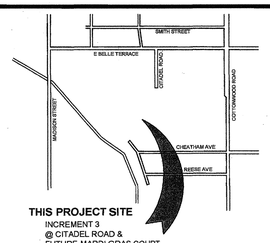
## VICINITY MAP




**THIS PROJECT SITE**
INCREMENT 3
@ CITADEL ROAD &
FUTURE MARDI GRAS COURT

**INCREMENT 3**

## SCOPE DESCRIPTION

Increment No. 1
Construction of:
Off-Site Utilities & Off-Site Street Improvements

Increment No. 2
Construction of:
New Admin\Library Building
New Multi-Purpose Building
Parking Lots with Passenger and Buss Loading Areas
Out Door Amphitheater, Sports and Play Field Areas
On-Site Grading & Utilities
Relocation of Irrigation Pipeline

Increment No. 3
Construction of:
DSA Approved PC/Modular Classroom Buildings on Concrete Foundations

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| ABOVE | ABV. | LAMINATE | LAM. |
| ABOVE FINISHED FLOOR | A.F.F. | LAVATORY | LAV. |
| ACCESSIBLE | A.C.C. | LEFT HAND | L.H. |
| ACOUSTICAL | ACOUST.,ACT. | LINOLEUM | LINO. |
| ADJACENT | ADJ | LONG | LG. |
| ADJUSTABLE | ADJUST. | | |
| AIR CONDITIONING | A/C | MACHINE BOLT | M.B. |
| ALUMINUM | ALUM.,AL. | MACHINE SCREW | M.S. |
| ANCHOR BOLT | AB. | MANUFACTURER | MFGR. |
| BENT ANCHOR BOLT | BAB. | MATERIAL | MAT.,MATL. |
| ANODIZED | ANOD. | MAXIMUM | MAX. |
| ARCHITECTURAL | ARCH. | MECHANICAL | MECH. |
| ASPHALT CONCRETE | A.C. | MEDIUM | MED. |
| | | MEMBRANE | MBNE. |
| BACKBOARD | BACKBRD. | METAL | MTL. |
| BEAM | BM | METAL PLANAR CEILING | M.P.C. |
| BENCH MARK | B.M. | METAL TOILET PARTITION | M.T.P. |
| BETWEEN | BTWN. | MILLIMETER | MILL. |
| BLOCK | BLK. | MINIMUM | MIN. |
| BOTTOM | BTM.,BTTM. | MISCELLANEOUS | MISC. |
| BOUNDARY NAILING | B.N. | MULLION | MULL. |
| BUILDING | BLDG. | | |
| | | NOT IN CONTRACT | N.I.C. |
| CABINET | CAB. | NOT TO SCALE | N.T.S. |
| CADMIUM | CAD. | NUMBER | NO.,# |
| CARPET | CPT. | | |
| CARRIAGE BOLT | C.B. | OPPOSITE HAND | O.H. |
| CAST IRON | C.I. | OPPOSITE | OPP. |
| CEILING | CLG.,CEL'G. | ON CENTER | O.C. |
| CEILING DIFFUSER | C.D. | OPENING | OPG. |
| CEILING GRILLE | C.G. | OUTSIDE DIAMETER/DIMENSION | O.D. |
| CEILING REGISTER | C.R. | OVAL HEAD | O.H. |
| CEMENT | CEM. | OVER (ON) | O/ |
| CENTERLINE | C.L. | OVERFLOW | OVFL. |
| CERAMIC TILE | C.T. | OVERHAND | OH. |
| CIRCUIT | CRT. | | |
| CLEANOUT | C.O. | PAINT | PT. |
| CLEAR | CLR. | PAIR | PR. |
| COLD WATER | C.W. | PAPER TOWEL DISPENSER | P.T.D. |
| COLUMN | COL. | PLASTIC | PLAS. |
| COMBINATION/COMBUSTION | COMB. | PLATE | PL. |
| COMPOSITION, COMPOSITE | COMP. | PLATED | PLTD. |
| CONCRETE | CONC. | PLUMBING | PLBG. |
| CONCRETE MASONRY UNIT | C.M.U. | PLYWOOD | PLYWD. |
| CONDITION | COND. | POINT | PT. |
| CONNECTION | CONN. | POINT OF CONNECTION | P.O.C. |
| CONSTRUCTION | CONST. | POUND | LB.,# |
| CONSTRUCTION JOINT | C.J. | POUND PER SQ. FOOT | P.S.F. |
| CONTINUOUS | CONT. | POUND PER SQ. INCH | P.S.I. |
| CONTRACTOR | CONTR. | | |
| COORDINATE | COORD. | QUARTER | QTR. |
| COUNTERSINK | CSK. | | |
| | | RADIUS | R.,RAD. |
| DEPARTMENT | DEPT. | RAINWATER LEADER | R.W.L. |
| DEPTH, DEEP | D. | RECEPTACLE | RECEPT. |
| DETAIL | DET.,DTL. | REFLECTED | REFL'D. |
| DIAGONAL | DIAG. | REFRIGERATOR | REF. |
| DIAMETER | DIA. | REINFORCING | REINF. |
| DIMENSION | DIM. | REMOVABLE | REMOV. |
| DISPENSER/DISPOSAL | DISP. | REQUIRED | REQ'D. |
| DIVISION | DIV. | RESILIENT | RES. |
| DOOR | DR. | REVISE, REVISION | REV. |
| DOUBLE | DBL. | RIGHT HAND | R.H. |
| DOWN | DN. | ROOF DRAIN | R.D. |
| DOWNSPOUT | D.S. | RUBBER TOPSET BASE | R.T.B. |
| DRAWING | DRWG. | | |
| DRINKING FOUNTAIN | D.F. | | |
| | | SANITARY NAPKIN DISPENSER | S.N.D. |
| | | SANITARY NAPKIN RECEPTACLE | S.N.R. |
| EACH | EA. | SCHEDULE | SCH. |
| ELECTRIC | ELEC. | SEAT COVER DISPENSER | S.C.D. |
| ELECTRIC DRINKING FOUNTAIN | E.D.F. | SECTION | SECT. |
| ELEVATION | ELEV.,EL. | SELF-TAPPING | ST. |
| EQUAL | EQ. | SHEATHING | SHTG. |
| EQUIPMENT | EQUIP. | SHEET | SHT. |
| ESTIMATE | EST. | SHEET METAL | S.M. |
| EXHAUST | EXH. | SHEET METAL & AIR CONDITIONING CONTRACTOR NATIONAL ASSOCIATION | SMACNA |
| EXHAUST FAN | E.F. | SHEET METAL SCREWS | S.M.S. |
| EXISTING | (E) | SHELVES | SH. |
| EXPANSION | EXP. | SIMILAR | SML.,SIM |
| EXPANSION JOINT | E.J. | SINK | S. |
| EXTERIOR | EXT. | SOAP DISPENSER | S.D. |
| FABRIC WALL COVERING | F.W.C. | SPECIFICATION | SPEC. |
| FACE OF BLOCK | F.O.B. | SPLASH | SPL. |
| FACE OF CONCRETE | F.O.C. | SPLASH BLOCK | S.B. |
| FACE OF STUD | F.O.S. | SQUARE | SQ. |
| FACE OF WALL | F.O.W. | STAINLESS STEEL | S.S. |
| FACTORY FINISH | F.F. | STANDARD | STD. |
| FEET/FOOT | FT. | STEEL | STL. |
| FEMININE NAPKIN DISPOSAL | F.N.D. | STORAGE | STOR. |
| FIBER GLASS | F.G.,FIBERGL. | STIFFENER | STIFF. |
| FINISH | FIN. | STRUCTURAL | STRUCT.,ST. |
| FIRE EXTINGUISHER CABINET | F.E.C. | SUSPENDED | SUSP. |
| FIRE RATED GYP. BD. | F.R.G.B. | SWITCH | SW. |
| FIRE TREATED | F.T. | | |
| FIXED GLASS | F.G. | TELEPHONE | TEL.,TELE. |
| FLAT HEAD | F.H. | THICK | THK. |
| FLOOR | FLR. | THRESHOLD | THR. |
| FLOOR DRAIN | F.D. | TOILET PAPER | T.P. |
| FLUORESCENT | FLUOR. | TOILET PAPER HOLDER | T.P.H. |
| FOOTING | FTG. | TOLERANCE | TOL. |
| FOUNDATION | FDN. | TRANSFORMER | TRANS. |
| FRAMING | FRM'G. | TYPICAL | TYP. |
| GAGE/GAUGE | GA. | UNDERWRITERS LABORATORY | U.L. |
| GALVANIZE | GALV. | UNLESS OTHERWISE NOTED | U.O.N. |
| GALVANIZED IRON | G.I. | URINAL | UR. |
| GLASS | GL. | | |
| GRAB BAR | G.B. | VENTILATE/VENTILATION | VENT. |
| GRADE | GR. | VENT THROUGH ROOF | V.T.R. |
| GROUND | GND. | VERTICAL | VERT. |
| GYPSUM | GYP. | VINYL COMPOSITION TILE | V.C.T. |
| GYPSUM BOARD | G.B.,GYP.BD. | VINYL WALL COVERING | V.W.C. |
| | | VOLUME | VOL. |
| HARDWARE | HDW.,HDWR. | | |
| HEAD | HD. | WATER CLOSET | W.C. |
| HEADER | HDR. | WATER PROOF | W.P. |
| HEIGHT | HT.,H. | WATER RESISTANT | W.R. |
| HOLLOW METAL | H.M. | WIDTH | W. |
| HORIZONTAL | HORIZ. | WIRE GLASS | W.GL. |
| HOT WATER | H.W. | WITH | W/ |
| HOSE BIBB | H.B. | WITHOUT | W/O |
| | | WOOD | WD. |
| INCH | IN. | WOOD SCREWS | W.S. |
| INSIDE DIAMETER/DIMENSION | I.D. | | |
| INSULATION | INSUL. | | |
| INTERIOR | INT. | | |
| JAMB | JB. | | |
| JOINT | JT. | | |


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BAKERSFIELD CITY SCHOOL DISTRICT
"Where The Child Comes First"

# NEW ELEMENTARY SCHOOL INCREMENT 3

## FOR BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

## SHEET INDEX


| SHT. NO. | DESCRIPTION |
|---|---|
| **GENERAL** | |
| T1.01 | TITLE SHEET |
| | |
| **ARCHITECTURAL** | |
| A1.01 | OVERALL SITE PLAN |
| A1.02 | ENLARGED SITE PLAN |
| **ELECTRICAL** | |
| E1.00 | SYMBOLS AND NOTES |
| E1.01 | SITE PLAN - ELECTRICAL |
| E1.02 | SITE PLAN - LOW VOLTAGE |
| E2.10 | SIGNAL AND COMMUNICATIONS - BLDG "C" |
| E2.20 | SIGNAL AND COMMUNICATIONS - BLDG "D" |
| E2.30 | SIGNAL AND COMMUNICATIONS - BLDG "E" |
| E2.40 | SIGNAL AND COMMUNICATIONS - BLDG "F" |
| E3.10 | FIRE ALARM PLAN - BLDG "C" |
| E3.20 | FIRE ALARM PLAN - BLDG "D" |
| E3.30 | FIRE ALARM PLAN - BLDG "E" |
| E3.40 | FIRE ALARM PLAN - BLDG "F" |
| E4.01 | FIRE ALARM RISER DIAGRAM & BATTERY CALCULATION |
| E4.02 | LOW VOLTAGE RISER DIAGRAMS AND DETAILS |
| E4.03 | SINGLE LINE DIAGRAM |
| E5.01 | FIRE ALARM SPECIFICATION 18 SHEETS |

**STOCKPILE # 02-113899 30' x 32' RELOCATABLE**

| | |
|---|---|
| T-1.00-R | TITLE SHEET |
| T-1.00 | (02-113899) TITLE SHEET |
| T-1.01 | (02-113899) TEST INSPECTIONS AND GUIDELINES |
| **ARCHITECTURAL** | |
| A-1.00-R | FLOOR PLAN - BUILDING C |
| A-1.01-R | FLOOR PLAN - BUILDING D |
| A-1.02-R | FLOOR PLAN - BUILDING E |
| A-1.03-R | FLOOR PLAN - BUILDING F |
| A-1.04-R | ENLARGED PLAN - BUILDING C |
| A-1.05-R | ENLARGED PLAN - BUILDING D |
| A-1.02 | (02-113899) FLOOR PLANS |
| A-1.04 | (02-113899) FLOOR PLANS |
| A-1.06-R | REFLECTED CEILING PLAN - BUILDING C |
| A-1.07-R | REFLECTED CEILING PLAN - BUILDING D |
| A-1.08-R | REFLECTED CEILING PLAN - BUILDING E |
| A-1.09-R | REFLECTED CEILING PLAN - BUILDING F |
| A-1.10 | (02-113899) CEILING DETAILS |
| A-1.12 | (02-113899) CEILING PLANS |
| A-1.21-R | DOOR, FINISH & WINDOW SCHEDULES |
| A-1.21 | (02-113899) DOOR AND WINDOW SCHED, GEN. NOTES & DETAILS |
| A-2.00-R | INTERIOR ELEVATIONS |
| A-2.01-R | INTERIOR ELEVATIONS |
| A-2.02-R | INTERIOR ELEVATIONS |
| A-2.00 | (02-113899) INTERIOR ELEVATIONS |
| A-2.20-R | ACCESSIBILITY DETAILS |
| A-2.20 | (02-113899) ACCESSIBILITY DETAILS |
| A-3.00-R | EXTERIOR ELEVATIONS - BUILDING C |
| A-3.01-R | EXTERIOR ELEVATIONS - BUILDING D |
| A-3.02-R | EXTERIOR ELEVATIONS - BUILDING E |
| A-3.03-R | EXTERIOR ELEVATIONS - BUILDING F |
| A-3.04 | (02-113899) EXTERIOR ELEVATIONS |
| A-3.05 | (02-113899) EXTERIOR ELEVATIONS |
| A-4.00-R | ROOF PLAN - BUILDING C |
| A-4.01-R | ROOF PLAN - BUILDING D |
| A-4.02-R | ROOF PLAN - BUILDING E |
| A-4.03-R | ROOF PLAN - BUILDING F |
| A-4.00 | (02-113899) ROOF PLAN |
| | 33 SHEETS |

| SHT. NO. | DESCRIPTION |
|---|---|
| A-5.00-R | BUILDING SECTIONS - BUILDING C |
| A-5.01-R | BUILDING SECTIONS - BUILDING D |
| A-5.02-R | BUILDING SECTIONS - BUILDING E |
| A-5.00 | (02-113899) SECTIONS |
| A-6.00 | (02-113899) DETAILS |
| A-6.01 | (02-113899) DETAILS |
| A-6.02-R | DETAILS |
| A-6.03-R | DETAILS 8 SHEETS |
| **STRUCTURAL** | |
| S-1.1 | (02-113899) GENERAL NOTES |
| S-1.2 | (02-113899) GENERAL NOTES |
| S-1.3 | (02-113899) GENERAL NOTES |
| S-1.4 | (02-113899) TYPICAL DETAILS |
| S-1.5 | (02-113899) TYPICAL DETAILS |
| S-1.6 | (02-113899) TYPICAL DETAILS |
| S-3.2 | FOUNDATION DETAILS |
| S2C.1 | EMBEDMENT PLAN |
| S2C.2 | FOUNDATION PLAN |
| S2D.1 | EMBEDMENT PLAN |
| S2D.2 | FOUNDATION PLAN |
| S2E.1 | EMBEDMENT PLAN |
| S2E.2 | FOUNDATION PLAN |
| S2F.1 | EMBEDMENT PLAN |
| S2F.2 | FOUNDATION PLAN |
| S-2.1 | (02-113899) EMBEDMENT PLAN |
| S-3.1 | (02-113899) FOUNDATION PLAN |
| S-4.1 | (02-113899) ROOF FRAMING PLAN - SINGLE SLOPE OVERHANG |
| S-5.1 | (02-113899) FRAME ELEVATIONS & DETAILS - SINGLE SLOPE |
| S-5.9 | (02-113899) FRAME DETAILS 4 56.2 Frame Elevation & Details |
| S-6.1 | (02-113899) FOUNDATION DETAILS |
| S-6.2 | (02-113899) FOUNDATION DETAILS |
| S-7.1 | (02-113899) FRAMING DETAILS |
| S-7.2 | (02-113899) FRAMING DETAILS - ROOF OVERHANG 26 SHEETS |
| **MECHANICAL** | |
| M-1.00-R | MECHANICAL FLOOR PLAN |
| M-1.01-R | MECHANICAL FLOOR PLAN |
| M-2.00-R | MECHANICAL FLOOR PLAN |
| M-2.01-R | MECHANICAL FLOOR PLAN |
| M-3.00-R | MECHANICAL FLOOR PLAN |
| M-3.01-R | MECHANICAL FLOOR PLAN |
| M-4.00-R | MECHANICAL FLOOR PLAN |
| M-4.01-R | MECHANICAL FLOOR PLAN |
| M-5.00-R | MECHANICAL DETAILS |
| M-0.01 | (02-113899) MECHANICAL NOTES & SYMBOLS |
| M-2.02 | (02-113899) MECHANICAL PLANS |
| M-2.05 | (02-113899) MECHANICAL PLANS |
| M-5.01 | (02-113899) MECHANICAL DETAILS 13 SHEETS |
| **ELECTRICAL** | |
| E-1.00-R | ELECTRICAL POWER PLAN |
| E-1.01-R | ELECTRICAL LIGHTING PLAN |
| E-2.00-R | ELECTRICAL POWER PLAN |
| E-2.01-R | ELECTRICAL LIGHTING PLAN |
| E-3.00-R | ELECTRICAL POWER PLAN |
| E-3.01-R | ELECTRICAL LIGHTING PLAN |
| E-4.00-R | ELECTRICAL POWER PLAN |
| E-4.01-R | ELECTRICAL LIGHTING PLAN |
| E-5.01-R | ELECTRICAL DETAILS |
| E-5.02-R | ELECTRICAL SCHEDULES |
| E-0.01 | (02-113899) ELECTRICAL NOTES & SYMBOLS |
| E-1.03 | (02-113899) ELECTRICAL PLANS |
| E-1.08 | (02-113899) ELECTRICAL PLANS |
| E-5.03 | (02-113899) ELECTRICAL LIGHTING SCHEDULES & DETAILS 14 SHEETS |
| **PLUMBING** | |
| P-1.00-R | PLUMBING PLAN - S&W |
| P-1.01-R | PLUMBING PLAN - DCW & DHW |
| P-2.00-R | PLUMBING PLAN - S&W |
| P-2.01-R | PLUMBING PLAN - DCW & DHW |
| P-3.00-R | PLUMBING PLAN - S&W |
| P-3.01-R | PLUMBING PLAN - DCW & DHW |
| P-4.00-R | PLUMBING PLAN - S&W |
| P-4.01-R | PLUMBING PLAN - DCW & DHW |
| P-4.05-R | ENLARGED PLUMBING PLAN |
| P-4.06-R | ENLARGED PLUMBING PLAN |
| P-5.00-R | PLUMBING DETAILS |
| P-0.01 | (02-113899) PLUMBING NOTES & SYMBOLS |
| P-1.02 | (02-113899) PLUMBING PLANS |
| P-5.01 | (02-113899) PLUMBING NOTES & SYMBOLS 14 SHEETS |
| **FIRE SPRINKLERS** | |
| FP-1 | BUILDING C FIRE SPRINKLER PLAN |
| FP-2 | BUILDING D FIRE SPRINKLER PLAN |
| FP-3 | BUILDING E FIRE SPRINKLER PLAN |
| FP-4 | BUILDING F FIRE SPRINKLER PLAN |
| FP-5 | FIRE SPRINKLER DETAILS |
| FP-6 | FIRE SPRINKLER DETAILS |
| FP-2M | (02-113899) FIRE SPRINKLER PLANS |
| FP-4M | (02-113899) FIRE SPRINKLER PLANS 8 SHEETS |
| **TITLE 24** | |
| EC-1.01-R | ENERGY CALC. BUILDING C |
| EC-1.02-R | ENERGY CALC. BUILDING D |
| EC-1.03-R | ENERGY CALC. BUILDING D |
| EC-1.04-R | ENERGY CALC. BUILDING D |
| EC-1.05-R | ENERGY CALC. BUILDING E |
| EC-1.06-R | ENERGY CALC. BUILDING E |
| EC-1.07-R | ENERGY CALC. BUILDING F |
| EC-1.08-R | ENERGY CALC. BUILDING F 8 SHEETS |


## GENERAL NOTES

1. ALL WORK SHALL CONFORM TO TITLE 24, 2016 CALIFORNIA CODE OF REGULATIONS.
2. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDUM OR CONSTRUCTION CHANGE DOCUMENT AND APPROVED BY DSA AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, C.C.R.
3. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE SCHOOL BOARD SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
4. ALL SPECIFICATIONS FOR ALTERATION, REHABILITATION OR RECONSTRUCTION PROJECTS; "THE INTENT" OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISH WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROSEEDING WITH THE WORK."
5. A COPY OF TITLE-24, ALL PARTS APPLICABLE, TO BE KEPT AT THE JOB SITE AT ALL TIMES.
6. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS WILL BE CONSIDERED AS CHANGES TO APPROVED PLANS OR SPECIFICATIONS. THEY ARE TO BE TREATED AS ADDENDA OR CONSTRUCTION CHANGE DOCUMENTS, AND WILL REQUIRE DSA'S APPROVAL PRIOR TO FABRICATION AND INSTALLATION. (SEC.4-338(C), PART 1, AND IR-6)
7. ADDENDA SHALL BE STAMPED AND SIGNED BY A/E ON RECORD AND DELEGATED DESIGN PROFESSIONAL WHEN APPLICABLE, AND APPROVED BY DSA (SEC. 4-338(B), PART 1).
8. CONSTRUCTION CHANGE DOCUMENTS AND SUPPLEMENTARY DRAWINGS SHALL BE PREPARED AND SUBMITTED TO DSA IN COMPLIANCE TO DSA INTERPRETATION OF REGULATION IR A-6 (SEC. 4-338(C), PART 1)
9. THE TESTING LAB, WHEN REQUIRED, MUST BE EMPLOYED BY THE OWNER AND APPROVED BY A/E ON RECORD, STRUCTURAL ENGINEER WHEN APPLICABLE, AND DSA. (SEC.4-341(D), PART 1)
10. CFC CHAPTER 33, CBC CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION SHALL BE REGULATED
11. FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECTS OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.
12. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
13. REFER TO RELOCATABLE BUILDING MANUFACTURER'S DRAWINGS FOR ALL INFORMATION REGARDING THE RELOCATABLE BUILDINGS
14. THE FOLLOWING DOCUMENTS SHALL BE ON THE JOBSITE PRIOR TO INSTALLATION OF UNITS:
    A. IN-PLAN VERIFIED REPORT
    B. LABORATORY VERIFIED REPORT
    C. WELDING VERIFIED REPORT
    THE SITE INSPECTOR SHALL VERIFY THE ABOVE DOCUMENTS AND SERIAL NUMBERS ARE APPLICABLE TO EACH UNIT PRIOR TO INSTALLATION OF THE UNITS.
    NOTIFY ARCHITECT AND DIVISION OF THE STATE ARCHITECT FIELD ENGINEER IF ANY DISCREPANCIES OCCUR
15. IN-PLANT INSPECTOR AND MANUFACTURER SHALL FOLLOW THE REQUIREMENTS OF DSA IR16-1.13 AND INCLUDE THE FOLLOWING INFORMATION ON ID TAG OF SHOP FABRICATED RELOCATABLE STRUCTURES:
    1. THE DSA APPLICATION NUMBER AND CBC EDITION UNDER WHICH THE BUILDING CONSTRUCTION WAS AUTHORIZED
    2. THE MANUFACTURER OR BUILDINGS NAME
    3. THE SERIAL NUMBER
    4. THE DESIGN CLIMATE ZONE
    5. THE DESIGN LIVE LOADS FOR THE ROOF AND FLOOR
    6. THE DESIGN WIND SPEED AND EXPOSURE CATEGORY
    7. THE SEISMIC DESIGN Ss

## INSPECTOR OF RECORD

THIS PROJECT REQUIRES A CLASS 2 INSPECTOR. THE INSPECTOR OF RECORD SHALL BE DSA APPROVED AND CONFORM TO THE CLASSIFICATION CRITERIA AS PROVIDED IN INTERPRETATION OF REGULATIONS (IR) A-7, DATED SEPTEMBER 18, 2007.

THE INSPECTOR SHALL BE EMPLOYED BY THE DISTRICT AND APPROVED BY THE RESPONSIBLE ARCHITECT.

## PROJECT DIRECTORY

OWNER:
BAKERSFIELD CITY SCHOOL DISTRICT
DOC ERVIN, SUPERINTENDENT
1300 BAKER STREET
BAKERSFIELD, CA 93305
TEL: 661-631-4676

ARCHITECT:
CURTIS E. FLYNN
INTEGRATED DESIGN by SOMAM, Inc.
6011 N. FRESNO SUITE #130
FRESNO, CA 93710
TEL: 559-436-0881
FAX. 559-436-0887

COMMUNICATIONS:
FRED BRAKEMAN
**INFINITY COMMUNICATIONS & CONSULTING**
P.O. BOX 999
BAKERSFIELD, CA 93302
TEL: 661-716-1840

ELECTRICAL ENGINEER:
JOHN CHONG
JOHN CHONG ENGEINEERING
433 E. KEATS AVE
FRESNO, CA 93710
TEL: 559-325-9988
FAX:

MODULAR BUILDING MANUFACTURER:
JTS MODULAR
CHUCK RICHMOND
7001 Mc DIVIT
BAKERSFIELD, CA 93313
TEL: 661-835-9270
FAX:

## BUILDING DATA

BUILDING C (CLASSROOM)
TYPE VB
11,642 SQ. FT. BLDG. AREA
E - NON-SEPERATED - Sprinklered

BUILDING D (CLASSROOM)
TYPE VB
11,642 SQ. FT. BLDG. AREA
E - NON-SEPERATED - Sprinklered

BUILDING E (CLASSROOM)
TYPE VB
12,609 SQ. FT. BLDG. AREA
E - NON-SEPERATED - Sprinklered

BUILDING F (CLASSROOM)
TYPE VB
12,609 SQ. FT. BLDG. AREA
E - NON-SEPERATED - Sprinklered

## SOILS REPORT

REFER TO GEOTECH REPORT AS PREPARED BY:
KRAZAN AND ASSOCIATES GEOTECHNICAL ENGINEERING, PROJECT NO. 022-17101
DATED NOVEMBER 1, 2017

ALL CONDITIONS OF GEOTECH REPORT HAVE BEEN REVIEWED AND APPROVED WITHIN INCREMENT 2 OF THIS APPLICATION.

## APPLICABLE CODES:

COMPLY WITH PART 1, TITLE 24, 2016 CCR.

A COPY OF TITLE 24 SHALL BE ON SITE AT ALL TIMES. CONSTRUCTION SHALL COMPLY WITH TITLE 24 CALIFORNIA CODE OF REGULATIONS. INCLUDING THE FOLLOWING:

TITLE 24, CCR, PART 2, 2016 CBC (2012 IBC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 3, 2016 CEC (2011 NEC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 4, 2016 CMC (2012 UMC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 5, 2016 CPC (2012 UPC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 6, 2016 CEC

TITLE 24, CCR, PART 9, 2016 CFC (2012 IFC, WITH CALIFORNIA AMENDMENTS).

TITLE 19, CCR.

NFPA 72, 2016 EDITION
(AS PER CA AMENDMENTS)

## ARCHITECT'S STATEMENT

**ARCHITECT'S STATEMENT FOR PLANS PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS**

THESE DRAWINGS AND/OR SPECIFICATIONS AND/OR CALCULATIONS FOR THE ITEMS LISTED IN THE SHEET INDEX AND CHECKED BELOW HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DOCUMENTS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR DESIGN INTENT AND HAVE BEEN FOUND TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME.

THE ITEMS CHECKED BELOW ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT FOR WHICH I AM THE INDIVIDUAL DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE (OR FOR WHICH I HAVE DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK.)

SEE THE SHEET INDEX ON THIS SHEET FOR DRAWINGS OTHER THAN ARCHITECTURAL.

APPLICABLE:

☐ STRUCTURAL ☐ PLUMBING ☐ MECHANICAL ☒ ELECTRICAL
☐ CIVIL ☒ RELOCATABLE BLDG.

SIGNATURE OF ☒ ARCHITECT/ENGINEER — DATE 06.26.18
NAME, TITLE, AFFILIATION
CURTIS E. FLYNN, ARCHITECT, INTEGRATED DESIGNS BY SOMAM, INC.

C-28966 — LICENSED NUMBER
05-31-19 — EXPIRATION DATE

## SYMBOLS

SECTION KEY
A / A3.01 — SECTION IDENTIFICATION / SHEET NUMBER

DETAIL KEY
1 / A2.01 — DETAIL NUMBER / SHEET NUMBER

INTERIOR ELEVATION KEY
A, B, C, D — ELEVATION DIRECTION
1 / A5.01 — ELEVATION IDENTIFICATION / SHEET NUMBER

ELEVATION DATUM
+1'-0" — INDICATES HEIGHT IN RELATION TO 0'-0"

ROOM NUMBER / FINISH TAG
OFFICE 100 A — ROOM NAME / ROOM NUMBER

WINDOW SCHEDULE KEY
1

KEYNOTE SCHEDULE KEY

DOOR SCHEDULE KEY
201

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Phone (559) 436-0881 Fax (559) 436-0887 E-Mail: design@somam.com
www.integratedesigns.com

Revision Description: — Revision: — Rev. Date:
Revision Description: — Revision: — Rev. Date:

Sheet Title: TITLE SHEET

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01-31-18
Revision: 06/25/18
Designed: ---
Drawn: ---
Checked: ---
PC: INITIALS

Agency Approval Stamp:
FILE # 15-6
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
03-118394
AC FLS TH SS
DATE JUN 27 2018
TRACKING # 63321-300

Stamp(s):
LICENSED ARCHITECT CURTIS E. FLYNN No. C-28966 STATE OF CALIFORNIA

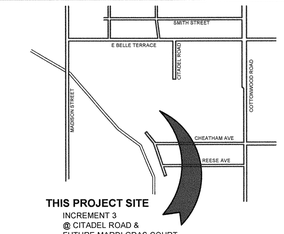
Job No.: 5262

Sheet No.: T1.01

Release:

G:\2017\In\17-5262 BCSD New Elementary\Sheets\Increment No. 3\Architectural\General\T1.01 CCVL.X SHEET.dwg RICHARD DELLANINI

## VICINITY MAP




**THIS PROJECT SITE**
INCREMENT 3
@ CITADEL ROAD &
FUTURE MARDI GRAS COURT

**INCREMENT 3**

## SCOPE DESCRIPTION

Increment No. 1
Construction of:
Off-Site Utilities & Off-Site Street Improvements

Increment No. 2
Construction of:
New Admin/Library Building
New Multi-Purpose Building
Parking Lots with Passenger and Buss Loading Areas
Out Door Amphitheater, Sports and Play Field Areas
On-Site Grading & Utilities
Relocation of Irrigation Pipeline

Increment No. 3
Construction of:
DSA Approved PC/Modular Classroom Buildings on Concrete Foundations

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| ABOVE | ABV. | LAMINATE | LAM. |
| ABOVE FINISHED FLOOR | A.F.F. | LAVATORY | LAV. |
| ACCESSIBLE | A.C.C. | LEFT HAND | L.H. |
| ACOUSTICAL | ACOUST.,ACT. | LINOLEUM | LINO. |
| ADJACENT | ADJ. | LONG | LG. |
| ADJUSTABLE | ADJUST. | | |
| AIR CONDITIONING | A/C | MACHINE BOLT | M.B. |
| ALUMINUM | ALUM.,AL. | MACHINE SCREW | M.S. |
| ANCHOR BOLT | AB. | MANUFACTURER | MFGR. |
| BENT ANCHOR BOLT | BAB. | MATERIAL | MAT.,MATL. |
| ANODIZED | ANOD. | MAXIMUM | MAX. |
| ARCHITECTURAL | ARCH. | MECHANICAL | MECH. |
| ASPHALT CONCRETE | A.C. | MEDIUM | MED. |
| | | MEMBRANE | MBNE. |
| BACKBOARD | BACKBRD. | METAL | MTL. |
| BEAM | BM | METAL PLANAR CEILING | M.P.C. |
| BENCH MARK | B.M. | METAL TOILET PARTITION | M.T.P. |
| BETWEEN | BTWN. | MILLIMETER | MILL. |
| BLOCK | BLK. | MINIMUM | MIN. |
| BOTTOM | BTM.,BTTM. | MISCELLANEOUS | MISC. |
| BOUNDARY NAILING | B.N. | MULLION | MULL. |
| BUILDING | BLDG. | | |
| | | NOT IN CONTRACT | N.I.C. |
| CABINET | CAB. | NOT TO SCALE | N.T.S. |
| CADMIUM | CAD. | NUMBER | NO.,# |
| CARPET | CPT. | | |
| CARRIAGE BOLT | C.B. | OPPOSITE HAND | O.H. |
| CAST IRON | C.I. | OPPOSITE | OPP. |
| CEILING | CLG.,CEL'G. | ON CENTER | O.C. |
| CEILING DIFFUSER | C.D. | OPENING | OPG. |
| CEILING GRILLE | C.G. | OUTSIDE DIAMETER/DIMENSION | O.D. |
| CEILING REGISTER | C.R. | OVAL HEAD | O.H. |
| CEMENT | CEM. | OVER (ON) | O/ |
| CENTERLINE | C.L. | OVERFLOW | OVFL. |
| CERAMIC TILE | C.T. | OVERHAND | O.H. |
| CIRCUIT | CRT. | | |
| CLEANOUT | C.O. | PAINT | PT. |
| CLEAR | CLR. | PAIR | PR. |
| COLD WATER | C.W. | PAPER TOWEL DISPENSER | P.T.D. |
| COLUMN | COL. | PLASTIC | PLAS. |
| COMBINATION/COMBUSTION | COMB. | PLATE | PL. |
| COMPOSITION, COMPOSITE | COMP. | PLATED | PLTD. |
| CONCRETE | CONC. | PLUMBING | PLBG. |
| CONCRETE MASONRY UNIT | C.M.U. | PLYWOOD | PLYWD. |
| CONDITION | COND. | POINT | PT. |
| CONNECTION | CONN. | POINT OF CONNECTION | P.O.C. |
| CONSTRUCTION | CONST. | POUND | LB.,# |
| CONSTRUCTION JOINT | C.J. | POUND PER SQ. FOOT | P.S.F. |
| CONTINUOUS | CONT. | POUND PER SQ. INCH | P.S.I. |
| CONTRACTOR | CONTR. | | |
| COORDINATE | COORD. | QUARTER | QTR. |
| COUNTERSINK | CSK. | | |
| | | RADIUS | R.,RAD. |
| DEPARTMENT | DEPT. | RAINWATER LEADER | R.W.L. |
| DEPTH, DEEP | D. | RECEPTACLE | RECEPT. |
| DETAIL | DET.,DTL. | REFLECTED | REFL'D. |
| DIAGONAL | DIAG. | REFRIGERATOR | REF. |
| DIAMETER | DIA. | REINFORCING | REINF. |
| DIMENSION | DIM. | REMOVABLE | REMOV. |
| DISPENSER/DISPOSAL | DISP. | REQ'D. | REQ'D. |
| DIVISION | DIV. | RESILIENT | RES. |
| DOOR | DR. | REVISE, REVISION | REV. |
| DOUBLE | DBL | RIGHT HAND | R.H. |
| DOWN | DN. | ROOF DRAIN | R.D. |
| DOWNSPOUT | D.S. | RUBBER TOPSET BASE | R.T.B. |
| DRAWING | DRWG. | | |
| DRINKING FOUNTAIN | D.F. | | |
| | | SANITARY NAPKIN DISPENSER | S.N.D. |
| | | SANITARY NAPKIN RECEPTACLE | S.N.R. |
| EACH | EA. | SCHEDULE | SCH. |
| ELECTRIC | ELEC. | SEAT COVER DISPENSER | S.C.D. |
| ELECTRIC DRINKING FOUNTAIN | E.D.F. | SECTION | SECT. |
| ELEVATION | ELEV.,EL. | SELF-TAPPING | S.T. |
| EQUAL | EQ. | SHEATHING | SHTG. |
| EQUIPMENT | EQUIP. | SHEET | SHT. |
| ESTIMATE | EST. | SHEET METAL | S.M. |
| EXHAUST | EXH. | SHEET METAL & AIR CONDITIONING CONTRACTOR NATIONAL ASSOCIATION | SMACNA |
| EXHAUST FAN | E.F. | SHEET METAL SCREWS | S.M.S. |
| EXISTING | (E) | SHELVES | SH. |
| EXPANSION | EXP. | SIMILAR | SML.,SIM |
| EXPANSION JOINT | E.J. | SINK | S. |
| EXTERIOR | EXT. | SOAP DISPENSER | S.D. |
| FABRIC WALL COVERING | F.W.C. | SPECIFICATION | SPEC. |
| FACE OF BLOCK | F.O.B. | SPLASH | SPL. |
| FACE OF CONCRETE | F.O.C. | SPLASH BLOCK | S.B. |
| FACE OF STUD | F.O.S. | SQUARE | SQ. |
| FACE OF WALL | F.O.W. | STAINLESS STEEL | S.S. |
| FACTORY FINISH | F.F. | STANDARD | STD. |
| FEET/FOOT | FT. | STEEL | STL. |
| FEMININE NAPKIN DISPOSAL | F.N.D. | STORAGE | STOR. |
| FIBER GLASS | F.G.,FIBERGL. | STIFFENER | STIFF. |
| FINISH | FIN. | STRUCTURAL | STRUCT.,ST. |
| FIRE EXTINGUISHER CABINET | F.E.C. | SUSPENDED | SUSP. |
| FIRE RATED GYP. BD. | F.R.G.B. | SWITCH | SW. |
| FIRE TREATED | F.T. | | |
| FIXED GLASS | F.G. | TELEPHONE | TEL.,TELE. |
| FLAT HEAD | F.H. | THICK | THK. |
| FLOOR | FLR. | THRESHOLD | THR. |
| FLOOR DRAIN | F.D. | TOILET PAPER | T.P. |
| FLUORESCENT | FLUOR. | TOILET PAPER HOLDER | T.P.H. |
| FOOTING | FTG. | TOLERANCE | TOL. |
| FOUNDATION | FDN. | TRANSFORMER | TRANS. |
| FRAMING | FRM'G. | TYPICAL | TYP. |
| GAGE/GAUGE | GA. | UNDERWRITERS LABORATORY | U.L. |
| GALVANIZE | GALV. | UNLESS OTHERWISE NOTED | U.O.N. |
| GALVANIZED IRON | G.I. | URINAL | UR. |
| GLASS | GL. | | |
| GRAB BAR | G.B. | VENTILATE/VENTILATION | VENT. |
| GRADE | GR. | VENT THROUGH ROOF | V.T.R. |
| GROUND | GND. | VERTICAL | VERT. |
| GYPSUM | GYP. | VINYL COMPOSITION TILE | V.C.T. |
| GYPSUM BOARD | G.B.,GYP.BD. | VINYL WALL COVERING | V.W.C. |
| | | VOLUME | VOL. |
| HARDWARE | HDW.HDWR. | | |
| HEAD | HD. | WATER CLOSET | W.C. |
| HEADER | HDR. | WATER PROOF | W.P. |
| HEIGHT | HT.,H. | WATER RESISTANT | W.R. |
| HOLLOW METAL | H.M. | WIDTH | W. |
| HORIZONTAL | HORIZ. | WIRE GLASS | W.GL. |
| HOT WATER | H.W. | WITH | W/ |
| HOSE BIBB | H.B. | WITHOUT | W/O |
| | | WOOD | WD. |
| INCH | IN. | WOOD SCREWS | W.S. |
| INSIDE DIAMETER/DIMENSION | I.D. | | |
| INSULATION | INSUL. | | |
| INTERIOR | INT. | | |
| JAMB | JB. | | |
| JOINT | JT. | | |


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# NEW ELEMENTARY SCHOOL INCREMENT 3

## FOR BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

## SHEET INDEX


| SHT. NO. | DESCRIPTION |
|---|---|
| **GENERAL** | |
| T1.01 | TITLE SHEET |
| | |
| **ARCHITECTURAL** | |
| A1.01 | OVERALL SITE PLAN |
| A1.02 | ENLARGED SITE PLAN |
| **ELECTRICAL** | |
| E1.00 | SYMBOLS AND NOTES |
| E1.01 | SITE PLAN - ELECTRICAL |
| E1.02 | SITE PLAN - LOW VOLTAGE |
| E2.10 | SIGNAL AND COMMUNICATIONS - BLDG "C" |
| E2.20 | SIGNAL AND COMMUNICATIONS - BLDG "D" |
| E2.30 | SIGNAL AND COMMUNICATIONS - BLDG "E" |
| E2.40 | SIGNAL AND COMMUNICATIONS - BLDG "F" |
| E3.10 | FIRE ALARM PLAN - BLDG "C" |
| E3.20 | FIRE ALARM PLAN - BLDG "D" |
| E3.30 | FIRE ALARM PLAN - BLDG "E" |
| E3.40 | FIRE ALARM PLAN - BLDG "F" |
| E4.01 | FIRE ALARM RISER DIAGRAM & BATTERY CALCULATION |
| E4.02 | LOW VOLTAGE RISER DIAGRAMS AND DETAILS |
| E4.03 | SINGLE LINE DIAGRAM |
| E5.01 | FIRE ALARM SPECIFICATION 18 SHEETS |
| | |

**STOCKPILE # 02-113899 30' x 32' RELOCATABLE**

| | |
|---|---|
| T-1.00-R | TITLE SHEET |
| T-1.00 | (02-113899) TITLE SHEET |
| T-1.01 | (02-113899) TEST INSPECTIONS AND GUIDELINES |
| **ARCHITECTURAL** | |
| A-1.00-R | FLOOR PLAN - BUILDING C |
| A-1.01-R | FLOOR PLAN - BUILDING D |
| A-1.02-R | FLOOR PLAN - BUILDING E |
| A-1.03-R | FLOOR PLAN - BUILDING F |
| A-1.04-R | ENLARGED PLAN - BUILDING C |
| A-1.05-R | ENLARGED PLAN - BUILDING D |
| A-1.02 | (02-113899) FLOOR PLANS |
| A-1.04 | (02-113899) FLOOR PLANS |
| A-1.06-R | REFLECTED CEILING PLAN - BUILDING C |
| A-1.07-R | REFLECTED CEILING PLAN - BUILDING D |
| A-1.08-R | REFLECTED CEILING PLAN - BUILDING E |
| A-1.09-R | REFLECTED CEILING PLAN - BUILDING F |
| A-1.10 | (02-113899) CEILING DETAILS |
| A-1.12 | (02-113899) CEILING PLANS |
| A-1.21-R | DOOR, FINISH & WINDOW SCHEDULES |
| A-1.21 | (02-113899) DOOR AND WINDOW SCHED, GEN. NOTES & DETAILS |
| A-2.00-R | INTERIOR ELEVATIONS |
| A-2.01-R | INTERIOR ELEVATIONS |
| A-2.02-R | INTERIOR ELEVATIONS |
| A-2.00 | (02-113899) INTERIOR ELEVATIONS |
| A-2.20-R | ACCESSIBILITY DETAILS |
| A-2.20 | (02-113899) ACCESSIBILITY DETAILS |
| A-3.00-R | EXTERIOR ELEVATIONS - BUILDING C |
| A-3.01-R | EXTERIOR ELEVATIONS - BUILDING D |
| A-3.02-R | EXTERIOR ELEVATIONS - BUILDING E |
| A-3.03-R | EXTERIOR ELEVATIONS - BUILDING F |
| A-3.04 | (02-113899) EXTERIOR ELEVATIONS |
| A-3.05 | (02-113899) EXTERIOR ELEVATIONS |
| A-4.00-R | ROOF PLAN - BUILDING C |
| A-4.01-R | ROOF PLAN - BUILDING D |
| A-4.02-R | ROOF PLAN - BUILDING E |
| A-4.03-R | ROOF PLAN - BUILDING F |
| A-4.00 | (02-113899) ROOF PLAN |
| | 33 SHEETS |

| SHT. NO. | DESCRIPTION |
|---|---|
| A-5.00-R | BUILDING SECTIONS - BUILDING C |
| A-5.01-R | BUILDING SECTIONS - BUILDING D |
| A-5.02-R | BUILDING SECTIONS - BUILDING E |
| A-5.00 | (02-113899) SECTIONS |
| A-6.00 | (02-113899) DETAILS |
| A-6.01 | (02-113899) DETAILS |
| A-6.02-R | DETAILS |
| A-6.03-R | DETAILS 8 SHEETS |
| **STRUCTURAL** | |
| S-1.1 | (02-113899) GENERAL NOTES |
| S-1.2 | (02-113899) GENERAL NOTES |
| S-1.3 | (02-113899) GENERAL NOTES |
| S-1.4 | (02-113899) TYPICAL DETAILS |
| S-1.5A | (02-113899) TYPICAL DETAILS |
| S-1.6 | (02-113899) TYPICAL DETAILS |
| S-3.2 | FOUNDATION DETAILS |
| S2C.1 | EMBEDMENT PLAN |
| S2C.2 | FOUNDATION PLAN |
| S2D.1 | EMBEDMENT PLAN |
| S2D.2 | FOUNDATION PLAN |
| S2E.1 | EMBEDMENT PLAN |
| S2E.2 | FOUNDATION PLAN |
| S2F.1 | EMBEDMENT PLAN |
| S2F.2 | FOUNDATION PLAN |
| S-2.1 | (02-113899) EMBEDMENT PLAN |
| S-3.1 | (02-113899) FOUNDATION PLAN |
| S-4.1 | (02-113899) ROOF FRAMING PLAN - SINGLE SLOPE OVERHANG |
| S-5.1 | (02-113899) FRAME ELEVATIONS & DETAILS - SINGLE SLOPE |
| S-5.2 | (02-113899) FRAME ELEVATIONS & DETAILS - SINGLE SLOPE |
| S-5.3 | FRAME ELEVATIONS & DETAILS |
| S-5.4 | FRAME ELEVATIONS & DETAILS |
| S-5.5 | FRAME ELEVATIONS & DETAILS |
| S-5.6 | FRAME ELEVATIONS & DETAILS |
| S-5.7 | FRAME ELEVATIONS & DETAILS |
| S-5.8 | FRAME ELEVATIONS & DETAILS |
| S-5.9 | (02-113899) FRAME DETAILS |
| S-5.11 | FACADE WALL FRAMING DETAILS |
| S-5.12 | FACADE WALL FRAMING DETAILS |
| S-5.13 | FRAME ELEVATIONS & DETAILS |
| S-6.1 | (02-113899) FOUNDATION DETAILS |
| S-6.2 | (02-113899) FOUNDATION DETAILS |
| S-7.1 | (02-113899) FRAMING DETAILS |
| S-7.2 | (02-113899) FRAMING DETAILS - ROOF OVERHANG |
| | 34 SHEETS |
| **MECHANICAL** | |
| M-1.00-R | MECHANICAL FLOOR PLAN |
| M-1.01-R | MECHANICAL FLOOR PLAN |
| M-2.00-R | MECHANICAL FLOOR PLAN |
| M-2.01-R | MECHANICAL FLOOR PLAN |
| M-3.00-R | MECHANICAL FLOOR PLAN |
| M-3.01-R | MECHANICAL FLOOR PLAN |
| M-4.00-R | MECHANICAL FLOOR PLAN |
| M-4.01-R | MECHANICAL FLOOR PLAN |
| M-5.00-R | MECHANICAL DETAILS |
| M-0.01 | (02-113899) MECHANICAL NOTES & SYMBOLS |
| M-2.02 | (02-113899) MECHANICAL PLANS |
| M-2.05 | (02-113899) MECHANICAL PLANS |
| M-5.01 | (02-113899) MECHANICAL DETAILS |
| | 13 SHEETS |

| SHT. NO. | DESCRIPTION |
|---|---|
| **ELECTRICAL** | |
| E-1.00-R | ELECTRICAL POWER PLAN |
| E-1.01-R | ELECTRICAL LIGHTING PLAN |
| E-2.00-R | ELECTRICAL POWER PLAN |
| E-2.01-R | ELECTRICAL LIGHTING PLAN |
| E-3.00-R | ELECTRICAL POWER PLAN |
| E-3.01-R | ELECTRICAL LIGHTING PLAN |
| E-4.00-R | ELECTRICAL POWER PLAN |
| E-4.01-R | ELECTRICAL LIGHTING PLAN |
| E-5.01-R | ELECTRICAL DETAILS |
| E-5.02-R | ELECTRICAL SCHEDULES |
| E-0.01 | (02-113899) ELECTRICAL NOTES & SYMBOLS |
| E-1.03 | (02-113899) ELECTRICAL PLANS |
| E-1.08 | (02-113899) ELECTRICAL PLANS |
| E-5.03 | (02-113899) ELECTRICAL LIGHTING SCHEDULES & DETAILS 14 SHEETS |
| **PLUMBING** | |
| P-1.00-R | PLUMBING PLAN - S&W |
| P-1.01-R | PLUMBING PLAN - DCW & DHW |
| P-2.00-R | PLUMBING PLAN - S&W |
| P-2.01-R | PLUMBING PLAN - DCW & DHW |
| P-3.00-R | PLUMBING PLAN - S&W |
| P-3.01-R | PLUMBING PLAN - DCW & DHW |
| P-4.00-R | PLUMBING PLAN - S&W |
| P-4.01-R | PLUMBING PLAN - DCW & DHW |
| P-4.05-R | ENLARGED PLUMBING PLAN |
| P-4.06-R | ENLARGED PLUMBING PLAN |
| P-5.00-R | PLUMBING DETAILS |
| P-0.01 | (02-113899) PLUMBING NOTES & SYMBOLS |
| P-1.02 | (02-113899) PLUMBING PLANS |
| P-5.01 | (02-113899) PLUMBING NOTES & SYMBOLS |
| | 14 SHEETS |
| **FIRE SPRINKLERS** | |
| FP-1 | BUILDING C FIRE SPRINKLER PLAN |
| FP-2 | BUILDING D FIRE SPRINKLER PLAN |
| FP-3 | BUILDING E FIRE SPRINKLER PLAN |
| FP-4 | BUILDING F FIRE SPRINKLER PLAN |
| FP-5 | FIRE SPRINKLER DETAILS |
| FP-6 | FIRE SPRINKLER DETAILS |
| FP-2M | (02-113899) FIRE SPRINKLER PLANS |
| FP-4M | (02-113899) FIRE SPRINKLER PLANS |
| | 8 SHEETS |
| **TITLE 24** | |
| EC-1.01-R | ENERGY CALC. BUILDING C |
| EC-1.02-R | ENERGY CALC. BUILDING C |
| EC-1.03-R | ENERGY CALC. BUILDING D |
| EC-1.04-R | ENERGY CALC. BUILDING D |
| EC-1.05-R | ENERGY CALC. BUILDING E |
| EC-1.06-R | ENERGY CALC. BUILDING E |
| EC-1.07-R | ENERGY CALC. BUILDING F |
| EC-1.08-R | ENERGY CALC. BUILDING F |
| | 8 SHEETS |
| | 150 SHEETS |


## INSPECTOR OF RECORD

THIS PROJECT REQUIRES A CLASS 2 INSPECTOR. THE INSPECTOR OF RECORD SHALL BE DSA APPROVED AND CONFORM TO THE CLASSIFICATION CRITERIA AS PROVIDED IN INTERPRETATION OF REGULATIONS (IR) A-7, DATED SEPTEMBER 18, 2007.

THE INSPECTOR SHALL BE EMPLOYED BY THE DISTRICT AND APPROVED BY THE RESPONSIBLE ARCHITECT.

## GENERAL NOTES

1. ALL WORK SHALL CONFORM TO TITLE 24, 2016 CALIFORNIA CODE OF REGULATIONS.
2. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDUM OR CONSTRUCTION CHANGE DOCUMENT AND APPROVED BY DSA AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, C.C.R.
3. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE SCHOOL BOARD SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
4. ALL SPECIFICATIONS FOR ALTERATION, REHABILITATION OR RECONSTRUCTION PROJECTS; "THE INTENT" OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISH WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK."
5. A COPY OF TITLE 24, ALL PARTS APPLICABLE, TO BE KEPT AT THE JOB SITE AT ALL TIMES.
6. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS WILL BE CONSIDERED AS CHANGES TO APPROVED PLANS OR SPECIFICATIONS, THEY ARE TO BE TREATED AS ADDENDA OR CONSTRUCTION CHANGE DOCUMENTS, AND WILL REQUIRE DSA'S APPROVAL PRIOR TO FABRICATION AND INSTALLATION. (SEC.4-338(C), PART 1, AND IR-6)
7. ADDENDA SHALL BE STAMPED AND SIGNED BY A/E ON RECORD AND DELEGATED DESIGN PROFESSIONAL WHEN APPLICABLE, AND APPROVED BY DSA (SEC. 4-338(B), PART 1).
8. CONSTRUCTION CHANGE DOCUMENTS AND SUPPLEMENTARY DRAWINGS SHALL BE PREPARED AND SUBMITTED TO DSA IN COMPLIANCE TO DSA INTERPRETATION OF REGULATION IR A-6 (SEC. 4-338(C), PART 1)
9. THE TESTING LAB, WHEN REQUIRED, MUST BE EMPLOYED BY THE OWNER AND APPROVED BY A/E ON RECORD, STRUCTURAL ENGINEER WHEN APPLICABLE, AND DSA. (SEC.4-341(D), PART 1)
10. CFC CHAPTER 33, CBC CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION SHALL BE REGULATED
11. FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECTS OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.
12. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
13. REFER TO RELOCATABLE BUILDING MANUFACTURER'S DRAWINGS FOR ALL INFORMATION REGARDING THE RELOCATABLE BUILDINGS
14. THE FOLLOWING DOCUMENTS SHALL BE ON THE JOBSITE PRIOR TO INSTALLATION OF UNITS:
    A. IN-PLAN VERIFIED REPORT
    B. LABORATORY VERIFIED REPORT
    C. WELDING VERIFIED REPORT
    THE SITE INSPECTOR SHALL VERIFY THE ABOVE DOCUMENTS AND SERIAL NUMBERS ARE APPLICABLE TO EACH UNIT PRIOR TO INSTALLATION OF THE UNITS.
    NOTIFY ARCHITECT AND DIVISION OF THE STATE ARCHITECT FIELD ENGINEER IF ANY DISCREPANCIES OCCUR
15. IN-PLANT INSPECTOR AND MANUFACTURER SHALL FOLLOW THE REQUIREMENTS OF DSA IR16-1.13 AND INCLUDE THE FOLLOWING INFORMATION ON ID TAG OF SHOP FABRICATED RELOCATABLE STRUCTURES:
    1. THE DSA APPLICATION NUMBER AND CBC EDITION UNDER WHICH THE BUILDING CONSTRUCTION WAS AUTHORIZED
    2. THE MANUFACTURER OR BUILDINGS NAME
    3. THE SERIAL NUMBER
    4. THE DESIGN CLIMATE ZONE
    5. THE DESIGN LIVE LOADS FOR THE ROOF AND FLOOR
    6. THE DESIGN WIND SPEED AND EXPOSURE CATEGORY
    7. THE SEISMIC DESIGN Ss

## PROJECT DIRECTORY

OWNER:
BAKERSFIELD CITY SCHOOL DISTRICT
DOC ERVIN, SUPERINTENDENT
1300 BAKER STREET
BAKERSFIELD, CA 93305
TEL: 661-631-4676

ARCHITECT:
CURTIS E. FLYNN
INTEGTRATED DESIGN by SOMAM, Inc.
6011 N. FRESNO SUITE #130
FRESNO, CA 93710
TEL: 559-436-0881
FAX. 559-436-0887

COMMUNICATIONS:
FRED BRAKEMAN
INFINITY COMMUNICATIONS & CONSULTING
P.O. BOX 999
BAKERSFIELD, CA 93302
TEL: 661-716-1840

ELECTRICAL ENGINEER:
JOHN CHONG
JOHN CHONG ENEGINEERING
433 E. KEATS AVE
FRESNO, CA 93710
TEL: 559-325-9988
FAX:

MODULAR BUILDING MANUFACTURER:
JTS MODULAR
CHUCK RICHMOND
7001 Mc DIVIT
BAKERSFIELD, CA 93313
TEL: 661-835-9270
FAX:

## BUILDING DATA

BUILDING C (CLASSROOM)
TYPE VB-S1
11,642 SQ. FT. BLDG. AREA
E - NON-SEPERATED

BUILDING D (CLASSROOM)
TYPE VB-S1
11,642 SQ. FT. BLDG. AREA
E - NON-SEPERATED

BUILDING E (CLASSROOM
TYPE VB-S1
12,609 SQ. FT. BLDG. AREA
E - NON-SEPERATED

BUILDING F (CLASSROOM)
TYPE VB-S1
12,609 SQ. FT. BLDG. AREA
E - NON-SEPERATED

## ARCHITECT'S STATEMENT

**ARCHITECT'S STATEMENT FOR PLANS PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS**

THESE DRAWINGS AND/OR SPECIFICATIONS AND/OR CALCULATIONS FOR THE ITEMS LISTED IN THE SHEET INDEX AND CHECKED BELOW HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DOCUMENTS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR DESIGN INTENT AND HAVE BEEN FOUND TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME.

THE ITEMS CHECKED BELOW ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT FOR WHICH I AM THE INDIVIDUAL DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE (OR FOR WHICH I HAVE DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK.)

SEE THE SHEET INDEX ON THIS SHEET FOR DRAWINGS OTHER THAN ARCHITECTURAL.

APPLICABLE:
☐ ~~STRUCTURAL~~ ☐ ~~PLUMBING~~ ☐ ~~MECHANICAL~~ ☒ ELECTRICAL
☐ ~~FIRE~~ ☒ RELOCATABLE BLDG.

Agency Approval Stamp:

FILE #: 15-6
IDENTIFICATION STAMP
DIV OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
03-118394
AC_____FLS_____SS_____
DATE

TRACKING #: 63321-300

SIGNATURE OF THE ARCHITECT/ENGINEER — DATE 06.26.18
NAME, TITLE, AFFILIATION
CURTIS E. FLYNN, ARCHITECT, INTEGRATED DESIGNS BY SOMAM, INC.

## SOILS REPORT

REFER TO GEOTECH REPORT AS PREPARED BY:
KRAZAN AND ASSOCIATES GEOTECHNICAL ENGINEERING, PROJECT NO. 022-17101
DATED NOVEMBER 1, 2017

ALL CONDITIONS OF GEOTECH REPORT HAVE BEEN REVIEWED AND APPROVED WITHIN INCREMENT 2 OF THIS APPLICATION.

C-28966 — LICENSED NUMBER
05-31-19 — EXPIRATION DATE

## APPLICABLE CODES:

COMPLY WITH PART 1, TITLE 24, 2016 CCR.

A COPY OF TITLE 24 SHALL BE ON SITE AT ALL TIMES. CONSTRUCTION SHALL COMPLY WITH TITLE 24 CALIFORNIA CODE OF REGULATIONS. INCLUDING THE FOLLOWING:

TITLE 24, CCR, PART 2, 2016 CBC (2012 IBC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 3, 2016 CEC (2011 NEC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 4, 2016 CMC (2012 UMC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 5, 2016 CPC (2012 UPC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 6, 2016 CEC

TITLE 24, CCR, PART 9, 2016 CFC (2012 IFC, WITH CALIFORNIA AMENDMENTS).

TITLE 19, CCR.

NFPA 72, 2016 EDITION
(AS PER CA AMENDMENTS)

## SYMBOLS

SECTION KEY
A / A3.03 — SECTION IDENTIFICATION / SHEET NUMBER

DETAIL KEY
1 / A2.01 — DETAIL NUMBER / SHEET NUMBER

INTERIOR ELEVATION KEY
A, B, C, D — ELEVATION DIRECTION
1 / A5.01 — ELEVATION IDENTIFICATION / SHEET NUMBER

ELEVATION DATUM
+1'-0" — INDICATES HEIGHT IN RELATION TO 0'-0"

ROOM NUMBER / FINISH TAG
OFFICE / 100 / A — ROOM NAME / ROOM NUMBER

WINDOW SCHEDULE KEY
1

KEYNOTE SCHEDULE KEY
201

DOOR SCHEDULE KEY

integrated designs by SOMAM, Inc.
ARCHITECTURE · ENGINEERING · INTERIOR DESIGN · PROJECT MANAGEMENT
6011 N. Fresno, Suite 130 – Fresno, California 93710
Phone (559) 436-0881 Fax (559) 436-0887 CalArch: cdelp@somam.com
www.integrateddesigns.com

| Rev. | Date | Revision Description |
|---|---|---|
| 3 | | ADDENDUM 3 |

Sheet Title: TITLE SHEET
Issue Date: 01 – 31 – 18
Date: 08/23/18
Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 — BAKERSFIELD CITY SCHOOL DISTRICT — @ CITADEL ROAD & MARDI GRAS COURT
Designer: —
DR: —
PIC: PC INITIALS

Stamp(s):

LICENSED ARCHITECT — CURTIS E. FLYNN — No. C 28966 — REN. 5-31-19 — STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: T1.01

Release: ADDENDUM 3

G:\2017\frs\17-5262 BCSD New Elementary\Sheets\Increment No. 3\Architectural\General\T1.01 COVER SHEET.dwg RICHARD DELLANINI

## VICINITY MAP




**THIS PROJECT SITE**
INCREMENT 3
@ CITADEL ROAD &
FUTURE MARDI GRAS COURT

**INCREMENT 3**

## SCOPE DESCRIPTION

Increment No. 1
Construction of:
Off-Site Utilities & Off-Site Street Improvements

Increment No. 2
Construction of:
New Admin/Library Building
New Multi-Purpose Building
Parking Lots with Passenger and Buss Loading Areas
Out Door Amphitheater, Sports and Play Field Areas
On-Site Grading & Utilities
Relocation of Irrigation Pipeline

Increment No. 3
Construction of:
DSA Approved PC/Modular Classroom Buildings on Concrete Foundations

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| ABOVE | ABV. | LAMINATE | LAM. |
| ABOVE FINISHED FLOOR | A.F.F. | LAVATORY | LAV. |
| ACCESSIBLE | A.C.C. | LEFT HAND | L.H. |
| ACOUSTICAL | ACOUST.,ACT. | LINOLEUM | LINO. |
| ADJACENT | ADJ | LONG | LG. |
| ADJUSTABLE | ADJUST. | | |
| AIR CONDITIONING | A./C. | MACHINE BOLT | M.B. |
| ALUMINUM | ALUM.,AL. | MACHINE SCREW | M.S. |
| ANCHOR BOLT | AB. | MANUFACTURER | MFGR. |
| BENT ANCHOR BOLT | BAB. | MATERIAL | MAT.,MATL. |
| ANODIZED | ANOD. | MAXIMUM | MAX. |
| ARCHITECTURAL | ARCH. | MECHANICAL | MECH. |
| ASPHALT CONCRETE | A.C. | MEDIUM | MED. |
| | | MEMBRANE | MBNE. |
| BACKBOARD | BACKBRD. | METAL | MTL. |
| BEAM | BM. | METAL PLANAR CEILING | M.P.C. |
| BENCH MARK | B.M. | METAL TOILET PARTITION | M.T.P. |
| BETWEEN | BTWN. | MILLIMETER | MILL. |
| BLOCK | BLK. | MINIMUM | MIN. |
| BOTTOM | BTM.,BTTM. | MISCELLANEOUS | MISC. |
| BOUNDARY NAILING | B.N. | MULLION | MULL. |
| BUILDING | BLDG. | | |
| | | NOT IN CONTRACT | N.I.C. |
| CABINET | CAB. | NOT TO SCALE | N.T.S. |
| CADMIUM | CAD. | NUMBER | NO.,# |
| CARPET | CPT. | | |
| CARRIAGE BOLT | C.B. | OPPOSITE HAND | O.H. |
| CAST IRON | C.I. | OPPOSITE | OPP. |
| CEILING | CLG.,CEL'G. | ON CENTER | O.C. |
| CEILING DIFFUSER | C.D. | OPENING | OPG. |
| CEILING GRILLE | C.G. | OUTSIDE DIAMETER/DIMENSION | O.D. |
| CEILING REGISTER | C.R. | OVAL HEAD | O.H. |
| CEMENT | CEM. | OVER (ON) | O/ |
| CENTERLINE | C.L. | OVERFLOW | OVFL. |
| CERAMIC TILE | C.T. | OVERHAND | OH. |
| CIRCUIT | CRT. | | |
| CLEANOUT | C.O. | PAINT | PT. |
| CLEAR | CLR. | PAIR | PR. |
| COLD WATER | C.W. | PAPER TOWEL DISPENSER | P.T.D. |
| COLUMN | COL. | PLASTIC | PLAS. |
| COMBINATION/COMBUSTION | COMB. | PLATE | PL. |
| COMPOSITION, COMPOSITE | COMP. | PLATED | PLTD. |
| CONCRETE | CONC. | PLUMBING | PLBG. |
| CONCRETE MASONRY UNIT | C.M.U. | PLYWOOD | PLYWD. |
| CONDITION | COND. | POINT | PT. |
| CONNECTION | CONN. | POINT OF CONNECTION | P.O.C. |
| CONSTRUCTION | CONST. | POUND | LB.,# |
| CONSTRUCTION JOINT | C.J. | POUND PER SQ. FOOT | P.S.F. |
| CONTINUOUS | CONT. | POUND PER SQ. INCH | P.S.I. |
| CONTRACTOR | CONTR. | | |
| COORDINATE | COORD. | QUARTER | QTR. |
| COUNTERSINK | CSK. | | |
| | | RADIUS | R.,RAD. |
| DEPARTMENT | DEPT. | RAINWATER LEADER | R.W.L. |
| DEPTH, DEEP | D. | RECEPTACLE | RECEPT. |
| DETAIL | DET.,DTL. | REFLECTED | REFL'D. |
| DIAGONAL | DIAG. | REFRIGERATOR | REF. |
| DIAMETER | DIA. | REINFORCING | REINF. |
| DIMENSION | DIM. | REMOVABLE | REMOV. |
| DISPENSER/DISPOSAL | DISP. | REQUIRED | REQ'D. |
| DIVISION | DIV. | RESILIENT | RES. |
| DOOR | DR. | REVISE, REVISION | REV. |
| DOUBLE | DBL. | RIGHT HAND | R.H. |
| DOWN | DN. | ROOF DRAIN | R.D. |
| DOWNSPOUT | D.S. | RUBBER TOPSET BASE | R.T.B. |
| DRAWING | DRWG. | | |
| DRINKING FOUNTAIN | D.F. | | |
| | | SANITARY NAPKIN DISPENSER | S.N.D. |
| | | SANITARY NAPKIN RECEPTACLE | S.N.R. |
| EACH | EA. | SCHEDULE | SCH. |
| ELECTRIC | ELEC. | SEAT COVER DISPENSER | S.C.D. |
| ELECTRIC DRINKING FOUNTAIN | E.D.F. | SECTION | SECT. |
| ELEVATION | ELEV.,EL. | SELF - TAPPING | S.T. |
| EQUAL | EQ. | SHEATHING | SHTG. |
| EQUIPMENT | EQUIP. | SHEET | SHT. |
| ESTIMATE | EST. | SHEET METAL | S.M. |
| EXHAUST | EXH. | SHEET METAL & AIR CONDITIONING CONTRACTOR NATIONAL ASSOCIATION | SMACNA |
| EXHAUST FAN | E.F. | SHEET METAL SCREWS | S.M.S. |
| EXISTING | (E) | SHELVES | SH. |
| EXPANSION | EXP. | SIMILAR | SML.,SIM |
| EXPANSION JOINT | E.J. | SINK | S. |
| EXTERIOR | EXT. | SOAP DISPENSER | S.D. |
| | | SPECIFICATION | SPEC. |
| FABRIC WALL COVERING | F.W.C. | SPLASH | SPL. |
| FACE OF BLOCK | F.O.B. | SPLASH BLOCK | S.B. |
| FACE OF CONCRETE | F.O.C. | SQUARE | SQ. |
| FACE OF STUD | F.O.S. | STAINLESS STEEL | S.S. |
| FACE OF WALL | F.O.W. | STANDARD | STD. |
| FACTORY FINISH | F.F. | STEEL | STL. |
| FEET/FOOT | FT. | STORAGE | STOR. |
| FEMININE NAPKIN DISPOSAL | F.N.D. | STIFFENER | STIFF. |
| FIBER GLASS | F.G.,FIBERGL. | STRUCTURAL | STRUCT.,ST. |
| FINISH | FIN. | SUSPENDED | SUSP. |
| FIRE EXTINGUISHER CABINET | F.E.C. | SWITCH | SW. |
| FIRE RATED GYP. BD. | F.R.G.B. | | |
| FIRE TREATED | F.T. | TELEPHONE | TEL.,TELE. |
| FIXED GLASS | F.G. | THICK | THK. |
| FLAT HEAD | F.H. | THRESHOLD | THR. |
| FLOOR | FLR. | TOILET PAPER | T.P. |
| FLOOR DRAIN | F.D. | TOILET PAPER HOLDER | T.P.H. |
| FLUORESCENT | FLUOR. | TOLERANCE | TOL. |
| FOOTING | FTG. | TRANSFORMER | TRANS. |
| FOUNDATION | FDN. | TYPICAL | TYP. |
| FRAMING | FRM'G. | | |
| GAGE/GAUGE | GA. | UNDERWRITERS LABORATORY | U.L. |
| GALVANIZE | GALV. | UNLESS OTHERWISE NOTED | U.O.N. |
| GALVANIZED IRON | G.I. | URINAL | UR. |
| GLASS | GL. | | |
| GRAB BAR | G.B. | VENTILATE/VENTILATION | VENT. |
| GRADE | GR. | VENT THROUGH ROOF | V.T.R. |
| GROUND | GND. | VERTICAL | VERT. |
| GYPSUM | GYP. | VINYL COMPOSITION TILE | V.C.T. |
| GYPSUM BOARD | G.B.,GYP.BD. | VINYL WALL COVERING | V.W.C. |
| | | VOLUME | VOL. |
| HARDWARE | HDW.HDWR. | WATER CLOSET | W.C. |
| HEAD | HD. | WATER PROOF | W.P. |
| HEADER | HDR. | WATER RESISTANT | W.R. |
| HEIGHT | HT.,H. | WIDTH | W. |
| HOLLOW METAL | H.M. | WIRE GLASS | W.GL. |
| HORIZONTAL | HORIZ. | WITH | W/ |
| HOT WATER | H.W. | WITHOUT | W/O |
| HOSE BIBB | H.B. | WOOD | WD. |
| | | WOOD SCREWS | W.S. |
| INCH | IN. | | |
| INSIDE DIAMETER/DIMENSION | I.D. | | |
| INSULATION | INSUL. | | |
| INTERIOR | INT. | | |
| JAMB | JB. | | |
| JOINT | JT. | | |

# NEW ELEMENTARY SCHOOL INCREMENT 3

## FOR BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

## SHEET INDEX


| SHT. NO. | DESCRIPTION |
|---|---|
| **GENERAL** | |
| T1.01 | TITLE SHEET |
| **ARCHITECTURAL** | |
| A1.01 | OVERALL SITE PLAN |
| A1.02 | ENLARGED SITE PLAN |
| **ELECTRICAL** | |
| E1.00 | SYMBOLS AND NOTES |
| E1.01 | SITE PLAN - ELECTRICAL |
| E1.02 | SITE PLAN - LOW VOLTAGE |
| E2.10 | SIGNAL AND COMMUNICATIONS - BLDG "C" |
| E2.20 | SIGNAL AND COMMUNICATIONS - BLDG "D" |
| E2.30 | SIGNAL AND COMMUNICATIONS - BLDG "E" |
| E2.40 | SIGNAL AND COMMUNICATIONS - BLDG "F" |
| E3.10 | FIRE ALARM PLAN - BLDG "C" |
| E3.20 | FIRE ALARM PLAN - BLDG "D" |
| E3.30 | FIRE ALARM PLAN - BLDG "E" |
| E3.40 | FIRE ALARM PLAN - BLDG "F" |
| E4.01 | FIRE ALARM RISER DIAGRAM & BATTERY CALCULATION |
| E4.02 | LOW VOLTAGE RISER DIAGRAMS AND DETAILS |
| E4.03 | SINGLE LINE DIAGRAM |
| E5.01 | FIRE ALARM SPECIFICATION — 18 SHEETS |

**STOCKPILE # 02-113899 30' x 32' RELOCATABLE**

| | |
|---|---|
| T-1.00-R | TITLE SHEET |
| T-1.00 | (02-113899) TITLE SHEET |
| T-1.01 | (02-113899) TEST INSPECTIONS AND GUIDELINES |
| **ARCHITECTURAL** | |
| A-1.00-R | FLOOR PLAN - BUILDING C |
| A-1.01-R | FLOOR PLAN - BUILDING D |
| A-1.02-R | FLOOR PLAN - BUILDING E |
| A-1.03-R | FLOOR PLAN - BUILDING F |
| A-1.04-R | ENLARGED PLAN - BUILDING C |
| A-1.05-R | ENLARGED PLAN - BUILDING D |
| A-1.02 | (02-113899) FLOOR PLANS |
| A-1.04 | (02-113899) FLOOR PLANS |
| A-1.06-R | REFLECTED CEILING PLAN - BUILDING C |
| A-1.07-R | REFLECTED CEILING PLAN - BUILDING D |
| A-1.08-R | REFLECTED CEILING PLAN - BUILDING E |
| A-1.09-R | REFLECTED CEILING PLAN - BUILDING F |
| A-1.10 | (02-113899) CEILING DETAILS |
| A-1.12 | (02-113899) CEILING PLANS |
| A-1.21-R | DOOR, FINISH & WINDOW SCHEDULES |
| A-1.21 | (02-113899) DOOR AND WINDOW SCHED, GEN. NOTES & DETAILS |
| A-2.00-R | INTERIOR ELEVATIONS |
| A-2.01-R | INTERIOR ELEVATIONS |
| A-2.02-R | INTERIOR ELEVATIONS |
| A-2.00 | (02-113899) INTERIOR ELEVATIONS |
| A-2.20-R | ACCESSIBILITY DETAILS |
| A-2.20 | (02-113899) ACCESSIBILITY DETAILS |
| A-3.00-R | EXTERIOR ELEVATIONS - BUILDING C |
| A-3.01-R | EXTERIOR ELEVATIONS - BUILDING D |
| A-3.02-R | EXTERIOR ELEVATIONS - BUILDING E |
| A-3.03-R | EXTERIOR ELEVATIONS - BUILDING F |
| A-3.04 | (02-113899) EXTERIOR ELEVATIONS |
| A-3.05 | (02-113899) EXTERIOR ELEVATIONS |
| A-4.00-R | ROOF PLAN - BUILDING C |
| A-4.01-R | ROOF PLAN - BUILDING D |
| A-4.02-R | ROOF PLAN - BUILDING E |
| A-4.03-R | ROOF PLAN - BUILDING F |
| A-4.00 | (02-113899) ROOF PLAN — 33 SHEETS |

| SHT. NO. | DESCRIPTION |
|---|---|
| A-5.00-R | BUILDING SECTIONS - BUILDING C |
| A-5.01-R | BUILDING SECTIONS - BUILDING D |
| A-5.02-R | BUILDING SECTIONS - BUILDING E |
| A-5.00 | (02-113899) SECTIONS |
| A-6.00 | (02-113899) DETAILS |
| A-6.01 | (02-113899) DETAILS |
| A-6.02-R | DETAILS |
| A-6.03-R | DETAILS — 8 SHEETS |
| **STRUCTURAL** | |
| S-1.1 | (02-113899) GENERAL NOTES |
| S-1.2 | (02-113899) GENERAL NOTES |
| S-1.3 | (02-113899) GENERAL NOTES |
| S-1.4 | (02-113899) TYPICAL DETAILS |
| S-1.5A | (02-113899) TYPICAL DETAILS |
| S-1.6 | (02-113899) TYPICAL DETAILS |
| S-3.2 | FOUNDATION DETAILS |
| S2C.1 | EMBEDMENT PLAN |
| S2C.2 | FOUNDATION PLAN |
| S2D.1 | EMBEDMENT PLAN |
| S2D.2 | FOUNDATION PLAN |
| S2E.1 | EMBEDMENT PLAN |
| S2E.2 | FOUNDATION PLAN |
| S2F.1 | EMBEDMENT PLAN |
| S2F.2 | FOUNDATION PLAN |
| S-2.1 | (02-113899) EMBEDMENT PLAN |
| S-3.1 | (02-113899) FOUNDATION PLAN |
| S-3.2 | FOUNDATION PLAN |
| S-4.1 | (02-113899) ROOF FRAMING PLAN - SINGLE SLOPE OVERHANG |
| S-5.1 | (02-113899) FRAME ELEVATIONS & DETAILS - SINGLE SLOPE |
| S-5.2 | (02-113899) FRAME ELEVATIONS & DETAILS - SINGLE SLOPE |
| S-5.3 | FRAME ELEVATIONS & DETAILS |
| S-5.4 | FRAME ELEVATIONS & DETAILS /3 |
| S-5.5 | FRAME ELEVATIONS & DETAILS |
| S-5.6 | FRAME ELEVATIONS & DETAILS |
| S-5.7 | FRAME ELEVATIONS & DETAILS |
| S-5.8 | FRAME ELEVATIONS & DETAILS |
| S-5.9 | (02-113899) FRAME ELEVATIONS |
| S-5.11 | FACADE WALL FRAMING DETAILS |
| S-5.12 | FACADE WALL FRAMING DETAILS /3 |
| S-5.13 | FRAME ELEVATIONS & DETAILS |
| S-6.1 | (02-113899) FOUNDATION DETAILS |
| S-6.2 | (02-113899) FOUNDATION DETAILS |
| S-7.1 | (02-113899) FRAMING DETAILS |
| S-7.2 | (02-113899) FRAMING DETAILS - ROOF OVERHANG — 35 SHEETS |
| **MECHANICAL** | |
| M-1.00-R | MECHANICAL FLOOR PLAN |
| M-1.01-R | MECHANICAL FLOOR PLAN |
| M-2.00-R | MECHANICAL FLOOR PLAN |
| M-2.01-R | MECHANICAL FLOOR PLAN |
| M-3.00-R | MECHANICAL FLOOR PLAN |
| M-3.01-R | MECHANICAL FLOOR PLAN |
| M-4.00-R | MECHANICAL FLOOR PLAN |
| M-4.01-R | MECHANICAL FLOOR PLAN |
| M-5.00-R | MECHANICAL DETAILS |
| M-0.01 | (02-113899) MECHANICAL NOTES & SYMBOLS |
| M-2.02 | (02-113899) MECHANICAL PLANS |
| M-2.05 | (02-113899) MECHANICAL PLANS |
| M-5.01 | (02-113899) MECHANICAL DETAILS — 13 SHEETS |
| **ELECTRICAL** | |
| E-1.00-R | ELECTRICAL POWER PLAN |
| E-1.01-R | ELECTRICAL LIGHTING PLAN |
| E-2.00-R | ELECTRICAL POWER PLAN |
| E-2.01-R | ELECTRICAL LIGHTING PLAN |
| E-3.00-R | ELECTRICAL POWER PLAN |
| E-3.01-R | ELECTRICAL LIGHTING PLAN |
| E-4.00-R | ELECTRICAL POWER PLAN |
| E-4.01-R | ELECTRICAL LIGHTING PLAN |
| E-5.01-R | ELECTRICAL DETAILS |
| E-5.02-R | ELECTRICAL SCHEDULES |
| E-0.01 | (02-113899) ELECTRICAL NOTES & SYMBOLS |
| E-1.03 | (02-113899) ELECTRICAL PLANS |
| E-1.08 | (02-113899) ELECTRICAL PLANS |
| E-5.03 | (02-113899) ELECTRICAL LIGHTING SCHEDULES & DETAILS — 14 SHEETS |
| **PLUMBING** | |
| P-1.00-R | PLUMBING PLAN - S&W |
| P-1.01-R | PLUMBING PLAN - DCW & DHW |
| P-2.00-R | PLUMBING PLAN - S&W |
| P-2.01-R | PLUMBING PLAN - DCW & DHW |
| P-3.00-R | PLUMBING PLAN - S&W |
| P-3.01-R | PLUMBING PLAN - DCW & DHW |
| P-4.00-R | PLUMBING PLAN - S&W |
| P-4.01-R | PLUMBING PLAN - DCW & DHW |
| P-4.05-R | ENLARGED PLUMBING PLAN |
| P-4.06-R | ENLARGED PLUMBING PLAN |
| P-5.00-R | PLUMBING DETAILS |
| P-0.01 | (02-113899) PLUMBING NOTES & SYMBOLS |
| P-1.02 | (02-113899) PLUMBING PLANS |
| P-5.01 | (02-113899) PLUMBING NOTES & SYMBOLS — 14 SHEETS |
| **FIRE SPRINKLERS** | |
| FP-1 | BUILDING C FIRE SPRINKLER PLAN |
| FP-2 | BUILDING D FIRE SPRINKLER PLAN |
| FP-3 | BUILDING E FIRE SPRINKLER PLAN |
| FP-4 | BUILDING F FIRE SPRINKLER PLAN |
| FP-5 | FIRE SPRINKLER DETAILS |
| FP-6 | FIRE SPRINKLER DETAILS |
| FP-2M | (02-113899) FIRE SPRINKLER PLANS |
| FP-4M | (02-113899) FIRE SPRINKLER PLANS — 8 SHEETS |
| **TITLE 24** | |
| EC-1.01-R | ENERGY CALC. BUILDING C |
| EC-1.02-R | ENERGY CALC. BUILDING C |
| EC-1.03-R | ENERGY CALC. BUILDING D |
| EC-1.04-R | ENERGY CALC. BUILDING D |
| EC-1.05-R | ENERGY CALC. BUILDING E |
| EC-1.06-R | ENERGY CALC. BUILDING E |
| EC-1.07-R | ENERGY CALC. BUILDING F |
| EC-1.08-R | ENERGY CALC. BUILDING F — 8 SHEETS |

151 SHEETS


## GENERAL NOTES

1. ALL WORK SHALL CONFORM TO TITLE 24, 2016 CALIFORNIA CODE OF REGULATIONS.
2. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDUM OR CONSTRUCTION CHANGE DOCUMENT AND APPROVED BY DSA AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, C.C.R.
3. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE SCHOOL BOARD SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
4. ALL SPECIFICATIONS FOR ALTERATION, REHABILITATION OR RECONSTRUCTION PROJECTS; "THE INTENT" OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISH WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK."
5. A COPY OF TITLE-24, ALL PARTS APPLICABLE, TO BE KEPT AT THE JOB SITE AT ALL TIMES.
6. SUBSTITUTIONS AFFECTING DSA-REGULATED ITEMS WILL BE CONSIDERED AS CHANGES TO APPROVED PLANS OR SPECIFICATIONS. THEY ARE TO BE TREATED AS ADDENDA OR CONSTRUCTION CHANGE DOCUMENTS, AND WILL REQUIRE DSA'S APPROVAL PRIOR TO FABRICATION AND INSTALLATION. (SEC.4-338(C), PART 1, AND IR-6)
7. ADDENDA SHALL BE STAMPED AND SIGNED BY A/E ON RECORD AND DELEGATED DESIGN PROFESSIONAL WHEN APPLICABLE, AND APPROVED BY DSA (SEC. 4-338(B), PART 1).
8. CONSTRUCTION CHANGE DOCUMENTS AND SUPPLEMENTARY DRAWINGS SHALL BE PREPARED AND SUBMITTED TO DSA IN COMPLIANCE TO DSA INTERPRETATION OF REGULATION IR A-6 (SEC. 4-338(C), PART 1).
9. THE TESTING LAB, WHEN REQUIRED, MUST BE EMPLOYED BY THE OWNER AND APPROVED BY A/E ON RECORD, STRUCTURAL ENGINEER WHEN APPLICABLE, AND DSA. (SEC.4-341(D), PART 1)
10. CFC CHAPTER 33, CBC CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION SHALL BE REGULATED
11. FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECTS OR STRUCTURAL ENGINEER AND APPROVED BY THE DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.
12. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
13. REFER TO RELOCATABLE BUILDING MANUFACTURER'S DRAWINGS FOR ALL INFORMATION REGARDING THE RELOCATABLE BUILDINGS
14. THE FOLLOWING DOCUMENTS SHALL BE ON THE JOBSITE PRIOR TO INSTALLATION OF UNITS:
    A. IN-PLAN VERIFIED REPORT
    B. LABORATORY VERIFIED REPORT
    C. WELDING VERIFIED REPORT
    THE SITE INSPECTOR SHALL VERIFY THE ABOVE DOCUMENTS AND SERIAL NUMBERS ARE APPLICABLE TO EACH UNIT PRIOR TO INSTALLATION OF THE UNITS.
    NOTIFY ARCHITECT AND DIVISION OF THE STATE ARCHITECT FIELD ENGINEER IF ANY DISCREPANCIES OCCUR
15. IN-PLANT INSPECTOR AND MANUFACTURER SHALL FOLLOW THE REQUIREMENTS OF DSA IR16-1.13 AND INCLUDE THE FOLLOWING INFORMATION ON ID TAG OF SHOP FABRICATED RELOCATABLE STRUCTURES:
    1. THE DSA APPLICATION NUMBER AND CBC EDITION UNDER WHICH THE BUILDING CONSTRUCTION WAS AUTHORIZED
    2. THE MANUFACTURER OR BUILDINGS NAME
    3. THE SERIAL NUMBER
    4. THE DESIGN CLIMATE ZONE
    5. THE DESIGN LIVE LOADS FOR THE ROOF AND FLOOR
    6. THE DESIGN WIND SPEED AND EXPOSURE CATEGORY
    7. THE SEISMIC DESIGN Ss

## INSPECTOR OF RECORD

THIS PROJECT REQUIRES A CLASS 2 INSPECTOR. THE INSPECTOR OF RECORD SHALL BE DSA APPROVED AND CONFORM TO THE CLASSIFICATION CRITERIA AS PROVIDED IN INTERPRETATION OF REGULATIONS (IR) A-7, DATED SEPTEMBER 18, 2007.

THE INSPECTOR SHALL BE EMPLOYED BY THE DISTRICT AND APPROVED BY THE RESPONSIBLE ARCHITECT.

## PROJECT DIRECTORY

**OWNER:**
BAKERSFIELD CITY SCHOOL DISTRICT
DOC ERVIN, SUPERINTENDENT
1300 BAKER STREET
BAKERSFIELD, CA 93305
TEL: 661-631-4676

**ARCHITECT:**
CURTIS E. FLYNN
INTEGTRATED DESIGN by SOMAM, Inc.
6011 N. FRESNO SUITE #130
FRESNO, CA 93710
TEL: 559-436-0881
FAX. 559-436-0887

**COMMUNICATIONS:**
FRED BRAKEMAN
**INFINITY COMMUNICATIONS & CONSULTING**
P.O. BOX 999
BAKERSFIELD, CA 93302
TEL: 661-716-1840

**ELECTRICAL ENGINEER:**
JOHN CHONG
JOHN CHONG ENGINEERING
433 E. KEATS AVE
FRESNO, CA 93710
TEL: 559-325-9988
FAX:

**MODULAR BUILDING MANUFACTURER:**
JTS MODULAR
CHUCK RICHMOND
7001 Mc DIVIT
BAKERSFIELD, CA 93313
TEL: 661-835-9270
FAX:

## BUILDING DATA

BUILDING C (CLASSROOM)
TYPE VB-S1
11,642 SQ. FT. BLDG. AREA
E - NON-SEPERATED

BUILDING D (CLASSROOM)
TYPE VB-S1
11,642 SQ. FT. BLDG. AREA
E - NON-SEPERATED

BUILDING E (CLASSROOM
TYPE VB-S1
12,609 SQ. FT. BLDG. AREA
E - NON-SEPERATED

BUILDING F (CLASSROOM)
TYPE VB-S1
12,609 SQ. FT. BLDG. AREA
E - NON-SEPERATED

## SOILS REPORT

REFER TO GEOTECH REPORT AS PREPARED BY:
KRAZAN AND ASSOCIATES GEOTECHNICAL ENGINEERING, PROJECT NO. 022-17101
DATED NOVEMBER 1, 2017

ALL CONDITIONS OF GEOTECH REPORT HAVE BEEN REVIEWED AND APPROVED WITHIN INCREMENT 2 OF THIS APPLICATION.

## APPLICABLE CODES:

COMPLY WITH PART 1, TITLE 24, 2016 CCR.

A COPY OF TITLE 24 SHALL BE ON SITE AT ALL TIMES. CONSTRUCTION SHALL COMPLY WITH TITLE 24 CALIFORNIA CODE OF REGULATIONS. INCLUDING THE FOLLOWING:

TITLE 24, CCR, PART 2, 2016 CBC
(2012 IBC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 3, 2016 CEC
(2011 NEC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 4, 2016 CMC
(2012 UMC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 5, 2016 CPC
(2012 UPC, WITH CALIFORNIA AMENDMENTS).

TITLE 24, CCR, PART 6, 2016 CEC

TITLE 24, CCR, PART 9, 2016 CFC
(2012 IFC, WITH CALIFORNIA AMENDMENTS).

TITLE 19, CCR.

NFPA 72, 2016 EDITION
(AS PER CA AMENDMENTS)

## ARCHITECT'S STATEMENT

**ARCHITECT'S STATEMENT FOR PLANS PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS**

THESE DRAWINGS AND/OR SPECIFICATIONS AND/OR CALCULATIONS FOR THE ITEMS LISTED IN THE SHEET INDEX AND CHECKED BELOW HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DOCUMENTS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR DESIGN INTENT AND HAVE BEEN FOUND TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME.

THE ITEMS CHECKED BELOW ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT FOR WHICH I AM THE INDIVIDUAL DESIGNATED TO BE IN RESPONSIBLE CHARGE (OR OF WHICH I HAVE DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK.)

SEE THE SHEET INDEX ON THIS SHEET FOR DRAWINGS OTHER THAN ARCHITECTURAL.

APPLICABLE:

☐ STRUCTURAL ☐ PLUMBING ☐ MECHANICAL ☒ ELECTRICAL
☐ CIVIL ☒ RELOCATABLE BLDG.

SIGNATURE OF THE ARCHITECT/ENGINEER — DATE 06.26.18
NAME, TITLE, AFFIRMATION
CURTIS E. FLYNN, ARCHITECT, INTEGRATED DESIGNS BY SOMAM, INC.

C-28966 — LICENSED NUMBER
05-31-19 — EXPIRATION DATE

## SYMBOLS

SECTION KEY
A / A3.03 — SECTION IDENTIFICATION / SHEET NUMBER

DETAIL KEY
1 / A2.01 — DETAIL NUMBER / SHEET NUMBER

INTERIOR ELEVATION KEY
A — ELEVATION DIRECTION
D — 1 / A5.01 — B — ELEVATION IDENTIFICATION / SHEET NUMBER
C
+1'-0" — ELEVATION DATUM
INDICATES HEIGHT IN RELATION TO 0'-0"

ROOM NUMBER / FINISH TAG
OFFICE — ROOM NAME
100 — ROOM NUMBER
A

WINDOW SCHEDULE KEY
1 — KEYNOTE SCHEDULE KEY
201 — DOOR SCHEDULE KEY


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www.integratedesigns.com


| Rev. Date: | Revision: | Revision Description: |
|---|---|---|
| | | |
| 06.24.18 | 3 | ADDENDUM 3 |

Sheet Title: TITLE SHEET

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 — BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Date: | Designed: | DR: | PC: |
|---|---|---|---|---|
| 01-31-18 | 04/04/19 | -- | -- | INITIALS |

Agency Approval Stamp:

FILE # 15-6
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
03-118394
AC. FLS SS T&I
DATE 5/6/19
TRACKING # 63321-300
ADDENDUM #3

Stamp(s):

REGISTERED ARCHITECT CURTIS E. FLYNN No. C 28966 5-31-19 STATE OF CALIFORNIA

Job No.: 5262

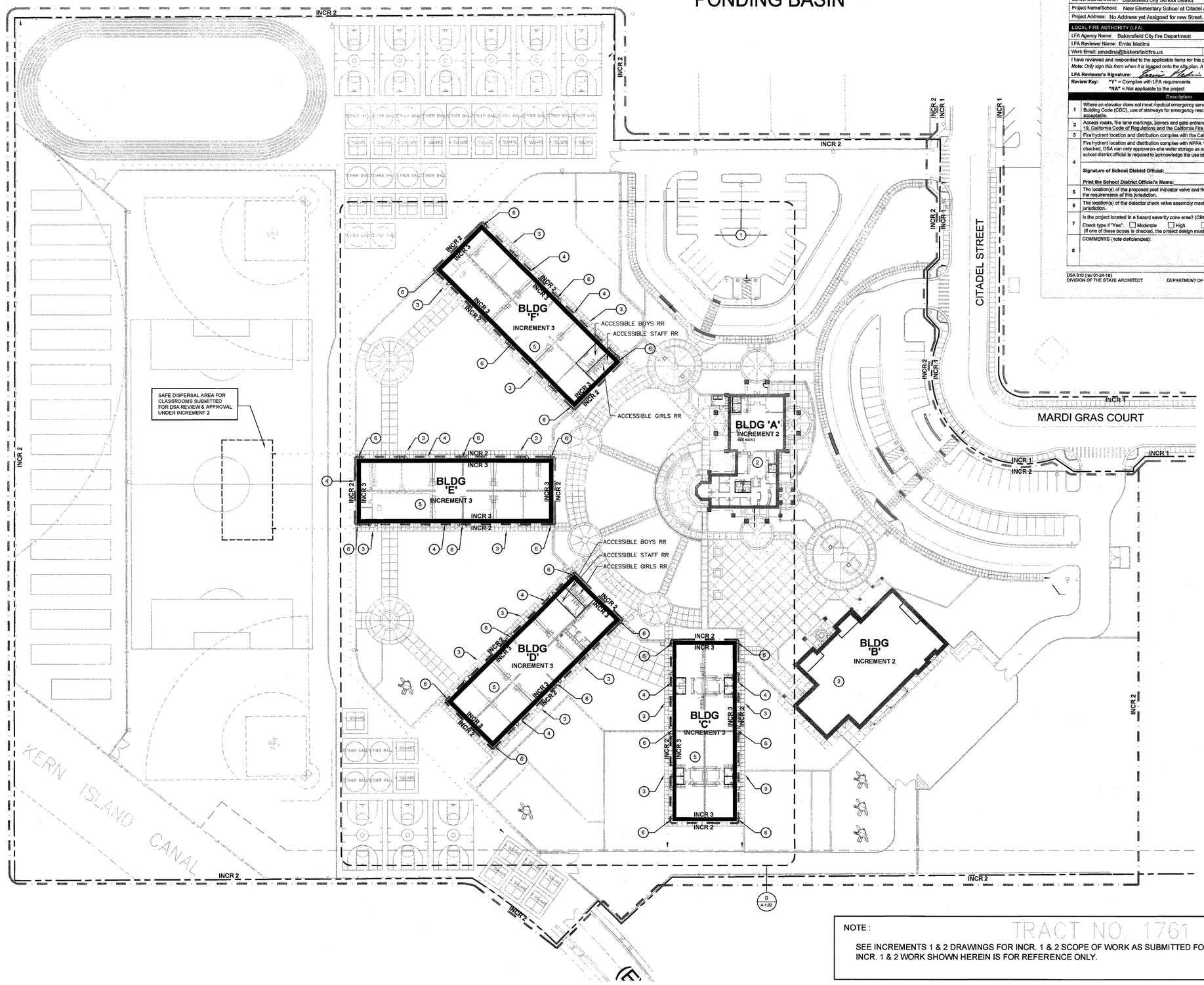
Sheet No.: T1.01

Release: ADDENDUM 3

G:\2017\fra\17-5262 BCSD New Elementary\Sheets\Increment No. 3\Architectural\General\T1.01 COVER SHEET.dwg RICHARD DELLANINI

# BELLE TERRACE PARK
# EXPANSION SITE
# MAP #9-P1 BELTER 1a M2

# SUMP SITE
# BK. 5262, PG. 435 O.R.
# PONDING BASIN




NOTE : TRACT NO. 1761

SEE INCREMENTS 1 & 2 DRAWINGS FOR INCR. 1 & 2 SCOPE OF WORK AS SUBMITTED FOR DSA REVIEW APPROVAL.
INCR. 1 & 2 WORK SHOWN HEREIN IS FOR REFERENCE ONLY.

## OVERALL SITE PLAN
### INCREMENT 3

SCALE: ########

## DSA 810

## LOCAL FIRE AUTHORITY REVIEW

To facilitate the Division of the State Architect's (DSA) approval of the Fire/Life Safety portion of a project, DSA requires Local Fire Authority (LFA) review of certain elements as identified in this form. Use of this form is mandatory for projects that add square footage to a campus or if any item on this form is relevant to the project. For additional information, see DSA 810 Instructions and DSA Policy 09-01.

**PROJECT INFORMATION**

School District/Owner: Bakersfield City School District
Project Name/School: New Elementary School at Citadel and Mardi Gras
Project Address: No Address yet Assigned for new Street.

**LOCAL FIRE AUTHORITY (LFA)**

LFA Agency Name: Bakersfield City fire Department
LFA Reviewer Name: Ernie Medina | Title: Fire Plans Examiner
Work Email: emedina@bakersfieldfire.us | Work Telephone Number: (661) 326-3682

I have reviewed and responded to the applicable items for this project as listed below.
*Note: Only sign this form when it is legged onto the site plan. A loose form is not acceptable to DSA.*

LFA Reviewer's Signature: Date: 6/11/18

Review Key: "Y" = Complies with LFA requirements "N" = Not approved (complete Section 8) "NA" = Not applicable to the project "NR" = LFA elects not to review

| | Description | Y | N | NA | NR |
|---|---|---|---|---|---|
| 1 | Where an elevator does not meet medical emergency service cab size, per the California Building Code (CBC), use of stairways for emergency rescue and patient transport is acceptable. | | | X | |
| 2 | Access roads, fire lane markings, pavers and gate entrances are in accordance with Title 19, California Code of Regulations and the California Fire Code, Chapter 5. | X | | | |
| 3 | Fire hydrant location and distribution complies with the California Fire Code (or see # 4). | X | | | |
| 4 | Fire hydrant location and distribution complies with NFPA 1142, "Alternate Means." If "NR" is checked, DSA can only approve on-site water storage as an alternate. The signature of the school district official is required to acknowledge the use of alternate means. | | | | X |
| | **Signature of School District Official:** Date: | | | | |
| | **Print the School District Official's Name:** | | | | |
| 5 | The location(s) of the proposed post indicator valve and fire department connection meet the requirements of this jurisdiction. | X | | | |
| 6 | The location(s) of the detector check valve assembly meet the requirements of this jurisdiction. | X | | | |
| 7 | Is the project located in a hazard severity zone area? (CBC, Chapter 7A, Section 701A.) ☐ Yes ☒ No Check type if "Yes": ☐ Moderate ☐ High ☐ Very High ☐ WIFA (If one of these boxes is checked, the project design must meet the requirements of Chapter 7A.) | | | | |
| 8 | COMMENTS (note deficiencies): | | | | |

DSA 810 (rev 01-24-18) DIVISION OF THE STATE ARCHITECT | DEPARTMENT OF GENERAL SERVICES | Page 1 of 1 STATE OF CALIFORNIA

## KEY NOTES

1. PARKING LOT, PART OF INCREMENT 2 (NO WORK).
2. BUILDING, PART OF INCREMENT 2. (NO WORK)
3. CONCRETE WALKS, PART OF INCREMENT 2 (NO WORK).
4. LIMITS OF WORK INCREMENT 3
5. NEW RELOCATABLE CLASSROOM ON CONCRETE FOUNDATION. REFER TO MANUFACTURES DRAWINGS FOR ADDITIONAL INFORMATION
6. DOWNSPOUT PER BUILDING MFR. CONNECT TO STORM DRAIN SYSTEM - SEE CIVIL FOR P.O.C. (INCREMENT 2)

## ACCESSIBILITY NOTES

NOTE :
ACCESSIBLE ROUTE SUBMITTED FOR DSA REVIEW & APPROVAL UNDER INCREMENT 2 & SHOWN HERE FOR REFERENCE ONLY.

A. ACCESSIBLE ROUTE, AS INDICATED, IS A COMMON BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING ¼" BEVELED AT 1:2 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEED ½" VERTICAL AND IS AT LEAST 48" WIDE. THE PATH SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. PASSING SPACES (11B-403.2) AT LEAST 60"x60" ARE LOCATED NOT MORE THAN 200' APART. PARTS OF P.O.T. WITH CONTINUOUS GRADIENTS HAVE 60" LEVEL AREAS (11B-403.7) NOT MORE THAN 400' APART. THE CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL AND IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE ROUTE SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" (11B-204 & 11B-307).

B. ACCESSIBLE ROUTE IS A MINIMUM OF 48" WIDE SLIP RESISTANT SURFACE WITH 5% MAX. SLOPE AND 2% MAX. CROSS SLOPE TYP. THERE IS NO DROP. OFF OVER 4" AT THE EDGE OF A WALK OR LANDING. ARCHITECT AND CONTRACTOR SHALL VERIFY THAT ALL BARRIERS ON THE INDICATED PATH OF TRAVEL HAVE BEEN REMOVED.

C. WALKS IN THE ACCESSIBLE ROUTE SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. IF GRATING ARE INSTALLED, GRID OPENINGS IN THESE GRATES SHALL BE ½" MAXIMUM IN THE DIRECTION OF TRAFFIC FLOW. (SEC. 11B-302.4) IF SUCH CONDITION OCCURS, WHERE THERE IS NO DOMINANT DIRECTION ½" MAX. OPENING SHALL BE FOR ALL DIRECTIONS.

D. (WHEN PROVIDED) GATES IN ACCESSIBLE ROUTE MUST COMPLY WITH DOOR REQUIREMENTS (SEE SECTION 11B-206.5) PROVIDE SMOOTH SURFACE AT BOTTOM 10 INCHES OF GATE. SPECIFY ACCESSIBLE HARDWARE

## GENERAL NOTES

A. GENERAL CONTRACTOR SHALL FIELD VERIFY ALL SITE CONDITIONS PRIOR TO BID. IF ANY DISCREPANCIES ARE FOUND, THE ARCHITECT SHALL BE NOTIFIED IN WRITING.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF LAYOUTS AND ESTABLISHED LOCATIONS OF BURIED UTILITY LINES. ANY UTILITIES REQUIRING RELOCATION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. CONTACT APPLICABLE GOVERNING AGENCIES REGARDING ARRANGEMENT AND COORDINATION OF WORK.

C. GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ANY COMPACTION RETEST DUE TO INITIAL FAILURE. REFER TO RECOMMENDATIONS IN GEOTECHNICAL REPORT DATED 11/1/2017 BY KRAZAN & ASSOCIATED FOR PROJECT NO. 022-17101.

D. PROJECT INSPECTOR SHALL BE EMPLOYED BY THE OWNER, APPROVED BY THE RESPONSIBLE ARCHITECT AND DSA.

E. A COPY OF TITLE-24, ALL PARTS APPLICABLE, TO BE KEPT AT THE JOB SITE AT ALL TIMES.

F. ADDENDA SHALL BE SIGNED BY THE ARCHITECT (RESPONSIBLE IN CHARGE) AND APPROVED BY DSA.

G. CONSTRUCTION CHANGE DOCUMENTS SHALL BE SIGNED BY THE ARCHITECT (RESPONSIBLE IN CHARGE), OWNER, AND APPROVED BY DSA.

H. TESTING LAB SHALL BE EMPLOYED BY THE OWNER, APPROVED BY THE RESPONSIBLE ARCHITECT AND DSA.

I. ALL COMPLETED WORK SURFACES DISTURBED OR DAMAGED BY SUBSEQUENT WORK SHALL BE REPAIRED IN KIND, TEXTURED AND FINISHED TO MATCH ADJACENT SURFACES.

J. ALL SIGNAGE PER PC DRAWINGS

K. SEE INCREMENT 2 FOR SITE DIMENSIONS

L. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING ADJACENT FACILITIES FROM DAMAGE INCLUDING BUT NOT LIMITED TO EXISTING FOUNDATIONS SLAB-ON-GRADE, PAVEMENT, UTILITIES, STREETS, ETC.

M. CONTRACTORS SHALL REVIEW AND COORDINATE ALL SITE WORK SHOWN ON ARCHITECTURAL DRAWINGS WITH CIVIL ELECTRICAL, MECHANICAL, LANDSCAPE AND OTHER DRAWINGS AND SPECIFICATIONS PRIOR TO BID AND CONSTRUCTION THAT WILL INCLUDE OTHER WORK NOT SHOWN ON ARCHITECTURAL DRAWINGS SHOULD CONTRADICTIONS OCCUR, OBTAIN CLARIFICATION FROM ARCHITECT PRIOR TO BID. OTHERWISE CONTRACTORS SHALL BE RESPONSIBLE TO PROVIDE THE MORE RESTRICTIVE REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

## FLS NOTES

SEE INCREMENT 2 DRAWINGS FOR DSA REVIEW & APPROVAL OF SITE FIRE ACCESS & LFA REVIEW & DSA 810

SEE INCREMENT 1 FOR OFF-SET FIRE HYDRANTS

## LEGEND

- BLDG X / INCR 2 — INDICATES BUILDING SUBMITTED FOR DSA REVIEW & APPROVAL UNDER INCREMENT 2
- BLDG X / INCR 3 — INDICATES BUILDING PART OF INCREMENT 3
- INDICATES NEW CONCRETE SIDEWALK - PART OF INCREMENT 2
- INDICATES ACCESSIBLE ROUTE SUBMITTED FOR DSA REVIEW & APPROVAL UNDER INCREMENT 2
- PROPERTY LINE
- INCR 2 / INCR 3 — DESIGNATE SCOPES OF WORK BOUNDARY LIMITS FOR DESIGNATED INCREMENT


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6011 N. Fresno, Suite 130 – Fresno, California 93710
Phone (559) 436-0881 Fax (559) 436-0887 C-4025 dsign@somah.com www.integrateddesigns.com


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Sheet Title: OVERALL SITE PLAN

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Agency Approval Stamp:

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DIV. OF THE STATE ARCHITECT
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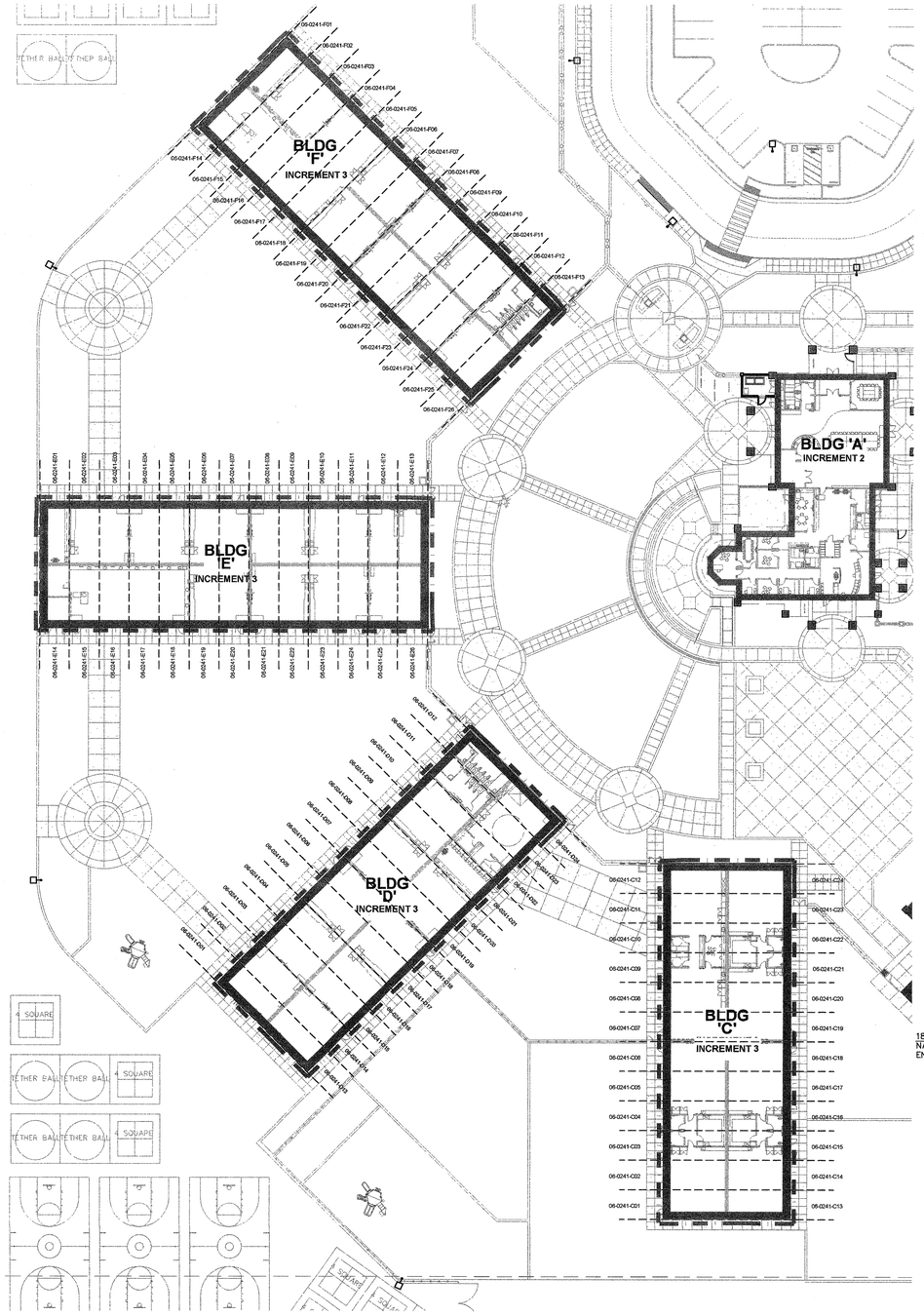
LICENSED ARCHITECT CURTIS E. FLYNN No. C 28966 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

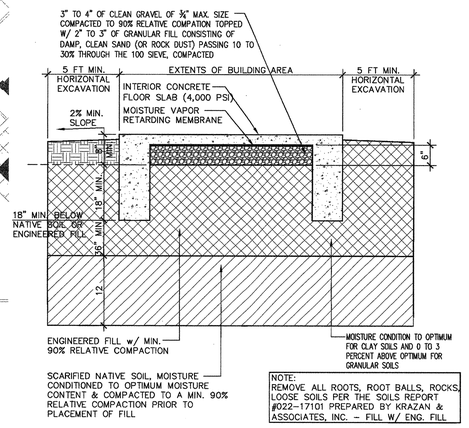
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**OVER EXCAVATION REQUIREMENTS @ BLDG S.O.G & FOUND.**

ADS100-08
FOR PROPOSED BUILDINGS

SCALE: N.T.S.

# ENLARGED SITE PLAN

## INCREMENT 3

SCALE: 1" = 30'

## SERIAL NUMBER SCHEDULE

| BLDG "C" | BASED ON STKPLE | SERIAL # |
|---|---|---|
| 1 | 02-113899 | 06-0241-C01 |
| 2 | 02-113899 | 06-0241-C02 |
| 3 | 02-113899 | 06-0241-C03 |
| 4 | 02-113899 | 06-0241-C04 |
| 5 | 02-113899 | 06-0241-C05 |
| 6 | 02-113899 | 06-0241-C06 |
| 7 | 02-113899 | 06-0241-C07 |
| 8 | 02-113899 | 06-0241-C08 |
| 9 | 02-113899 | 06-0241-C09 |
| 10 | 02-113899 | 06-0241-C10 |
| 11 | 02-113899 | 06-0241-C11 |
| 12 | 02-113899 | 06-0241-C12 |
| 13 | 02-113899 | 06-0241-C13 |
| 14 | 02-113899 | 06-0241-C14 |
| 15 | 02-113899 | 06-0241-C15 |
| 16 | 02-113899 | 06-0241-C16 |
| 17 | 02-113899 | 06-0241-C17 |
| 18 | 02-113899 | 06-0241-C18 |
| 19 | 02-113899 | 06-0241-C19 |
| 20 | 02-113899 | 06-0241-C20 |
| 21 | 02-113899 | 06-0241-C21 |
| 22 | 02-113899 | 06-0241-C22 |
| 23 | 02-113899 | 06-0241-C23 |
| 24 | 02-113899 | 06-0241-C24 |

| BLDG "D" | BASED ON STKPLE | SERIAL # |
|---|---|---|
| 1 | 02-113899 | 06-0241-D01 |
| 2 | 02-113899 | 06-0241-D02 |
| 3 | 02-113899 | 06-0241-D03 |
| 4 | 02-113899 | 06-0241-D04 |
| 5 | 02-113899 | 06-0241-D05 |
| 6 | 02-113899 | 06-0241-D06 |
| 7 | 02-113899 | 06-0241-D07 |
| 8 | 02-113899 | 06-0241-D08 |
| 9 | 02-113899 | 06-0241-D09 |
| 10 | 02-113899 | 06-0241-D10 |
| 11 | 02-113899 | 06-0241-D11 |
| 12 | 02-113899 | 06-0241-D12 |
| 13 | 02-113899 | 06-0241-D13 |
| 14 | 02-113899 | 06-0241-D14 |
| 15 | 02-113899 | 06-0241-D15 |
| 16 | 02-113899 | 06-0241-D16 |
| 17 | 02-113899 | 06-0241-D17 |
| 18 | 02-113899 | 06-0241-D18 |
| 19 | 02-113899 | 06-0241-D19 |
| 20 | 02-113899 | 06-0241-D20 |
| 21 | 02-113899 | 06-0241-D21 |
| 22 | 02-113899 | 06-0241-D22 |
| 23 | 02-113899 | 06-0241-D23 |
| 24 | 02-113899 | 06-0241-D24 |

| BLDG "E" | BASED ON STKPLE | SERIAL # |
|---|---|---|
| 1 | 02-113899 | 06-0241-E01 |
| 2 | 02-113899 | 06-0241-E02 |
| 3 | 02-113899 | 06-0241-E03 |
| 4 | 02-113899 | 06-0241-E04 |
| 5 | 02-113899 | 06-0241-E05 |
| 6 | 02-113899 | 06-0241-E06 |
| 7 | 02-113899 | 06-0241-E07 |
| 8 | 02-113899 | 06-0241-E08 |
| 9 | 02-113899 | 06-0241-E09 |
| 10 | 02-113899 | 06-0241-E10 |
| 11 | 02-113899 | 06-0241-E11 |
| 12 | 02-113899 | 06-0241-E12 |
| 13 | 02-113899 | 06-0241-E13 |
| 14 | 02-113899 | 06-0241-E14 |
| 15 | 02-113899 | 06-0241-E15 |
| 16 | 02-113899 | 06-0241-E16 |
| 17 | 02-113899 | 06-0241-E17 |
| 18 | 02-113899 | 06-0241-E18 |
| 19 | 02-113899 | 06-0241-E19 |
| 20 | 02-113899 | 06-0241-E20 |
| 21 | 02-113899 | 06-0241-E21 |
| 22 | 02-113899 | 06-0241-E22 |
| 23 | 02-113899 | 06-0241-E23 |
| 24 | 02-113899 | 06-0241-E24 |
| 24 | 02-113899 | 06-0241-E25 |
| 24 | 02-113899 | 06-0241-E26 |

| BLDG "F" | BASED ON STKPLE | SERIAL # |
|---|---|---|
| 1 | 02-113899 | 06-0241-F01 |
| 2 | 02-113899 | 06-0241-F02 |
| 3 | 02-113899 | 06-0241-F03 |
| 4 | 02-113899 | 06-0241-F04 |
| 5 | 02-113899 | 06-0241-F05 |
| 6 | 02-113899 | 06-0241-F06 |
| 7 | 02-113899 | 06-0241-F07 |
| 8 | 02-113899 | 06-0241-F08 |
| 9 | 02-113899 | 06-0241-F09 |
| 10 | 02-113899 | 06-0241-F10 |
| 11 | 02-113899 | 06-0241-F11 |
| 12 | 02-113899 | 06-0241-F12 |
| 13 | 02-113899 | 06-0241-F13 |
| 14 | 02-113899 | 06-0241-F14 |
| 15 | 02-113899 | 06-0241-F15 |
| 16 | 02-113899 | 06-0241-F16 |
| 17 | 02-113899 | 06-0241-F17 |
| 18 | 02-113899 | 06-0241-F18 |
| 19 | 02-113899 | 06-0241-F19 |
| 20 | 02-113899 | 06-0241-F20 |
| 21 | 02-113899 | 06-0241-F21 |
| 22 | 02-113899 | 06-0241-F22 |
| 23 | 02-113899 | 06-0241-F23 |
| 24 | 02-113899 | 06-0241-F24 |
| 24 | 02-113899 | 06-0241-F25 |
| 24 | 02-113899 | 06-0241-F26 |

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ARCHITECTURE · ENGINEERING · INTERIOR DESIGN · CONSTRUCTION MANAGEMENT
6011 N. Fresno, Suite 130 – Fresno, California 93710
Phone (559) 436-0881 Fax (559) 435-0887 E-Mail: dale@dkomm.com
www.integrateddesigns.com

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Job No.: 5262

Sheet No.: A1.02

Release: -

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## APPLICABLE CODES:

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS
TITLE 24 CCR, PART 1 – 2016 BUILDING STANDARDS ADMINISTRATIVE CODE
TITLE 24 CCR, PART 2 – 2016 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC) (2015 IBC, AS AMENDED BY CA.)
TITLE 24 CCR, PART 3 – 2016 ELECTRICAL CODE (CEC) (2014 NEC, AS AMENDED BY CA.)
TITLE 24 CCR, PART 4 – 2016 CALIFORNIA MECHANICAL CODE (CMC) (2015 IAPMO UMC, AS AMENDED BY CA.)
TITLE 24 CCR, PART 5 – 2016 CALIFORNIA PLUMBING CODE (CPC) (2015 IAPMO UPC, AS AMENDED BY CA.)
TITLE 24 CCR, PART 6 – 2016 CALIFORNIA ENERGY CODE
TITLE 24 CCR, PART 7 – 2016 CALIFORNIA ELEVATOR SAFETY CONSTRUCTION CODE
TITLE 24 CCR, PART 9 – 2016 CALIFORNIA FIRE CODE (CC) (2015 FCM AS AMENDED BY CA.)
TITLE 24 CCR, PART 12– 2016 CALIFORNIA REFERENCED STANDARDS (PARTIAL LIST – SEE CBC CH. 35 AND CFC CH. 45)
2016 NFPA 13, INSTALLATION OF SPRINKLER SYSTEM (CA. AMENDED)
2016 NFPA 14, DRY CHEMICAL EXTINGUISHING SYSTEMS
2016 NFPA 17A, WET CHEMICAL EXTINGUISHING SYSTEMS
2016 NFPA 20, INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2016 NFPA 25, INSPECTION, TESTING, MAINTENANCE OF WATER–BASE FIRE PROTECTION SYSTEMS (CA. AMENDED)
2016 NFPA 72, NATIONAL FIRE ALARM CODE (CA AMENDED); SEE UL STD 1971 FOR "VISUAL DEVICES"

## U.S.A. – UNDERGROUND SERVICE ALERT
## CALL BEFORE YOU DIG: 1–800–642–2444

THE LOCATION OF EXISTING UNDERGROUND UTILITIES WERE TAKEN FORM SOURCES BELIEVED TO BE RELIABLE. HOWEVER, THEY HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THIS ENGINEER. THE CONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTIFY OWNER 72 HOURS PRIOR TO ANY EXCAVATION

## CODE RULES AND REGULATIONS

ALL WORK AND MATERIAL SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHAL, THE CALIFORNIA ELECTRICAL CODE, THE SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY AND OTHER APPLICABLE STATE LAWS OR REGULATIONS. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APLICABLE TO THIS SUBJECT. CBC 2016, CMC 2016, CPC 2016, CEC 2016, NFPA, STATE OF CALIFORNIA ENERGY CONSERVATION REGULATION, TITLE 24 2016.

## ELECTRICAL ABBREVIATIONS

| | |
|---|---|
| A | AMPERES |
| AC | ALTERNATING CURRENT |
| AFF | ABOVE FINISHED FLOOR |
| AH | AIR HANDLER |
| AIC | AMPERES INTERRUPTING CAPACITY |
| AMP | AMPERES |
| A/C | AIR CONDITIONER |
| BKBD | BACKBOARD |
| C | CONDUIT |
| CB | CIRCUIT BREAKER |
| CU | COPPER |
| CCTV | CLOSED CIRCUIT TELEVISION |
| CEIL | CEILING |
| CKT | CIRCUIT |
| COMM | COMMUNICATION |
| CONT | CONTINUING |
| DIST | DISTRIBUTION |
| DF | ELECTRIC DRINKING FOUNTAIN |
| EMB | EMBEDMENT |
| EMT | ELECTRICAL METALLIC TUBING |
| EXP | EXPANSION |
| FACP | FIRE ALARM CONTROL PANEL |
| FCI | FAN COIL UNIT |
| GFI | GROUND FAULT INTERRUPTED |
| GND | GROUND |
| GRC | GALVANIZED RIGID CONDUIT |
| IC | INTERCOM |
| IMC | INTERMEDIATE METALLIC CONDUIT |
| KVA | KILOVOLTAMPERE |
| LAN | LOCAL AREA NETWORK |
| LTG | LIGHTING |
| MLO | MAIN LUGS ONLY |
| MSBD | MAIN SWITCHBOARD |
| MT'D | MOUNTED |
| NFD | NON FUSED DISCONNECT |
| NTL | NIGHT LIGHT |
| PA | PUBLIC ADDRESS |
| PB | PULL BOX |
| PNL | ELECTRICAL LIGHTING OR POWER PANEL |
| PVC | POLYVINYL CHLORIDE |
| P.G.& E. | PACIFIC GAS & ELECTRIC |
| RC | RELAY CABINET |
| REC | RECEPTACLE |
| REQ'D | REQUIREMENT |
| STD | STANDARD(S) |
| SW | SWITCH |
| SWBD | SWITCHBOARD |
| TC | TERMINAL CABINET |
| TEL | TELEPHONE |
| TERM | TERMINAL |
| TV | TELEVISION |
| TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSION |
| TYP | TYPICAL |
| T/C | TIME CLOCK |
| UTP | UNTWIST PAIR |
| U.O.N. | UNLESS OTHERWISE NOTED |
| V | VOLTS |
| WH | WATER HEATER |
| WP | WEATHERPROOF |

## ELECTRICAL SYMBOLS

- A-1 / 4 — HOME RUN MINIMUM 3/4" CONDUIT SIZE PER CEC TABLE 3B
- BRANCH CIRCUIT NO.
- NUMBER OF CONDUCTORS SIZE PER PANEL SCHEDULE
- LIGHT FIXTURE WITH J-BOX
- 2 x 0' A — FIXTURE TYPE
- SWITCHING
- BRANCH CIRCUIT
- DISTRIBUTION PANEL
- TERMINAL CABINET
- JUNCTION BOX
- WALL BRACKET OUTLET
- FLUORESCENT FIXTURE
- CEILING OUTLET
- 3 — BRANCH CIRCUIT NO.
- DUPLEX OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- FLOURPLEX CONVENIENCE OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- W.P. — WEATHERPROOF OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- I.G — ISOLATE GROUND OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- G.F.I — OUTLET WITH GROUND FAULT INTERRUPTER AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- 220V DEDICATE OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- 48" — WALL SWITCH +48" AFF TO TOP OF OUTLET BOX
- CONDUIT RUN UNDER FLOOR
- CONDUIT RUN IN CEILING AND IN WALL
- MOTOR DISCONNECT FUSED SWITCH
- C — CONDUIT RACEWAY
- (N) — NEW
- (E) — EXISTING

## ELECTRICAL GENERAL NOTES

1. VERIFY EXACT LOCATIONS WITH GENERAL CONTRACTOR FOR ALL ELECTRICAL EQUIPMENT ON SITE BEFORE STARTING WORK.
2. ELECTRICAL CONTRACTOR SHALL APPRISE HIMSELF OF ALL EXISTING ELECTRICAL CONDITIONS AT SITE PRIOR TO BID.
3. ELECTRICAL CONTRACTOR TO HOOK UP ALL MOTOR CONTROL SYSTEM AS PER MECHANICAL & PLUMBING PLANS.
4. CIRCUIT BREAKERS USED TO SWITCH FLUORESCENT FIXTURES TO BE APPROVED FOR SWITCHING DUTY.
5. PROVIDE MINIMUM 36" WORK CLEARANCE IN FRONT AND 30" WIDE WORK SPACE FOR SERVICE / PANEL / EQUIPMENT.
6. ALL EQUIPMENT TO HAVE TESTING LABORATORY LABEL ATTACHED. (UL, OSA, ...)
7. SWITCHES TO BE MAXIMUM OF +48"AFF AT TOP AND A MINIMUM OF +36"AFF TO BOTTOM OF THE OUTLET BOX (UNO).
8. RECEPTACLE TO BE A MINIMUM OF 18" TO BOTTOM FROM FINISH FLOOR (AFF). UNLESS NOTED OTHERWISE (UNO).
9. PROVIDE WEATHERPROOF (WP) GROUND FAULT INTERRUPTED (GFI) RECEPTACLE WITHIN 25 FEET OF ALL HVAC UNITS ON ROOF.
10. GROUND ALL ELECTRICAL EQUIPMENT AS PER TITLE 24 AND CALIFORNIA ELECTRICAL CODE (CEC), SECTION 250–50.
11. FLUORESCENT BALLASTS SHALL MEET THE CERTIFICATION REQUIREMENTS OF ARTICLE 2–5314 (A) OF CALIFORNIA ENERGY STANDARDS, TITLE 24.
12. SURFACE MOUNTED FIXTURES SHALL BE SECURED TO BLDG. STRUCTURE, NO TOGGLE BOLTS SHALL BE ALLOWED.
13. PENETRATIONS OF FIRE RATED WALLS, CEILINGS OR FLOOR SHALL COMPLY WITH UBC REQUIREMENTS.
14. NO BACK TO BACK RECEPTACLES SHALL BE INSTALLED IN FIREWALLS. MAINTAIN HORIZONTAL SEPARATION OF 24" BETWEEN RECEPTACLES.
15. EXACT LOCATION OF ALL EQUIP, SWITCH, DATA OUTLET, PHONE JACK AND RECEPTACLE ETC. TO BE VERIFY WITH OWNER IN FIELD.
16. ALL WIRING SHALL BE INSTALLED IN CONDUIT RACEWAY. PVC SCH. 40 CONDUIT BELOW GRADE, EMT CONDUIT CONCEAL IN WALL AND ABOVE CEILING, RIGID STEEL CONDUIT ON EXTERIOR WALL OR ROOF.
17. THE LOCATION AND ROUTE OF CONDUITS AND RACEWAYS IN ALL ELECTRICAL DRAWINGS IN THESE SET OF DOCUMENT ARE SCHEMATIC. ALL CONDUIT RACEWAYS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE BUILDING STRUCTURE WITH THE MINIMUM LENGTH AS POSSIBLE.
18. ELECTRICAL CONTRACTOR SHALL FILED VERIFY ALL EXISTING OVERHEAD AND UNDERGROUND UTILITY SERVICE SUCH AS POWER, TELEPHONE, CATV, GAS, WATER AND SEWER; PROVIDE MINIMUM SEPARATION CLEARANCE PER UTILITY COMPANY REQUIREMENT FOR ALL NEW ELECTRICAL EQUIPMENT AND WIRING INSTALLATION.
19. ELECTRICAL CONTRACTOR SHALL ARRANGE A MEETING WITH LOW VOLTAGE CONTRACTORS (FIRE, SECURITY, TELEPHONE, COMPUTER AND CATV), REVIEW THEIR EQUIPMENT AND DRAWINGS, INCLUDING ALL ELECTRICAL REQUIREMENT IN HIS SCOPE OF WORK BEFORE SUBMITTING THE BID.
20. THE LAYOUT FOR THE POWER AND TELEPHONE UNDERGROUND SERVICE IN THIS DRAWING IS ONLY FOR PLAN CHECK PURPOSE, AND HAS NOT BEEN APPROVAL BY THE UTILITY COMPANIES. IT IS THE RESPONSIBILITY FOR THE ELECTRICAL CONTRACTOR TO CONTACT THE UTILITY COMPANIES AND TO REVIEW THE APPROVAL CONSTRUCTION DRAWINGS PRIOR TO SUBMITTING THE BID.
21. 110V 20A BRANCH CIRCUIT SHALL BE DEDICATED NEUTRAL AND GROUNDING CONDUCTOR, SEE PANEL SCHEDULES.
22. OUTLET BOXES BETWEEN INTERIOR ROOMS CANNOT OCCUPY THE SAME BAY OF WALL STUDS, OTHERWISE PROVIDE SEALING MATERIAL FOR SOUND CONTROL PURPOSE.

## FIRE ALARM NOTES

1) APPLICABLE STANDARD 2016 NFPA 72
2) INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
3) COMPLETION OF THE INSTALLATION OF THE SYSTEMS, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
4) A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
5) 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.
6) DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 24 HOURS PRIOR TO THE FINAL INSPECTION AND /OR TESTING.
7) 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.
8) WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR. ENTIRE LENS SHALL BE WITHIN THIS RANGE.
9) WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE.
10) 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 LEASE 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPANCIES SPACE WITHIN THE BUILDING.
11) AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.
12) THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
13) VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
14) UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE TO BE APPROVAL FOR WET LOCATIONS.
15) ALL FIRE ALARM WIRING SHALL BE FLP OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
16) PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.
17) SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
18) 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 MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
19) FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
20) 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 RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL". CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
21) THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA 72, FIGURE 10.18.2.1.1.
22) CONTROL PANELS, REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48"
23) THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
24) SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
25) OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.

## MEP COMPONENT ANCHORAGE NOTES

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAILS IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A. 1.26 AND ASCE 7–10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

## PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7–10 SECTION 13.3 AS DEFINED IN ASCE 7–10 SECTION 12.6.8, 13.6.5.6 AND 2016 CBC, SECTION 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENT ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEM (E):

MP☐MD☐ PP☐ E☑– OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐MD☐ PP☐ E☐– OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE–APPROVAL (OPM #) #_____.

MP☐MD☐ PP☐ – OPTION 3: SHALL COMPLY WITH SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2000), INCLUDING ANY ADDENDA, FASTENERS AND ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL ____ AND CONNECTION LEVEL ____ FOR THE PROJECT AND CONDITIONS.

## F.A. MONITORING NOTES

1. THE AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AND AMENDED EITHER UUFX OR UUJS BY UNDERWRITERS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BY ARRANGED BY OWNER.

## SEISMIC ANCHORAGE

1. TO COMPLY WITH 2016 CBC, TITLE 24, SECTION #1632A.
2. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ELECTRICAL ENGINEER AND THE FIELD ENGINEER OF THE DIVISION OF THE STATE ARCHITECT.

## COMPLETE AUTOMATIC FIRE ALARM PLAN SUBMITTAL

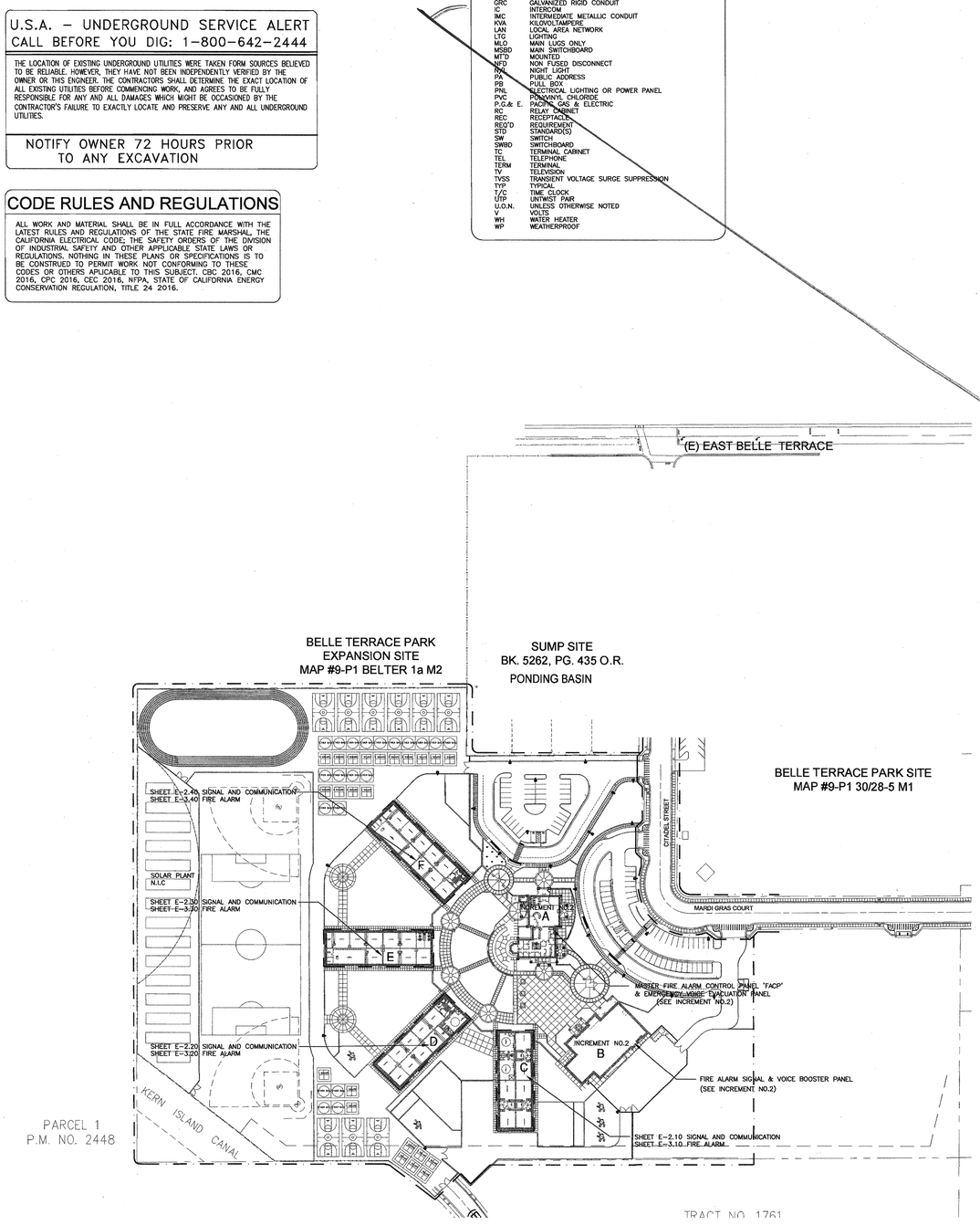
1. THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.
2. THE AUTOMATIC FIRE ALARM SYSTEM SHALL COVER ALL ROOMS AND AREAS AND UPON ACTIVATION OF AN INITIATING DEVICE ALERT ALL OCCUPANTS AND TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION.

## F.A SYSTEM SCOPE OF WORK

1. PROVIDE AUTOMATIC FIRE ALARM SYSTEM FOR THE ENTIRE NEW SCHOOL CAMPUS PER PLANS.
2. NEW FACP IS 24VDC ADDRESSABLE WITH EMERGENCY VOICE EVACUATION, AND CLASS B WIRING SYSTEM. AND WITH OFF SITE MONITORING SERVICE VIA AUTO DUAL LINE DIALER AND TELEPHONE LINES.
3. DURING THE FINAL TESTING, MEASURE ALL FIRE ALARM CURRENTS, VOLTAGE DROP FOR EACH SIGNAL CIRCUITS. SEND OWNER AND ENGINEER ONE COPY RECORD FOR REVIEW, AND PLASTIC LAMINATED ONE COPY INSIDE FACP CABINET DOOR.
4. COMPLETE FIRE ALARM DRAWING SUBMITTAL IS PROVIDED.

## MANUAL PULL STATION NOTES

1. COMPLY WITH CBC, NFPA & ADA. Current addition
2. PROVIDE KEY LOCK.
3. MEET ADA 5LB. MAX. PULL–FORCE.
4. USE INSTRUCTIONS IN BRAILLE & TACTILE LETTERS ON COVER.
5. WORD "ACTIVATED" APPEARS ON TOP OF HANDLE AFTER THE HANDLE HAS BEEN PULLED DOWN.
6. CAN BE OPERATED WITH A FIST, ELBOW, OR FLAILED HAND.
7. SINGLE ACTION SIMPLY PULL DOWN TO OPERATE.




## OVERALL SITE PLAN

SCALE: 1"=100'


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Phone (559) 436–0981 Fax (559) 436–0987 Cell 468 Email: design@somah.com
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Sheet Title: SYMBOLS AND NOTES

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3, BAKERSFIELD CITY SCHOOL DISTRICT, @ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designed: J CHONG
DR. J CHONG
CK. –

Agency Approval Stamp:

FILE #: 15–6
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
03–11839 4
AC. M FLS SPTSS M
DATE JUN 2 7 2018
TRACKING #: –

Stamp(s):

REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA


CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE #103 FRESNO CA 93727
(559) 435–2268 • FAX 291–9401
jcengineer@aol.com


Job No.: 5262

Sheet No.: E1.00

Release:

## APPLICABLE CODES:

TITLE 19 CCR. PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS
TITLE 24 CCR. PART 1 – 2016 BUILDING STANDARDS ADMINISTRATIVE CODE
TITLE 24 CCR. PART 2 – 2016 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC) (2015 IBC, AS AMENDED BY CA.)
TITLE 24 CCR. PART 3 – 2016 ELECTRICAL CODE (CEC) (2014 NEC, AS AMENDED BY CA.)
TITLE 24 CCR. PART 4 – 2016 CALIFORNIA MECHANICAL CODE (CMC) (2015 IAPMO UMC, AS AMENDED BY CA.)
TITLE 24 CCR. PART 5 – 2016 CALIFORNIA PLUMBING CODE (CPC) (2015 IAPMO UPC, AS AMENDED BY CA.)
TITLE 24 CCR. PART 6 – 2016 CALIFORNIA ENERGY CODE
TITLE 24 CCR. PART 7 – 2016 CALIFORNIA ELEVATOR SAFETY CONSTRUCTION CODE
TITLE 24 CCR. PART 9 – 2016 CALIFORNIA FIRE CODE (CC) (2015 IFCM AS AMENDED BY CA.)
TITLE 24 CCR. PART 12– 2016 CALIFORNIA REFERENCED STANDARDS (PARTIAL LIST – SEE CBC CH. 35 AND CFC CH. 45)
2016 NFPA 13, INSTALLATION OF SPRINKLER SYSTEM (CA. AMENDED)
2016 NFPA 14, DRY CHEMICAL, EXTINGUISHING SYSTEMS
2016 NFPA 17A, WET CHEMICAL EXTINGUISHING SYSTEMS
2016 NFPA 20, INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2016 NFPA 25, INSPECTION, TESTING, MAINTENANCE OF WATER-BASE FIRE PROTECTION SYSTEMS (CA. AMENDED)
2016 NFPA 72, NATIONAL FIRE ALARM CODE (CA. AMENDED); SEE UL STD 1971 FOR "VISUAL DEVICES"

## U.S.A. – UNDERGROUND SERVICE ALERT
## CALL BEFORE YOU DIG: 1–800–642–2444

THE LOCATION OF EXISTING UNDERGROUND UTILITIES WERE TAKEN FORM SOURCES BELIEVED TO BE RELIABLE. HOWEVER, THEY HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THIS ENGINEER. THE CONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

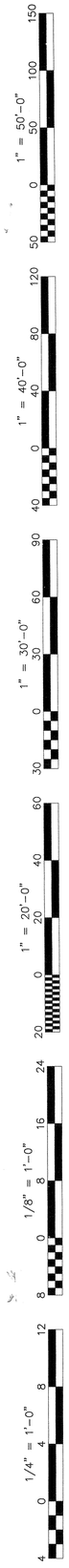
NOTIFY OWNER 72 HOURS PRIOR TO ANY EXCAVATION

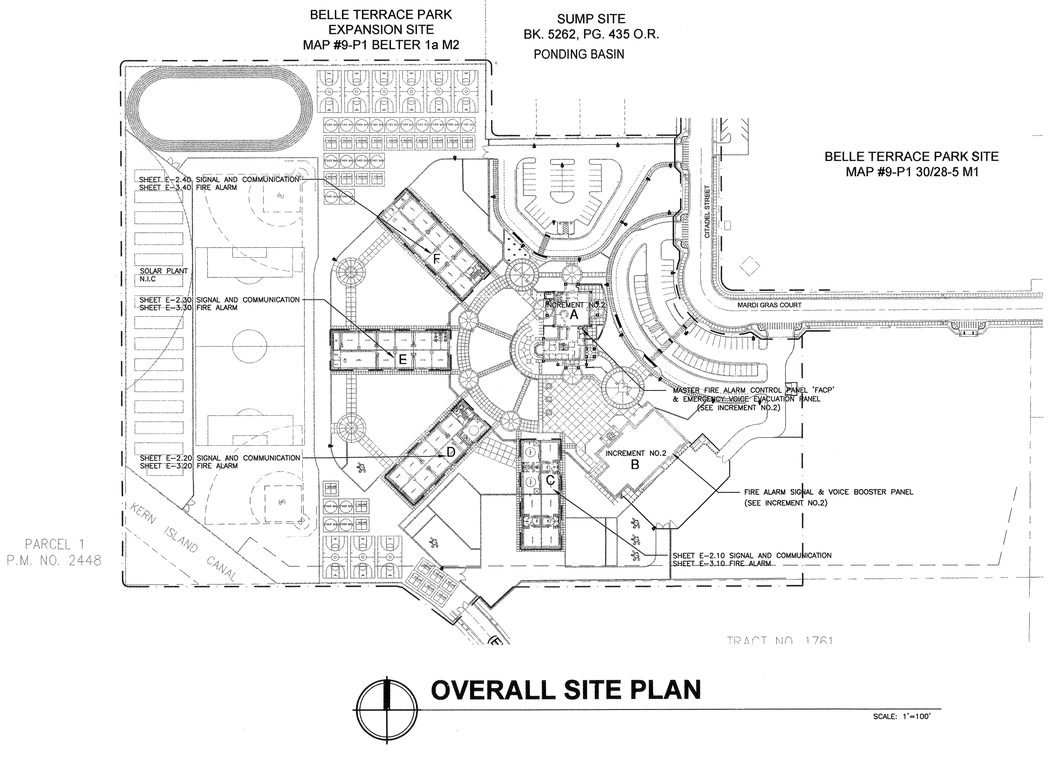
## CODE RULES AND REGULATIONS

ALL WORK AND MATERIAL SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHALL, THE CALIFORNIA ELECTRICAL CODE; THE SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY AND OTHER APPLICABLE STATE LAWS OR REGULATIONS. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APLICABLE TO THIS SUBJECT. CBC 2016, CMC 2016, CPC 2016, CEC 2016, NFPA, STATE OF CALIFORNIA ENERGY CONSERVATION REGULATION, TITLE 24 2016.

## ELECTRICAL ABBREVIATIONS

| | |
|---|---|
| A | AMPERES |
| AC | ALTERNATING CURRENT |
| AFF | ABOVE FINISHED FLOOR |
| AH | AIR HANDLER |
| AIC | AMPERES INTERRUPTING CAPACITY |
| AMP | AMPERES |
| A/C | AIR CONDITIONER |
| BKBD | BACKBOARD |
| C | CONDUIT |
| CB | CIRCUIT BREAKER |
| CU | COPPER |
| CCTV | CLOSED CIRCUIT TELEVISION |
| CEIL | CEILING |
| CKT | CIRCUIT |
| COMM | COMMUNICATION |
| CONT | CONTINUED |
| DIST | DISTRIBUTION |
| EDF | ELECTRIC DRINKING FOUNTAIN |
| EMB | EMBEDMENT |
| EMT | ELECTRICAL METALLIC TUBING |
| EXP | EXPANSION |
| FACP | FIRE ALARM CONTROL PANEL |
| FCI | FAN COIL UNIT |
| GFI | GROUND FAULT INTERRUPTED |
| GND | GROUND |
| GRC | GALVANIZED RIGID CONDUIT |
| IC | INTERCOM |
| IMC | INTERMEDIATE METALLIC CONDUIT |
| KVA | KILOVOLTAMPERE |
| LAN | LOCAL AREA NETWORK |
| LTG | LIGHTING |
| MLO | MAIN LUGS ONLY |
| MSBD | MAIN SWITCHBOARD |
| MT'D | MOUNTED |
| NFD | NON FUSED DISCONNECT |
| N/L | NIGHT LIGHT |
| PA | PUBLIC ADDRESS |
| PB | PULL BOX |
| PNL | ELECTRICAL LIGHTING OR POWER PANEL |
| PVC | POLYVINYL CHLORIDE |
| P.G.& E. | PACIFIC GAS & ELECTRIC |
| RC | RELAY CABINET |
| REC | RECEPTACLE |
| REQ'D | REQUIREMENT |
| STD | STANDARD(S) |
| SW | SWITCH |
| SWBD | SWITCHBOARD |
| TC | TERMINAL CABINET |
| TEL | TELEPHONE |
| TERM | TERMINAL |
| TV | TELEVISION |
| TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSION |
| TYP | TYPICAL |
| T/C | TIME CLOCK |
| UTP | UNTWIST PAIR |
| U.O.N. | UNLESS OTHERWISE NOTED |
| V | VOLTS |
| WH | WATER HEATER |
| WP | WEATHERPROOF |




## OVERALL SITE PLAN

SCALE: 1"=100'

## ELECTRICAL SYMBOLS

- A-1 — HOME RUN MINIMUM 3/4" CONDUIT SIZE PER CEC TABLE 3B
- BRANCH CIRCUIT NO.
- NUMBER OF CONDUCTORS SIZE PER PANEL SCHEDULE
- LIGHT FIXTURE WITH J-BOX
- FIXTURE TYPE
- SWITCHING
- BRANCH CIRCUIT
- DISTRIBUTION PANEL
- TERMINAL CABINET
- JUNCTION BOX
- WALL BRACKET OUTLET
- FLUORESCENT FIXTURE
- CEILING OUTLET
- BRANCH CIRCUIT NO.
- 3 — DUPLEX OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- FLOURPLEX CONVENIENCE OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- W.P. — WEATHERPROOF OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- I.G — ISOLATE GROUND OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- GF I — OUTLET WITH GROUND FAULT INTERRUPTER AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- 220V DEDICATE OUTLET AT +18"AFF TO THE BOTTOM OF OUTLET BOX U.N.O
- WALL SWITCH +48" AFF TO TOP OF OUTLET BOX
- CONDUIT RUN UNDER FLOOR
- CONDUIT RUN IN CEILING AND IN WALL
- MOTOR DISCONNECT FUSED SWITCH
- C — CONDUIT RACEWAY
- (N) — NEW
- (E) — EXISTING

## ELECTRICAL GENERAL NOTES

1. VERIFY EXACT LOCATIONS WITH GENERAL CONTRACTOR FOR ALL ELECTRICAL EQUIPMENT ON SITE BEFORE STARTING WORK.
2. ELECTRICAL CONTRACTOR SHALL APPRAISE HIMSELF OF ALL EXISTING ELECTRICAL CONDITIONS AT SITE PRIOR TO BID.
3. ELECTRICAL CONTRACTOR TO HOOK UP ALL MOTOR CONTROL SYSTEM AS PER MECHANICAL & PLUMBING PLANS.
4. CIRCUIT BREAKERS USED TO SWITCH FLUORESCENT FIXTURES TO BE APPROVED FOR SWITCHING DUTY.
5. PROVIDE MINIMUM 36" WORK CLEARANCE IN FRONT AND 30" WIDE WORK SPACE FOR SERVICE / PANEL / EQUIPMENT.
6. ALL EQUIPMENT TO HAVE TESTING LABORATORY LABEL ATTACHED. (UL, OSA, ..)
7. SWITCHES TO BE MAXIMUM OF +48"AFF AT TOP AND A MINIMUM OF +36"AFF TO BOTTOM OF THE OUTLET BOX (UNO).
8. RECEPTACLE TO BE A MINIMUM OF 18" TO BOTTOM FROM FINISH FLOOR (AFF). UNLESS NOTED OTHERWISE (UNO).
9. PROVIDE WEATHERPROOF (WP) GROUND FAULT INTERRUPTED (GFI) RECEPTACLE WITHIN 25 FEET OF ALL HVAC UNITS ON ROOF.
10. GROUND ALL ELECTRICAL EQUIPMENT AS PER TITLE 24 AND CALIFORNIA ELECTRICAL CODE (CEC), SECTION 250–50.
11. FLUORESCENT BALLASTS SHALL MEET THE CERTIFICATION REQUIREMENTS OF ARTICLE 2–5314 (A) OF CALIFORNIA ENERGY STANDARDS, TITLE 24.
12. SURFACE MOUNTED FIXTURES SHALL BE SECURED TO BLDG. STRUCTURE, NO TOGGLE BOLTS SHALL BE ALLOWED.
13. PENETRATIONS OF FIRE RATED WALLS, CEILINGS OR FLOOR SHALL COMPLY WITH UBC REQUIREMENTS.
14. NO BACK TO BACK RECEPTACLES SHALL BE INSTALLED IN FIREWALLS. MAINTAIN HORIZONTAL SEPARATION OF 24" BETWEEN RECEPTACLES.
15. EXACT LOCATION OF ALL EQUIP, SWITCH, DATA OUTLET, PHONE JACK AND RECEPTACLE ETC. TO BE VERIFY WITH OWNER IN FIELD.
16. ALL WIRING SHALL BE INSTALLED IN CONDUIT RACEWAY, PVC SCH. 40 CONDUIT BELOW GRADE, EMT CONDUIT CONCEAL IN WALL AND ABOVE CEILING, RIGID STEEL CONDUIT ON EXTERIOR WALL OR ROOF.
17. THE LOCATION AND ROUTE OF CONDUITS AND RACEWAYS IN ALL ELECTRICAL DRAWINGS IN THESE SET OF DOCUMENT ARE SCHEMATIC. ALL CONDUIT RACEWAYS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO THE BUILDING STRUCTURE WITH THE MINIMUM LENGTH AS POSSIBLE.
18. ELECTRICAL CONTRACTOR SHALL FILED VERIFY ALL EXISTING OVERHEAD AND UNDERGROUND UTILITY SERVICE SUCH AS POWER, TELEPHONE, CATV, GAS, WATER AND SEWER; PROVIDE MINIMUM SEPARATION CLEARANCE PER UTILITY COMPANY REQUIREMENT FOR ALL NEW ELECTRICAL EQUIPMENT AND WIRING INSTALLATION.
19. ELECTRICAL CONTRACTOR SHALL ARRANGE A MEETING WITH LOW VOLTAGE CONTRACTORS (FIRE, SECURITY, TELEPHONE, COMPUTER AND CATV), REVIEW THEIR EQUIPMENT AND DRAWINGS, INCLUDING ALL ELECTRICAL REQUIREMENT IN HIS SCOPE OF WORK BEFORE SUBMITTING THE BID.
20. THE LAYOUT FOR THE POWER AND TELEPHONE UNDERGROUND SERVICE IN THIS DRAWING IS ONLY FOR PLAN CHECK PURPOSE, AND HAS NOT BEEN APPROVAL BY THE UTILITY COMPANIES. IT IS THE RESPONSIBILITY FOR THE ELECTRICAL CONTRACTOR TO CONTACT THE UTILITY COMPANIES AND TO REVIEW THE APPROVAL CONSTRUCTION DRAWINGS PRIOR TO SUBMITTING THE BID.
21. 110V 20A BRANCH CIRCUIT SHALL BE DEDICATED NEUTRAL AND GROUNDING CONDUCTOR, SEE PANEL SCHEDULES.
22. OUTLET BOXES BETWEEN INTERIOR ROOMS CANNOT OCCUPY THE SAME BAY OF WALL STUDS, OTHERWISE PROVIDE SEALING MATERIAL FOR SOUND CONTROL PURPOSE.

## FIRE ALARM NOTES

1) APPLICABLE STANDARD 2016 NFPA 72
2) INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
3) COMPLETION OF THE INSTALLATION OF THE SYSTEMS, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
4) A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
5) 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.
6) DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND /OR TESTING.
7) 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.
8) WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR. ENTIRE LENS SHALL BE WITHIN THIS RANGE.
9) WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE.
10) 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 LEASE 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPANCIES SPACE WITHIN THE BUILDING.
11) AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.
12) THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
13) VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
14) UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE TO BE APPROVAL FOR WET LOCATIONS.
15) ALL FIRE ALARM WIRING SHALL BE FLP OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
16) PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT PULL SPLICE WIRE. WIRES TO BE SIZED PER CEC.
17) SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
18) 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 MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
19) FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
20) 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 RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE 'ON' POSITION. THE CIRCUIT BREAKER SHALL BE LABELED 'FIRE ALARM CIRCUIT CONTROL'. CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
21) THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA 72, FIGURE 10.18.2.1.1.
22) CONTROL PANELS, REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48'
23) THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
24) SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
25) OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.

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3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

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A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHTING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

## PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7–10 SECTION 13.3 AS DEFINED IN ASCE 7–10 SECTION 12.6.8, 13.6.5.6 AND 2016 CBC, SECTION 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENT ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., SMACNA OR OSHPD OPM), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEM (E):

MP☐ MD☐ PP☐ E☑ – OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ E☐ – OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) f_____

MP☐ MD☐ PP☐ – OPTION 3: SHALL COMPLY WITH SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA, FASTENERS AND ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL _____ AND CONNECTION LEVEL _____ FOR THE PROJECT AND CONDITIONS.

## F.A. MONITORING NOTES

1. THE AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AND AMENDED EITHER UUFX OR UUJS BY UNDERWRITERS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BY ARRANGED BY OWNER.

## SEISMIC ANCHORAGE

1. TO COMPLY WITH 2016 CBC, TITLE 24, SECTION #1632A.
2. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ELECTRICAL ENGINEER AND THE FIELD ENGINEER OF THE DIVISION OF THE STATE ARCHITECT.

## COMPLETE AUTOMATIC FIRE ALARM PLAN SUBMITTAL

1. THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.
2. THE AUTOMATIC FIRE ALARM SYSTEM SHALL COVER ALL ROOMS AND AREAS AND UPON ACTIVATION OF AN INITIATING DEVICE ALERT ALL OCCUPANTS AND TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION.

## F.A SYSTEM SCOPE OF WORK

1. PROVIDE AUTOMATIC FIRE ALARM SYSTEM FOR THE ENTIRE NEW SCHOOL CAMPUS PER PLANS.
2. NEW FACP IS 24VDC ADDRESSABLE WITH EMERGENCY VOICE EVACUATION, AND CLASS B WIRING SYSTEM. AND WITH OFF SITE MONITORING SERVICE VIA AUTO DUAL LINE DIALER AND TELEPHONE LINES.
3. DURING THE FINAL TESTING, MEASURE ALL FIRE ALARM CURRENTS, VOLTAGE DROP FOR EACH SIGNAL CIRCUITS. SEND OWNER AND ENGINEER ONE COPY RECORD FOR REVIEW, AND PLASTIC LAMINATED ONE COPY INSIDE FACP CABINET DOOR.
4. COMPLETE FIRE ALARM DRAWING SUBMITTAL IS PROVIDED.

## MANUAL PULL STATION NOTES

1. COMPLY WITH CBC, NFPA & ADA.
2. PROVIDE KEY LOCK.
3. MEET ADA 5LB. MAX. PULL–FORCE.
4. USE INSTRUCTIONS IN BRAILLE & TACTILE LETTERS ON COVER.
5. WORD "ACTIVATED" APPEARS ON TOP OF HANDLE AFTER THE HANDLE HAS BEEN PULLED DOWN.
6. CAN BE OPERATED WITH A FIST, ELBOW, OR FLAILED HAND.
7. SINGLE ACTION SIMPLY PULL DOWN TO OPERATE.


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|---|---|---|
| | | |

Sheet Title: SYMBOLS AND NOTES

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
Drawn By: J CHONG
PIC: --

Agency Approval Stamp:

FILE #: 15–6
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OFFICE OF REGULATION SERVICES
03–118394
AC SC FLS SB SSTH
DATE 5/6/19
TRACKING # –
ADDENDUM #3

Stamp(s):
REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

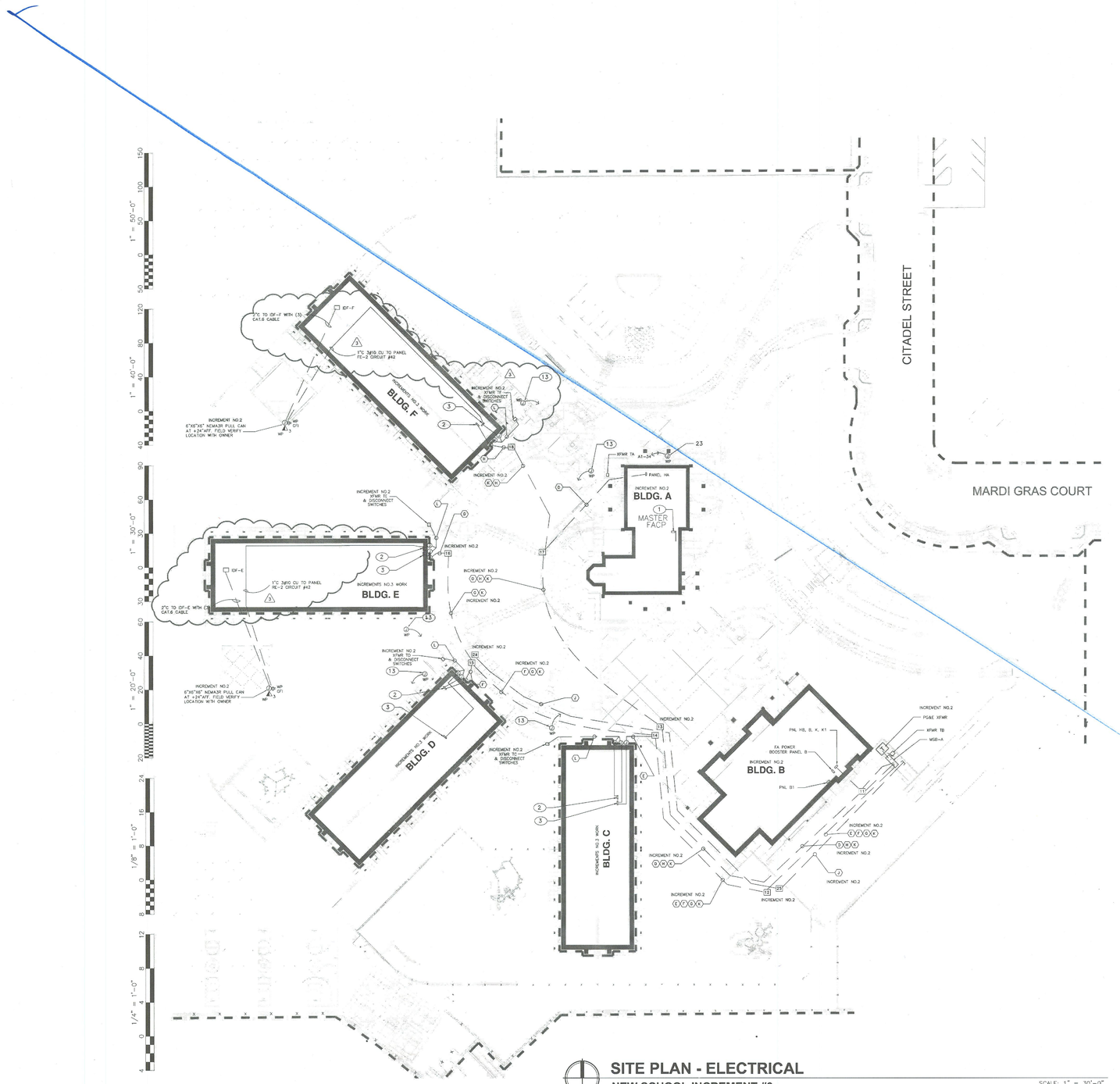
ADDENDUM NO.3

Job No.: 5262

Sheet No.: E1.00

Release:


CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE #103 FRESNO CA 93727
(559) 325-9388 • FAX 251-9401
jcengineer@sbcl.com




## SITE PLAN - ELECTRICAL
NEW SCHOOL INCREMENT #3

SCALE: 1" = 30'-0"

## KEY NOTES

1. APPROXIMATE LOCATION FOR THE EXISTING ADDRESSABLE FIRE ALARM CONTROL PANEL & VOICE EVACUATION PANEL TO REMAIN IN SERVICE. SEE FA ALARM RISER AND RISER DIAGRAM 1/FA.01.
2. PROVIDE BUILDING MAIN DISCONNECT SWITCH AND POWER CONNECTION FOR 400A 480V BUILDING MAIN PANEL. SEE PC DRAWINGS AND SINGLE LINE DIAGRAM 1/FA.03.
3. PROVIDE POWER CONNECTION FOR 400A 208/Y BUILDING DIST. PANEL. SEE PC DRAWINGS AND SINGLE LINE DIAGRAM 1/FA.03.

(E) — — INDICATE EXISTING CONDUIT AND WIRING. FOR REFERENCE ONLY, FIELD VERIFY AS REQUIRED.

## PULL BOX SCHEDULE

| NO. | SIZE | COVER MARKING |
|---|---|---|
| 1 | 24"x36" CHRISTY H48 | POWER |
| 2 | 24"x32" CHRISTY H48 | POWER |
| 3 | 24"x32" CHRISTY H48 | POWER |
| 4 | 24"x32" CHRISTY H48 | POWER |
| 5 | 24"x32" CHRISTY H48 | POWER |
| 6 | 24"x36" CHRISTY H30 | POWER |
| 7 | 24"x32" CHRISTY H48 | POWER |
| 8 | 24"x32" CHRISTY H48 | POWER |
| 9 | 24"x36" CHRISTY H30 | POWER |
| 20 | 24"x32" CHRISTY H48 | SOLAR POWER |
| 21 | 24"x32" CHRISTY H48 | SOLAR POWER |
| 24 | 24"x32" CHRISTY H48 | SOLAR POWER |
| 25 | 24"x32" CHRISTY H48 | SOLAR POWER |

NOTES:
1. ALL PULL BOX SHALL BE RATED H-20 WITH STEEL COVER PLATE AND HOLD DOWN BOLTS.
2. PROVIDE ID LETTER ON COVER PLATE PER SCHEDULE.
3. PROVIDE 4" NOM STRIP FOR AROUND PULL BOX ON LANDSCAPE AREA.

## SITE CONDUIT SYSTEM SCHEDULE

| SYMBOL | SYSTEM | QUANTITY/SIZE | TYPE | REMARKS |
|---|---|---|---|---|
| D | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING A |
| K | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING C |
| F | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING D |
| G | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING E |
| H | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING F |
| J | POWER | (SIX) 4"C | PVC SCH.40 | SOLAR PLANT |
| A | POWER | (TWO) 4"C | PVC SCH.40 | SPARE |
| L | POWER | (ONE) 2"C<br>(TWO) 2-1/2"C | PVC SCH.40<br>PVC SCH.40 | XFMR 480Y PRIMARY<br>XFMR 208Y SECONDARY |

## PROJECT NOTES

A. EXISTING ELECTRICAL SERVICE HAS BEEN INVESTIGATE AND FOUND TO HAVE ADEQUATE CAPACITY FOR THE PROPOSED LOAD ADDITION AS SHOWN ON THESE PLANS AND SPECS.
B. SOURCE OF POWER HAS BEEN INVESTIGATED AND IS ADEQUATE FOR THE ADDITIONAL LOAD.
C. SITE INSPECTOR IS TO WITNESS AND VERIFY GROUNDING TEST.
D. CONTRACTOR TO MONITOR EXISTING FIRE ALARM SYSTEM IF IT IS INTERRUPTED OR DISCONNECTED.

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8201 W. Plano, Suite 130 ~ Plano, California 93709
Phone (559) 709-4888 ~ Fax (559) 709-4889
www.integrateddesigns.com

| Revision | Revision Description | Rev. Date |
|---|---|---|
| 1 | ADDENDUM NO.3 | 5-29-18 |

Dwn. Date: 07/25/18
Drawn: J. CHONG
Checked: J. CHONG
Project Nbr. & Address: 12/16/16
Sheet Title: SITE PLAN - ELECTRICAL

# NEW ELEMENTARY SCHOOL INCREMENT 3
VISALIA UNIFIED SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

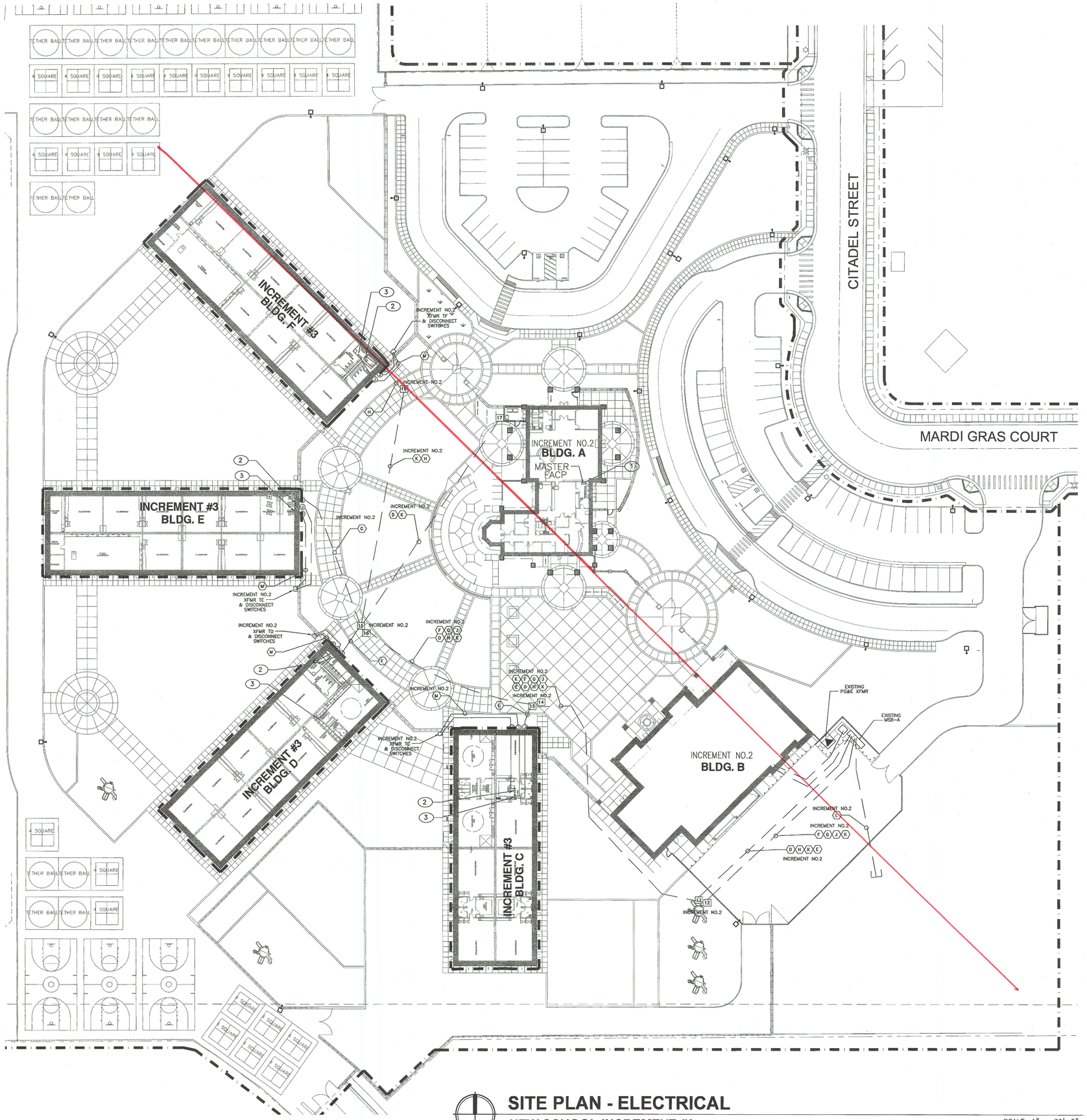
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Stamp(s):
JOHN C. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE, #109 FRESNO CA 93727
(559) 705-2588 • FAX 237-5401
johnchongeng@sbcglobal.com

Job No.: 5262

Sheet No.: E1.01
Release: ADDENDUM 3




# SITE PLAN - ELECTRICAL

## NEW SCHOOL INCREMENT #3

SCALE: 1" = 30'-0"

# KEY NOTES

1. APPROXIMATE LOCATION FOR THE EXISTING ADDRESSABLE FIRE ALARM CONTROL PANEL & VOICE EVACUATION PANEL TO REMAIN IN SERVICE. SEE FA ALARM PLANS AND RISER DIAGRAM 1/E4.01.
2. PROVIDE POWER CONNECTION FOR 600A 480V BUILDING MAIN PANEL. SEE PC DRAWINGS AND SINGLE LINE DIAGRAM 1/E4.03.
3. PROVIDE POWER CONNECTION FOR 400A 208V BUILDING DIST. PANEL. SEE PC DRAWINGS AND SINGLE LINE DIAGRAM 1/E4.03.

(E) — — — INDICATE EXISTING CONDUIT AND WIRING. FOR REFERENCE ONLY, FIELD VERIFY AS REQUIRED.

## (E)SITE CONDUIT SYSTEM SCHEDULE

| SYMBOL | SYSTEM | QUANTITY/SIZE | TYPE | REMARKS |
|---|---|---|---|---|
| D | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING A |
| E | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING C |
| F | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING D |
| G | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING E |
| H | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING F |
| J | POWER | (TWO) 4"C | PVC SCH.40 | SOLAR PLANT |
| K | POWER | (TWO) 4"C | PVC SCH.40 | SPARE |
| L | POWER | (TWO) 3"C | PVC SCH.40 | FUTURE BUILDING |
| M | POWER | (TWO) 4"C | PVC SCH.40 | 208V |

## (E)PULL BOX SCHEDULE

| NO. | SIZE | COVER MARKING |
|---|---|---|
| 11 | 34"x52" CHRISTY N48 | POWER |
| 12 | 34"x52" CHRISTY N48 | POWER |
| 13 | 34"x52" CHRISTY N48 | POWER |
| 14 | 34"x52" CHRISTY N48 | POWER |
| 15 | 34"x52" CHRISTY N48 | POWER |
| 16 | 34"x52" CHRISTY N48 | POWER |
| 17 | 34"x52" CHRISTY N48 | POWER |

NOTES:
1. ALL PULL BOX SHALL BE RATED H20 WITH STEEL COVER PLATE AND HOLD DOWN BOLTS.
2. PROVIDE ID LETTER ON COVER PLATE PER SCHEDULE.
3. PROVIDE 4" MOLD STRIP FOR AROUND PULL BOX ON LANDSCAPE AREA.

# PROJECT NOTES

A. EXISTING ELECTRICAL SERVICE HAS BEEN INVESTIGATE AND FOUND TO HAVE ADEQUATE CAPACITY FOR THE PROPOSED LOAD ADDITION AS SHOWN ON THESE PLANS OR
B. SOURCE OF POWER HAS BEEN INVESTIGATED AND IS ADEQUATE FOR THE ADDITIONAL LOAD.
C. SITE INSPECTOR IS TO WITNESS AND VERIFY GROUNDING TEST
D. CONTRACTOR TO MONITOR EXISTING FIRE ALARM SYSTEM IF IT IS INTERRUPTED OR DISCONNECTED.

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8031 N. Fresno, Suite 130 – Fresno, California 93710
Phone (559) 436-0881 Fax (559) 436-0887 E-Mail: design@somam.com
www.integrateddesigns.com

Revision: Revision Description: Rev. Date:

Sheet Title: SITE PLAN - ELECTRICAL

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designed: J. CHONG
Drawn: J. CHONG
Chk'd: —

Agency Approval Stamp:

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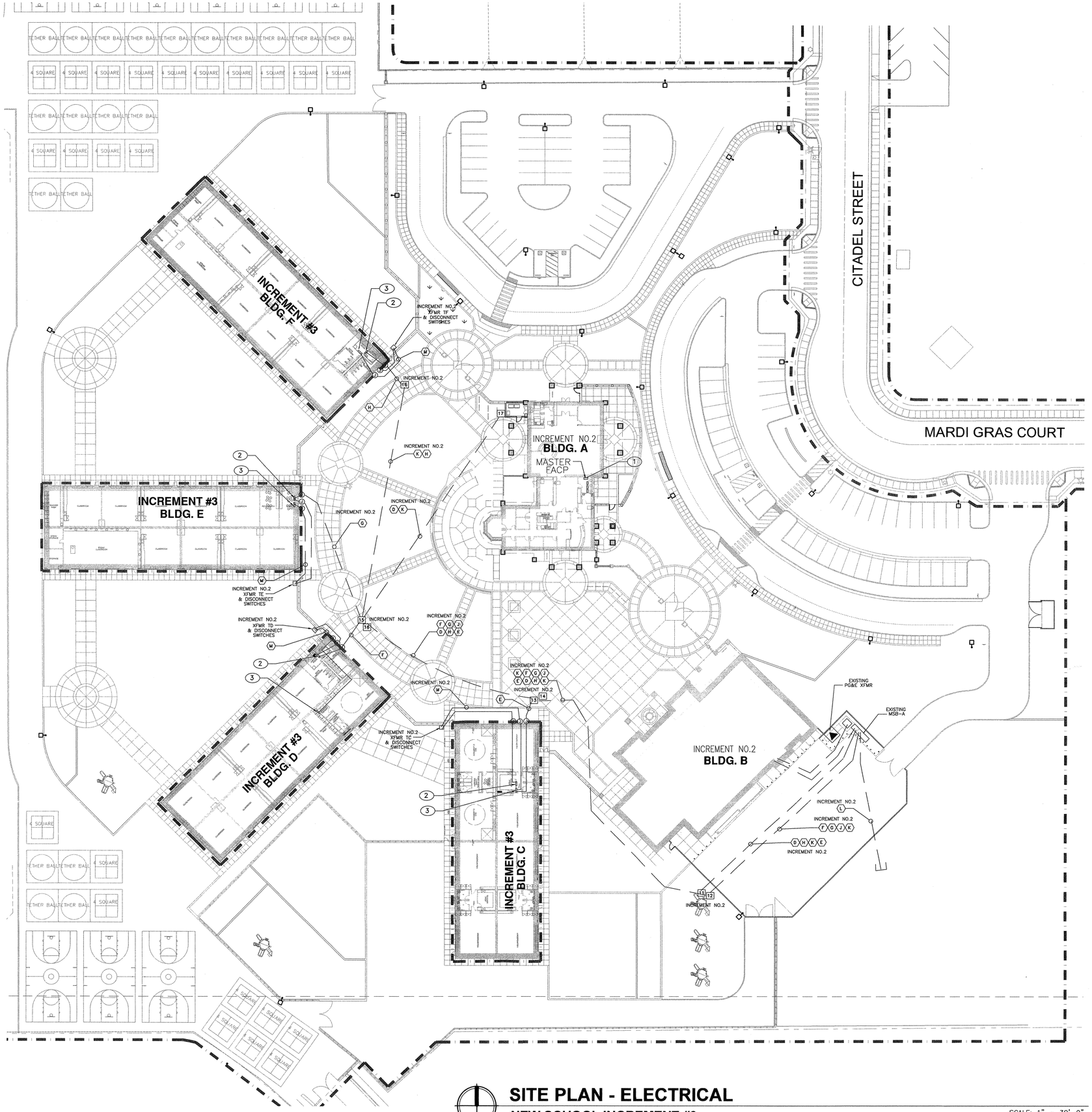
REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1243 N HELM AVE #103 FRESNO CA 93727
(559) 325-9288 • FAX 237-3401
jcengineer@aol.com

Job No.: 5262

Sheet No.: E1.01

Release:




# SITE PLAN - ELECTRICAL

## NEW SCHOOL INCREMENT #3

SCALE: 1" = 30'-0"

# KEY NOTES

1. APPROXIMATE LOCATION FOR THE EXISTING ADDRESSABLE FIRE ALARM CONTROL PANEL & VOICE EVACUATION PANEL TO REMAIN IN SERVICE. SEE FA ALARM PLANS AND RISER DIAGRAM 1/EA.01.
2. PROVIDE POWER CONNECTION FOR 600A 480V BUILDING MAIN PANEL. SEE PC DRAWINGS AND SINGLE LINE DIAGRAM 1/EA.03.
3. PROVIDE POWER CONNECTION FOR 400A 208Y/ BUILDING DIST. PANEL. SEE PC DRAWINGS AND SINGLE LINE DIAGRAM 1/EA.03.

(E) ___ INDICATE EXISTING CONDUIT AND WIRING. FOR REFERENCE ONLY, FIELD VERIFY AS REQUIRED.

## (E)SITE CONDUIT SYSTEM SCHEDULE

| SYMBOL | SYSTEM | QUANTITY/SIZE | TYPE | REMARKS |
|---|---|---|---|---|
| D | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING A |
| E | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING C |
| F | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING D |
| G | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING E |
| H | POWER | (TWO) 4"C | PVC SCH.40 | BUILDING F |
| J | POWER | (TWO) 4"C | PVC SCH.40 | SOLAR PLANT |
| K | POWER | (TWO) 4"C | PVC SCH.40 | SPARE |
| L | POWER | (TWO) 3"C | PVC SCH.40 | FUTURE BUILDING |
| M | POWER | (TWO) 4"C | PVC SCH.40 | 208V |

## (E)PULL BOX SCHEDULE

| NO. | SIZE | COVER MARKING |
|---|---|---|
| 11 | 34"x52" CHRISTY N48 | POWER |
| 12 | 34"x52" CHRISTY N48 | POWER |
| 13 | 34"x52" CHRISTY N48 | POWER |
| 14 | 34"x52" CHRISTY N48 | POWER |
| 15 | 34"x52" CHRISTY N48 | POWER |
| 16 | 34"x52" CHRISTY N48 | POWER |
| 17 | 34"x52" CHRISTY N48 | POWER |

NOTES:
1. ALL PULL BOX SHALL BE RATED H20 WITH STEEL COVER PLATE AND HOLD DOWN BOLTS.
2. PROVIDE ID LETTER ON COVER PLATE PER SCHEDULE.
3. PROVIDE 4" MOLD STRIP FOR AROUND PULL BOX ON LANDSCAPE AREA.

# PROJECT NOTES

A. EXISTING ELECTRICAL SERVICE HAS BEEN INVESTIGATE AND FOUND TO HAVE ADEQUATE CAPACITY FOR THE PROPOSED LOAD ADDITION AS SHOWN ON THESE PLANS OR
B. SOURCE OF POWER HAS BEEN INVESTIGATED AND IS ADEQUATE FOR THE ADDITIONAL LOAD.
C. SITE INSPECTOR IS TO WITNESS AND VERIFY GROUNDING TEST
D. CONTRACTOR TO MONITOR EXISTING FIRE ALARM SYSTEM IF IT IS INTERRUPTED OR DISCONNECTED.

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Sheet Title: SITE PLAN - ELECTRICAL

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PC: --

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AC SC FLS SI SS TN
DATE 5/6/16
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REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

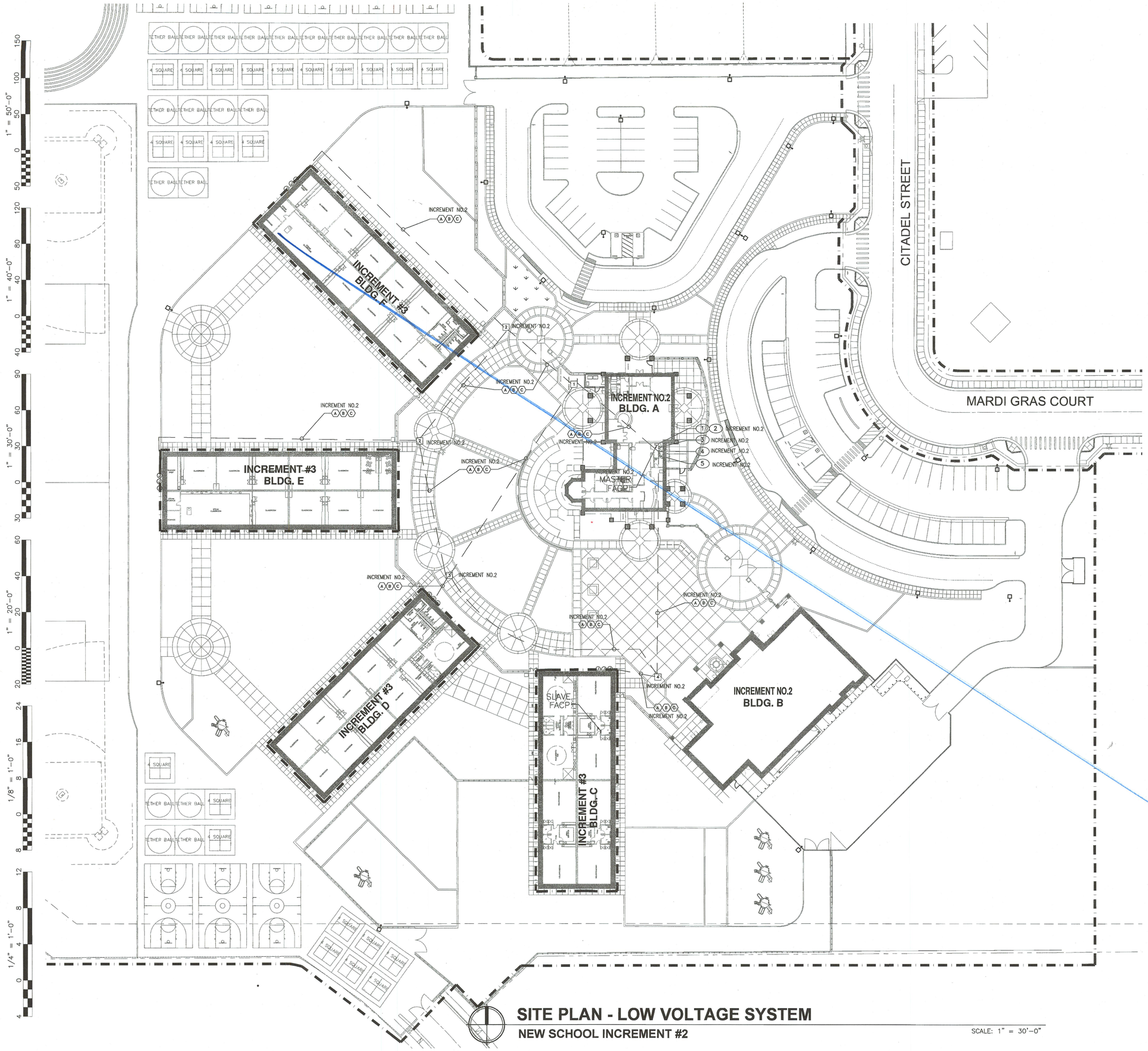
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Job No.: 5262

Sheet No.: E1.01

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CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1543 N HELM AVE #103 FRESNO CA 93727
(559) 915-9388 • FAX 237-9401
jcengineer@aol.com




# SITE PLAN - LOW VOLTAGE SYSTEM

## NEW SCHOOL INCREMENT #2

SCALE: 1" = 30'-0"

## KEY NOTES

1. APPROXIMATE LOCATION FOR THE EXISTING ADDRESSABLE FIRE ALARM CONTROL PANEL & VOICE EVACUATION PANEL TO REMAIN IN SERVICE. PROVIDE CONNECTION TO THE NEW FIRE ALARM DEVICES PER PLANS, UPDATE NEW FIRE ZONE MAP. PROGRAM NEW DEVICES INFORMATION, MEASURE ACTUAL LOAD CURRENT AND VOLTAGE DROP FOR EACH NAC SIGNAL CIRCUITS, AND FACP STANDBY CURRENT AND ALARM CURRENT. SEND THE REPORT TO OWNER AND ENGINEER FOR REVIEW, AND PLASTIC LAMINATED ONE COPY INSIDE FACP CABINET DOOR.
2. APPROXIMATE LOCATION FOR EXISTING EMERGENCY VOICE EVACUATION PANEL. FIELD VERIFY LOCATION.
3. APPROXIMATE LOCATION FOR THE EXISTING COMPUTER MDF SERVER EQUIPMENT IN ADMIN OFFICE. PROVIDE NEW CABLE AND CONNECTION FOR THE NEW SIGNAL DEVICES PER PLANS.
4. APPROXIMATE LOCATION FOR THE EXISTING PA/IC EQUIPMENT IN ADMIN OFFICE. PROVIDE NEW CABLE AND CONNECTION FOR THE NEW SIGNAL DEVICES PER PLANS.
5. APPROXIMATE LOCATION FOR THE EXISTING MASTER INTRUSION ALARM PANEL IN ADMIN OFFICE. PROVIDE NEW CABLE AND CONNECTION FOR THE NEW SIGNAL DEVICES PER PLANS.
6. EXISTING SIGNAL CONDUITS PATHWAY, FOR REFERENCE ONLY. CONTRACTOR SHOULD INCLUDE ALLOWANCE IN HIS BID PROPOSAL TO FIELD VERIFY EXACT LOCATION AND REQUIREMENT PER PLANS.

(E) — INDICATE EXISTING CONDUIT AND WIRING. FOR REFERENCE ONLY, FIELD VERIFY AS REQUIRED.

## INCREMENT NO.2 SITE CONDUIT SYSTEM SCHEDULE

| SYMBOL | SYSTEM | QUANTITY/SIZE | TYPE | REMARKS |
|---|---|---|---|---|
| (A) | PA/IC/TELE/SECURITY | (TWO) 4"C | PVC SCH.40 | PROVIDE PULL ROPE FOR EMPTY CONDUIT AND SEAL WITH SILICONE SEALANT |
| (B) | DATA/TV | (TWO) 2"C | PVC SCH.40 | |
| (C) | FIRE ALARM | (ONE) 2"C | PVC SCH.40 | |

## INCREMENT NO.2 PULL BOX SCHEDULE

| NO. | SIZE | COVER MARKING |
|---|---|---|
| 1 | 34"x52" CHRISTY N48 | SIGNAL |
| 2 | 24"x36" CHRISTY N40 | SIGNAL |
| 3 | 24"x36" CHRISTY N40 | SIGNAL |
| 4 | 34"x52" CHRISTY N48 | SIGNAL |
| 5 | 24"x36" CHRISTY N40 | SIGNAL |
| 6 | 24"x36" CHRISTY N40 | SIGNAL |
| 7 | 24"x36" CHRISTY N40 | SIGNAL |

NOTES:
1. ALL PULL BOX SHALL BE RATED H20 WITH STEEL COVER PLATE AND HOLD DOWN BOLTS.
2. PROVIDE ID LETTER ON COVER PLATE PER SCHEDULE.
3. PROVIDE 4" MOLD STRIP FOR AROUND PULL BOX ON LANDSCAPE AREA.

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Phone (559) 436-0881 Fax (559) 436-0887 E-Mail: design@somam.com
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Revision: | Revision Description: | Rev. Date:

Sheet Title: SITE PLAN - LOW VOLTAGE

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designed: J CHONG
DR: J CHONG
PIC: ---

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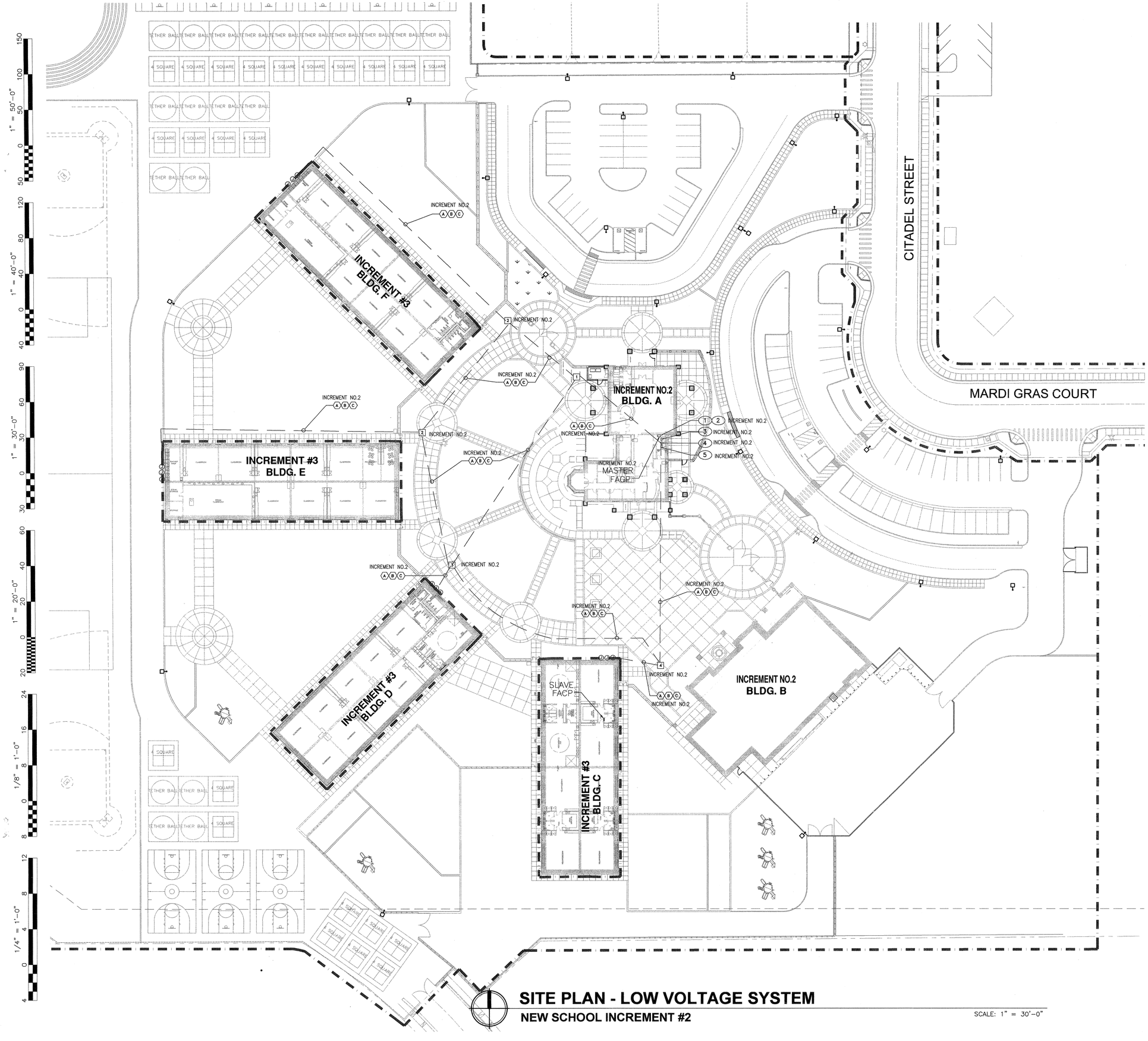
REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E1.02

Release:

CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1845 N HELM AVE #103 FRESNO CA 93727
(559) 325-9266 • FAX 251-3401
jcengineer@aol.com




## SITE PLAN - LOW VOLTAGE SYSTEM

NEW SCHOOL INCREMENT #2

SCALE: 1" = 30'-0"

# KEY NOTES

1. APPROXIMATE LOCATION FOR THE EXISTING ADDRESSABLE FIRE ALARM CONTROL PANEL & VOICE EVACUATION PANEL TO REMAIN IN SERVICE. PROVIDE CONNECTION TO THE NEW FIRE ALARM DEVICES PER PLANS. UPDATE NEW FIRE ZONE MAP, PROGRAM NEW DEVICES INFORMATION, MEASURE ACTUAL LOAD CURRENT AND VOLTAGE DROP FOR EACH NAC SIGNAL CIRCUITS, AND FACP STANDBY CURRENT AND ALARM CURRENT. SEND THE REPORT TO OWNER AND ENGINEER FOR REVIEW, AND PLASTIC LAMINATED ONE COPY INSIDE FACP CABINET DOOR.
2. APPROXIMATE LOCATION FOR EXISTING EMERGENCY VOICE EVACUATION PANEL. FIELD VERIFY LOCATION.
3. APPROXIMATE LOCATION FOR THE EXISTING COMPUTER MDF SERVER EQUIPMENT IN ADMIN OFFICE. PROVIDE NEW CABLE AND CONNECTION FOR THE NEW SIGNAL DEVICES PER PLANS.
4. APPROXIMATE LOCATION FOR THE EXISTING PA/IC EQUIPMENT IN ADMIN OFFICE. PROVIDE NEW CABLE AND CONNECTION FOR THE NEW SIGNAL DEVICES PER PLANS.
5. APPROXIMATE LOCATION FOR THE EXISTING MASTER INTRUSION ALARM PANEL IN ADMIN OFFICE. PROVIDE NEW CABLE AND CONNECTION FOR THE NEW SIGNAL DEVICES PER PLANS.
6. EXISTING SIGNAL CONDUITS PATHWAY, FOR REFERENCE ONLY. CONTRACTOR SHOULD INCLUDE ALLOWANCE IN HIS BID PROPOSAL TO FIELD VERIFY EXACT LOCATION AND REQUIREMENT PER PLANS.

(E) — INDICATE EXISTING CONDUIT AND WIRING. FOR REFERENCE ONLY, FIELD VERIFY AS REQUIRED.

## INCREMENT NO.2 SITE CONDUIT SYSTEM SCHEDULE

| SYMBOL | SYSTEM | QUANTITY/SIZE | TYPE | REMARKS |
|---|---|---|---|---|
| A | PA/IC/TELE/SECURITY | (TWO) 4"C | PVC SCH.40 | PROVIDE PULL ROPE FOR EMPTY CONDUIT AND SEAL WITH SILICONE SEALANT |
| B | DATA/TV | (TWO) 2"C | PVC SCH.40 | |
| C | FIRE ALARM | (ONE) 2"C | PVC SCH.40 | |

## INCREMENT NO.2 PULL BOX SCHEDULE

| NO. | SIZE | COVER MARKING |
|---|---|---|
| 1 | 34"x52" CHRISTY N48 | SIGNAL |
| 2 | 24"x36" CHRISTY N40 | SIGNAL |
| 3 | 24"x36" CHRISTY N40 | SIGNAL |
| 4 | 34"x52" CHRISTY N48 | SIGNAL |
| 5 | 24"x36" CHRISTY N40 | SIGNAL |
| 6 | 24"x36" CHRISTY N40 | SIGNAL |
| 7 | 24"x36" CHRISTY N40 | SIGNAL |

NOTES:
1. ALL PULL BOX SHALL BE RATED H20 WITH STEEL COVER PLATE AND HOLD DOWN BOLTS.
2. PROVIDE ID LETTER ON COVER PLATE PER SCHEDULE.
3. PROVIDE 4" MOLD STRIP FOR AROUND PULL BOX ON LANDSCAPE AREA.

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6011 N. Fresno, Suite 130 - Fresno, California 93710
Phone (559) 436-0887 Fax (559) 436-0887 E-Mail: design@somam.com
www.integrateddesigns.com

Revision: / Rev. Date: / Revision Description:

Sheet Title: SITE PLAN - LOW VOLTAGE

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PIC: --

Agency Approval Stamp:

FILE #: 15-6
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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AC SC FLS SHEET IN
DATE 5/6/18
TRACKING #: -
Addendum # 7

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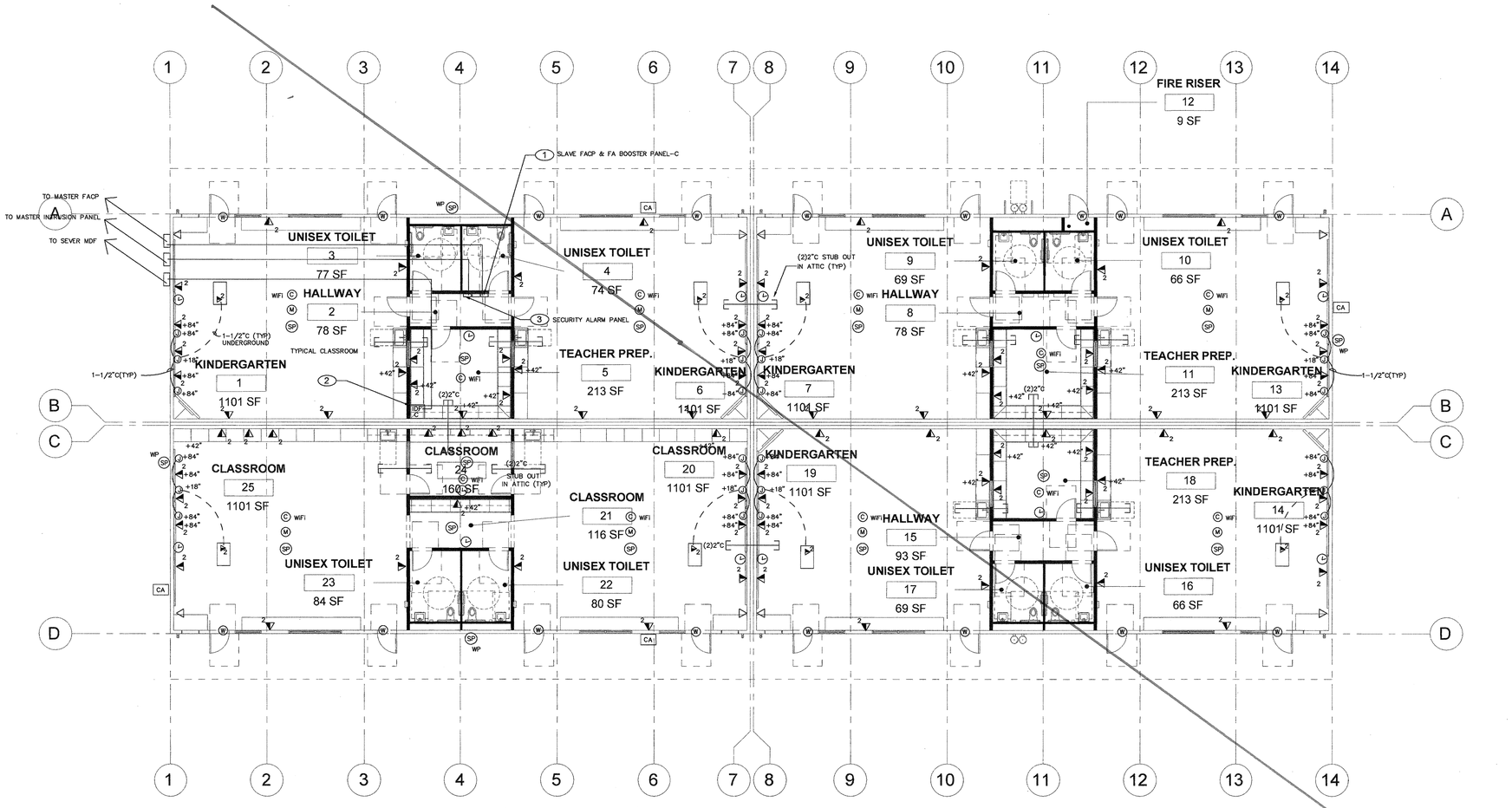
ADDENDUM NO.3

Job No.: 5262

Sheet No.: E1.02

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CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE #103 FRESNO CA 93727
(559) 515-9288 • FAX 591-9401
jcengineer@aol.com




## SIGNAL AND COMMUNICATION PLAN - BLDG. ' C '

**NEW SCHOOL INCREMENT #3**

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

# KEY NOTES

1. SLAVE FACP AND FIRE ALARM NAC SIGNAL & EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.

# LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

- (K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.
- (M) CEILING MOUNTED INTRUSION DETECTOR +84"AFF. PROVIDE LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.
- (W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 1/2"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

- ▽ HANDSET/IP PHONE OUTLET AT 46"AFF - PROVIDE BLUE COLOR CAT.6e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.
- S (L) WALL MOUNTED CLOCK/SPEAKER COMBO AT +84"AFF. PROVIDE BACK BOX, 3/4"C WITH CABLE TO MASTER CLOCK AND 3/4"C (1)SPEAKER CABLE TO MASTER PA/IC. SEE SPECIFICATION FOR MORE INFORMATION.
- (L) WIRELESS WALL CLOCK AT +84"AFF. SEE SPECIFICATION FOR MORE INFORMATION.
- (SP) CEILING SPEAKER - RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.
- WP (SP) OUTDOOR SPEAKER - ATLAS #APF15 HORN W/XFWR AND LOWELL (#CBB4 FOR SURFACE, #P87SX FOR RECESS) BACK BOX W/SQLK GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

- 3 LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.
- WALL DATA OUTLET AT +18"AFF - NUMBER 3 INDICATED (THREE DATA DROP) HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6e 4UTP CABLE TO IDF PATCH PANEL.
- WiFi (C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK. HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.
- IDF WALL MOUNT DATA CABINET, MODEL: HUBBELL 36"H WITH SWING OUT DOOR AND RACK, PROVIDE EXHAUST FAN INSIDE. PROVIDE (4) 48 PORT PATCH PANEL, MODEL: HUBBELL #UDX48E1U. DATA SWITCH FURNISH BY OWNER, INSTALL BY CONTRACTOR. PROVIDE ALL HARDWARE AND PATCH CABLE AS REQUIRED FOR A COMPLETE FUNCTION SYSTEM. PROVIDE 66 BLOCK INSIDE CABINET FOR SPEAKER WIRING TERMINATION.
- WIREMOLD RFB4E ON GRADE FLOOR BOX WITH 2HUB CONDUIT HUB FITTING. COORDINATE FINISH WITH ARCHITECT. PROVIDE FOURPLEX RECEPTACLE AND DATA OUTLETS, AND UNDERGROUND CONDUIT AND WIRING PER PLANS.
- —T— OUTDOOR TELE/IC CABLE. 22AWG SOLID COPPER 25 PAIR OSP TELEPHONE CABLE.
- —P1— PA/IC CABLE. CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.
- —FO— FIBER OPTIC CABLE VIA INNER DUCT WITH J-HOOK IN ATTIC AND 2"C FOR OUTDOOR. 12 STAND OM4 MULTIMODE CABLE. TERMINATED IN TO FUSION SPLICED CONNECTORS AND PUT INTO HUBBLE BULKHEADS INSIDE IDF
- —C1— GENERAL CABLE BLUE COLOR CAT 6e 22AWG 4UTP.
- —C2— GENERAL CABLE BLUE COLOR CAT 6A 22AWG 4UTP. (WIRELESS ACCESS POINT)
- CA EXTERIOR WALL MOUNT SECURITY CAMERA. ROUGH IN DATA JACK AND MOUNTING BACK BOX. SEE SPECIFICATION. PROVIDE ONE CAT 6A 4UTP CABLE TO IDF PATCH PANEL.


CONSULTING ENGINEERS

JOHN CHONG ENGINEERING

1849 N HELM AVE #103 FRESNO CA 93727

(559) 325-9388 • FAX 237-9403

jcengineer@aol.com



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6311 N. Fresno, Suite 130 – Fresno, California 93710

Phone (559) 436-0881 Fax (559) 436-0887 E-Mail: design@somam.com

www.integrateddesigns.com


| Revision: | Rev. Date: | Revision Description: |
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Sheet Title: SIGNAL & COMMUNICATION PLAN - BUILDING ' C '

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3, BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18

Date: 12/06/16

Designed: J. CHONG

Drawn: J. CHONG

Chkd: —

PIC:

Agency Approval Stamp:

FILE #: 15-6
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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DATE JUN 27 2018
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Stamp(s):

REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E2.10

Release:

**7-01 DRAWING E2.10 - SIGNAL AND COMMUNICATION PLAN - BLDG C:**

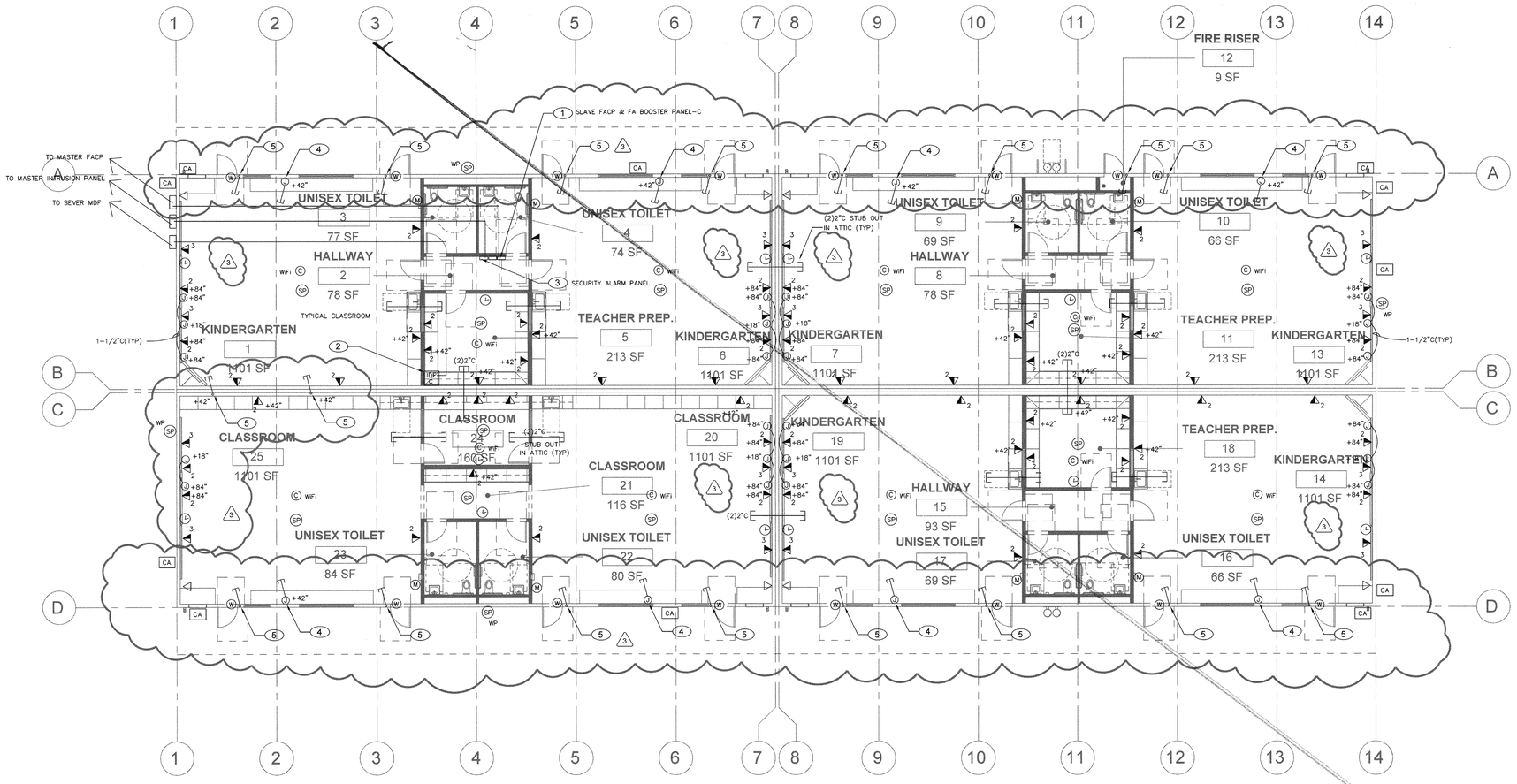
1. Classroom A/V system and projector are furnished and installed by Owner, Contractor provides conduit raceway with pull rope, blocking and support per plans and spec.

2. Intrusion/Alarm equipment and system are furnished and installed by Owner, Contractor provides conduits and raceway per plans and spec.

3. Telephone equipment furnished and installed by Owner, Contractor provides phone jack and complete wiring per plans and spec.

4. PA/IC/Clock head end equipment furnished and installed by Owner, Contractor provides PA/IC speakers, clock and complete wiring per plans and spec.

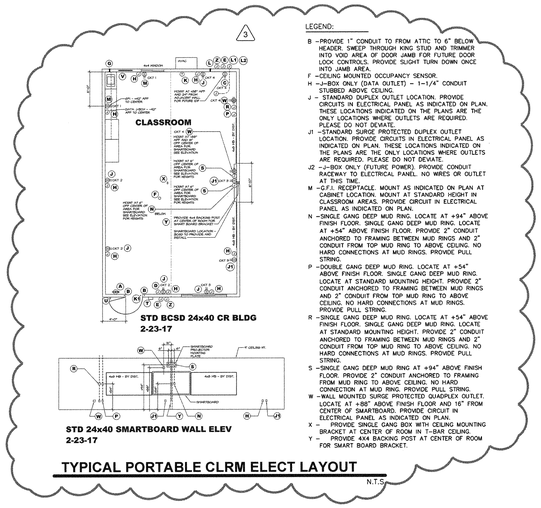
5. IDF Data switching equipment are furnished by Owner, Contractor provides IDF cabinets, patch panels, patch cord and complete data cabling per plans and spec.




# SIGNAL AND COMMUNICATION PLAN - BLDG. ' C '

## NEW SCHOOL INCREMENT #3

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




LEGEND:

B –PROVIDE 1" CONDUIT TO FROM ATTIC TO 6" BELOW HEADER. SWEEP THROUGH KING STUD AND TRIMMER INTO VOID AREA OF DOOR JAMB FOR FUTURE DOOR LOCK CONTROLS. PROVIDE SLIGHT TURN DOWN ONCE INTO JAMB AREA.
F –CEILING MOUNTED OCCUPANCY SENSOR.
H –J-BOX ONLY (DATA OUTLET) – 1-1/4" CONDUIT STUBBED ABOVE CEILING.
J – STANDARD DUPLEX OUTLET LOCATION. PROVIDE CIRCUITS IN ELECTRICAL PANEL AS INDICATED ON PLAN. THESE LOCATIONS INDICATED ON THE PLANS ARE THE ONLY LOCATIONS WHERE OUTLETS ARE REQUIRED. PLEASE DO NOT DEVIATE.
J1 –STANDARD SURGE PROTECTED DUPLEX OUTLET LOCATION. PROVIDE CIRCUITS IN ELECTRICAL PANEL AS INDICATED ON PLAN. THESE LOCATIONS INDICATED ON THE PLANS ARE THE ONLY LOCATIONS WHERE OUTLETS ARE REQUIRED. PLEASE DO NOT DEVIATE.
J2 –J-BOX ONLY (FUTURE POWER). PROVIDE CONDUIT RACEWAY TO ELECTRICAL PANEL. NO WIRES OR OUTLET AT THIS TIME.
M –G.F.I. RECEPTACLE. MOUNT AS INDICATED ON PLAN AT CABINET LOCATION. MOUNT AT STANDARD HEIGHT IN CLASSROOM AREAS. PROVIDE CIRCUIT IN ELECTRICAL PANEL AS INDICATED ON PLAN.
N –SINGLE GANG DEEP MUD RING. LOCATE AT +94" ABOVE FINISH FLOOR. SINGLE GANG DEEP MUD RING. LOCATE AT +54" ABOVE FINISH FLOOR. PROVIDE 2" CONDUIT ANCHORED TO FRAMING BETWEEN MUD RINGS AND 2" CONDUIT FROM TOP MUD RING TO ABOVE CEILING. NO HARD CONNECTIONS AT MUD RINGS. PROVIDE PULL STRING.
P –DOUBLE GANG DEEP MUD RING. LOCATE AT +54" ABOVE FINISH FLOOR. SINGLE GANG DEEP MUD RING. LOCATE AT STANDARD MOUNTING HEIGHT. PROVIDE 2" CONDUIT ANCHORED TO FRAMING BETWEEN MUD RINGS AND 2" CONDUIT FROM TOP MUD RING TO ABOVE CEILING. NO HARD CONNECTIONS AT MUD RINGS. PROVIDE PULL STRING.
R –SINGLE GANG DEEP MUD RING. LOCATE AT +54" ABOVE FINISH FLOOR. SINGLE GANG DEEP MUD RING. LOCATE AT STANDARD MOUNTING HEIGHT. PROVIDE 2" CONDUIT ANCHORED TO FRAMING BETWEEN MUD RINGS AND 2" CONDUIT FROM TOP MUD RING TO ABOVE CEILING. NO HARD CONNECTIONS AT MUD RINGS. PROVIDE PULL STRING.
S –SINGLE GANG DEEP MUD RING AT +94" ABOVE FINISH FLOOR. PROVIDE 2" CONDUIT ANCHORED TO FRAMING FROM MUD RING TO ABOVE CEILING. NO HARD CONNECTION AT MUD RING. PROVIDE PULL STRING.
W –WALL MOUNTED SURGE PROTECTED QUADPLEX OUTLET. LOCATE AT +86" ABOVE FINISH FLOOR AND 16" FROM CENTER OF SMARTBOARD. PROVIDE CIRCUIT IN ELECTRICAL PANEL AS INDICATED ON PLAN.
X – PROVIDE SINGLE GANG BOX WITH CEILING MOUNTING BRACKET AT CENTER OF ROOM IN T-BAR CEILING.
Y – PROVIDE 4X4 BACKING POST AT CENTER OF ROOM FOR SMART BOARD BRACKET.

## TYPICAL PORTABLE CLRM ELECT LAYOUT

N.T.S.

ADDENDUM DRAWING 3 - 04

# KEY NOTES

1. SLAVE FACP AND FIRE ALARM NAC SIGNAL & EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.
4. PROVIDE 4"SQ. BACK BOX +18"AFF WITH SINGLE GANG DEEP RING AND 1-1/4"C STUB TO ACCESSIBLE ATTIC WITH PULL ROPE FOR FUTURE DATA OUTLET.
5. PROVIDE 1/2"C AT DOOR JAMB AND STUB TO ACCESSIBLE ATTIC WITH PULL ROPE FOR FUTURE CARD ACCESS CONTROL.

3

# LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

(K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

(M) WALL MOUNTED INTRUSION DETECTOR +84"AFF. PROVIDE 4"SQ BACK BOX WITH 3/4"C STUB INTO ACCESSIBLE ATTIC SPACE. SEE SPECIFICATION FOR MORE INFORMATION.

(W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 3/4"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

▽ HANDSET/IP PHONE OUTLET AT 46"AFF – PROVIDE BLUE COLOR CAT.6e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.

3

(L) WIRELESS WALL CLOCK AT +96"AFF. SEE SPECIFICATION FOR MORE INFORMATION.

(SP) CEILING SPEAKER – RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

WP (SP) OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#CB84 FOR SURFACE, #FB75X FOR RECESS) BACK BOX W/SQUK GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

3 – LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.

WALL DATA OUTLET AT +18"AFF – NUMBER 3 INDICATED (THREE DATA DROP) HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6e 4UTP CABLE TO IDF PATCH PANEL.

WIFI (C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK. HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.

IDF WALL MOUNT DATA CABINET, MODEL: HUBBELL 36"H WITH SWING OUT DOOR AND RACK. PROVIDE EXHAUST FAN INSIDE. PROVIDE (4) 48 PORT PATCH PANEL, MODEL: HUBBELL #UDX48E1U. DATA SWITCH FURNISH BY OWNER, INSTALL BY CONTRACTOR. PROVIDE ALL HARDWARE AND PATCH CABLE AS REQUIRED FOR A COMPLETE FUNCTION SYSTEM. PROVIDE 66 BLOCK INSIDE CABINET FOR SPEAKER WIRING TERMINATION.

3

— T — OUTDOOR TELE/IC CABLE. 22AWG SOILD COPPER 25 PAIR DSP TELEPHONE CABLE.

— P1 — PA/IC CABLE. CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

— FO — FIBER OPTIC CABLE VIA INNER DUCT WITH J-HOOK IN ATTIC AND 2"C FOR OUTDOOR. 12 STAND OM4 MULTIMODE CABLE. TERMINATED IN TO FUSION SPLICED CONNECTORS AND PUT INTO HUBBLE BULKHEADS INSIDE IDF

— C1 — GENERAL CABLE BLUE COLOR CAT 6e 22AWG 4UTP.

— C2 — GENERAL CABLE BLUE COLOR CAT 6A 22AWG 4UTP. (WIRELESS ACCESS POINT)

CA EXTERIOR WALL MOUNT SECURITY CAMERA AT +96". ROUGH IN 4"SQ BACK BOX WITH 3/4"C STUB INTO ACCESSIBLE ATTIC SPACE, PROVIDE WP FACEPLATE. SEE DIV 27 SPEC FOR ADDITIONAL INFORMATION.

3


CONSULTING ENGINEERS
JOHN C HONG ENGINEERING
1849 N HELM AVE #107 FRESNO CA 93727
(559) 325-9388 • FAX 237-9401
jcengineer@aol.com



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www.integrateddesigns.com


| Revision | Revision Description | Rev. Date |
|---|---|---|
| 3 | ADDENDUM NO.3 | 8-26-18 |

Sheet Title: SIGNAL & COMMUNICATION PLAN - BUILDING ' C '

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designer: | Dr: | PIC: |
|---|---|---|---|
| 01/31/18 | J. CHONG | J. CHONG | -- |
| Date: 12/06/16 | | | |

Agency Approval Stamp:

FILE #: 15-6
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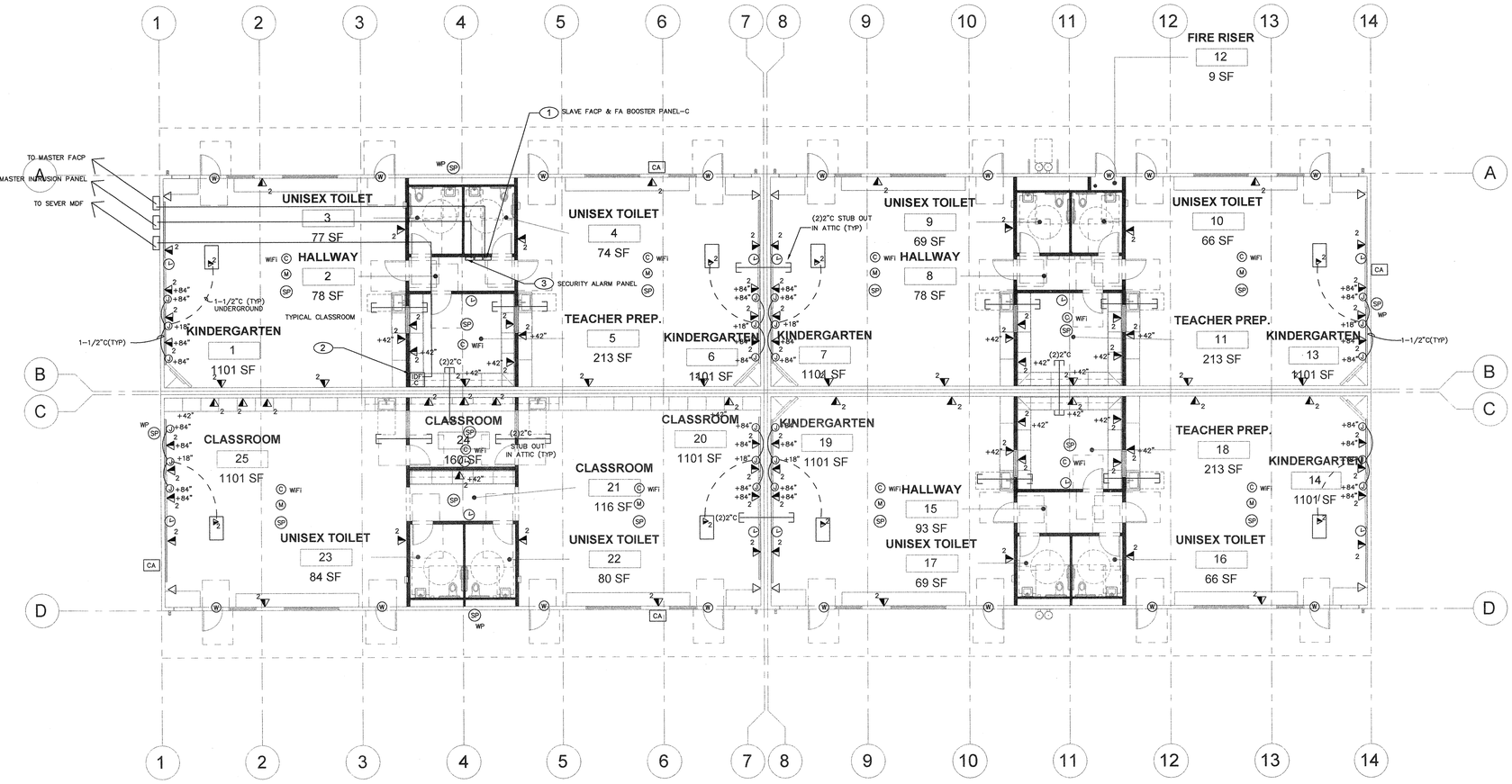
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STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E2.10

Release: ADDENDUM 3




## SIGNAL AND COMMUNICATION PLAN - BLDG. ' C '

**NEW SCHOOL INCREMENT #3**

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

# KEY NOTES

1. SLAVE FACP AND FIRE ALARM NAC SIGNAL & EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVIDE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.


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- (K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.
- (M) CEILING MOUNTED INTRUSION DETECTOR +84"AFF. PROVIDE LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.
- (W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 1/2"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

- ▽ HANDSET/IP PHONE OUTLET AT 46"AFF – PROVIDE BLUE COLOR CAT.6e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.
- S WALL MOUNTED CLOCK/SPEAKER COMBO AT +84"AFF. PROVIDE BACK BOX, 3/4"C WITH CABLE TO MASTER CLOCK AND 3/4"C (1)SPEAKER CABLE TO MASTER PA/C. SEE SPECIFICATION FOR MORE INFORMATION.
- (L) WIRELESS WALL CLOCK AT +84"AFF. SEE SPECIFICATION FOR MORE INFORMATION.
- (SP) CEILING SPEAKER – RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.
- WP (SP) OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#CB84 FOR SURFACE, #PS75X FOR RECESS) BACK BOX W/SQLK GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

- 2 LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.
- 2 WALL DATA OUTLET AT +18"AFF – NUMBER 3 INDICATED (THREE DATA DROP) HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6e 4UTP CABLE TO IDF PATCH PANEL.
- WIFI (C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK, HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.
- IDF WALL MOUNT DATA CABINET, MODEL: HUBBELL 36"H WITH SWING OUT DOOR AND RACK, PROVIDE EXHAUST FAN INSIDE. PROVIDE (4) 48 PORT PATCH PANEL, MODEL: HUBBELL #UDX48E1U. DATA SWITCH FURNISH BY OWNER, INSTALL BY CONTRACTOR. PROVIDE ALL HARDWARE AND PATCH CABLE AS REQUIRED FOR A COMPLETE FUNCTION SYSTEM. PROVIDE 66 BLOCK INSIDE CABINET FOR SPEAKER WIRING TERMINATION.
- WIREMOLD RFB4E ON GRADE FLOOR BOX WITH 2HUB CONDUIT HUB FITTING. COORDINATE FINISH WITH ARCHITECT. PROVIDE FOURPLEX RECEPTACLE AND DATA OUTLETS, AND UNDERGROUND CONDUIT AND WIRING PER PLANS.
- —T— OUTDOOR TELE/IC CABLE. 22AWG SOILD COPPER 25 PAIR OSP TELEPHONE CABLE.
- —P1— PA/IC CABLE. CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.
- —FO— FIBER OPTIC CABLE VIA INNER DUCT WITH J-HOOK IN ATTIC AND 2"C FOR OUTDOOR. 12 STAND OM4 MULTIMODE CABLE. TERMINATED IN TO FUSION SPLICED CONNECTORS AND PUT INTO HUBBLE BULKHEADS INSIDE IDF
- —C1— GENERAL CABLE BLUE COLOR CAT 6e 22AWG 4UTP.
- —C2— GENERAL CABLE BLUE COLOR CAT 6A 22AWG 4UTP. (WIRELESS ACCESS POINT)
- CA EXTERIOR WALL MOUNT SECURITY CAMERA. ROUGH IN DATA JACK AND MOUNTING BACK BOX. SEE SPECIFICATION. PROVIDE ONE CAT 6A 4UTP CABLE TO IDF PATCH PANEL.


CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE #103 FRESNO CA 93727
(559) 325-9388 • FAX 297-3401
jcengineer@aol.com



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www.integrateddesigns.com


| Revision: | Revision Description: | Rev. Date: |
|---|---|---|
| | | |

Sheet Title: SIGNAL & COMMUNICATION PLAN - BUILDING ' C '

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 — BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designer: | DR: | PIC: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | -- |
| 12/06/16 | | | |

Agency Approval Stamp:

FILE #: 15-6
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03-118394
AC SC FLS SH SS TN
DATE 5/6/19
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ADDENDUM #3

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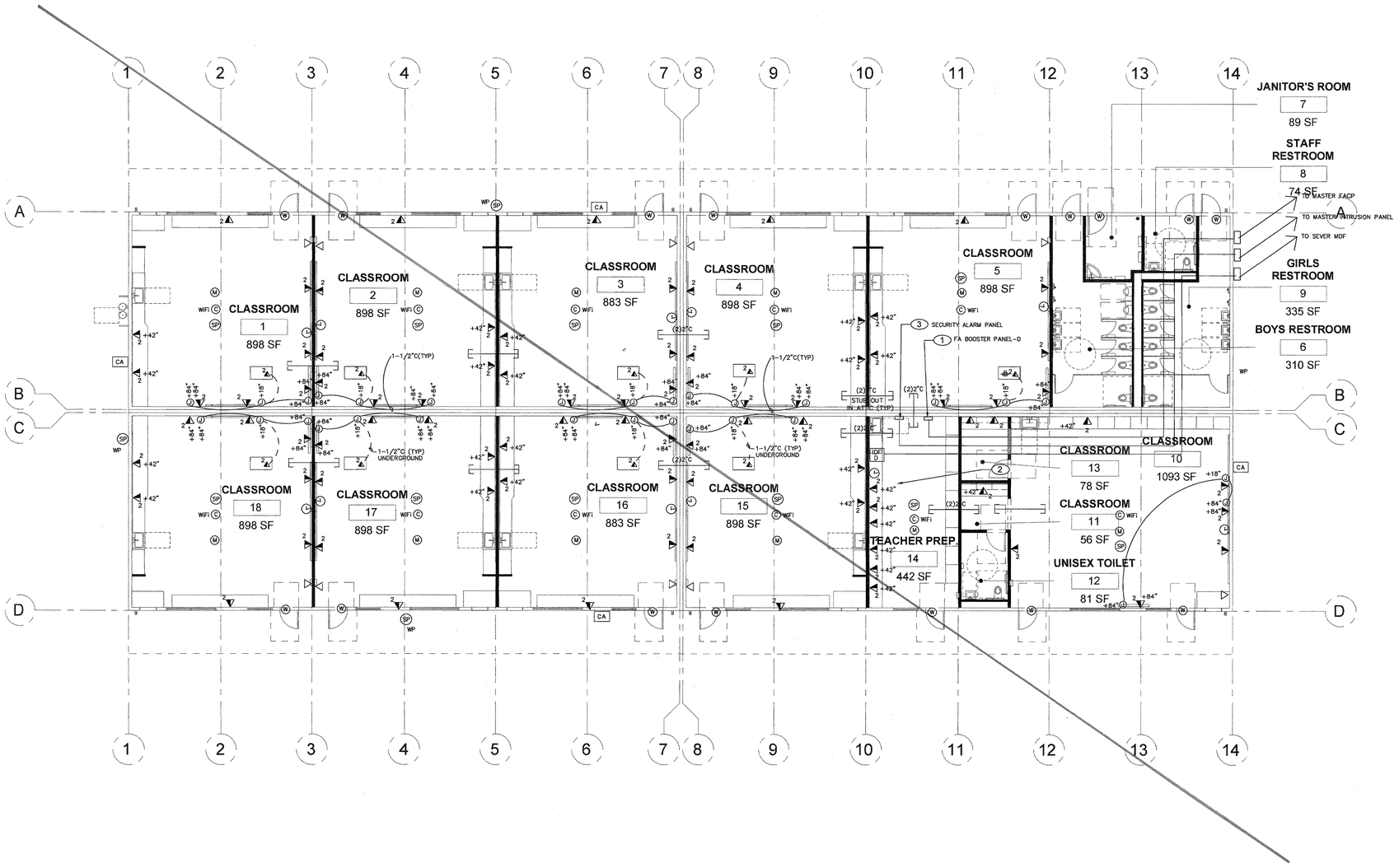
REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

ADDENDUM NO.3

Job No.: 5262

Sheet No.: E2.10

Release:




## SIGNAL AND COMMUNICATION PLAN - BLDG. ' D '

**NEW SCHOOL INCREMENT #3**

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

# KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.

# LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

(K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

(M) CEILING MOUNTED INTRUSION DETECTOR +84"AFF. PROVIDE LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

(W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 1/2"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

▽ HANDSET/P PHONE OUTLET AT 46"AFF – PROVIDE BLUE COLOR CAT.6e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.

S WALL MOUNTED CLOCK/SPEAKER COMBO AT +84"AFF. PROVIDE BACK BOX, 3/4"C WITH CABLE TO MASTER CLOCK AND 3/4"C (1)SPEAKER CABLE TO MASTER PA/C. SEE SPECIFICATION FOR MORE INFORMATION.

(L) WIRELESS WALL CLOCK AT +84"AFF. SEE SPECIFICATION FOR MORE INFORMATION.

(SP) CEILING SPEAKER – RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

WP (SP) OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#C884 FOR SURFACE, #F875X FOR RECESS) BACK BOX W/SQLK GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

2 LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.
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WIFI (C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK. HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.

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CA EXTERIOR WALL MOUNT SECURITY CAMERA. ROUGH IN DATA JACK AND MOUNTING BACK BOX. SEE SPECIFICATION. PROVIDE ONE CAT 6A 4UTP CABLE TO IDF PATCH PANEL.


CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1349 N HELM AVE #103 FRESNO CA 93727
(559) 325-7288 • FAX 237-9401
jcengineer@aol.com



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Sheet Title: SIGNAL & COMMUNICATION BLDG 'D'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Drawn: | Ck'd: | PC: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | -- |
| Date: 12/06/16 | | | |

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Stamp(s):

REGISTERED PROFESSIONAL ENGINEER
John E. Chong
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E2.20

Release:

**7-02 DRAWING E2.20 - SIGNAL AND COMMUNICATION PLAN - BLDG D:**

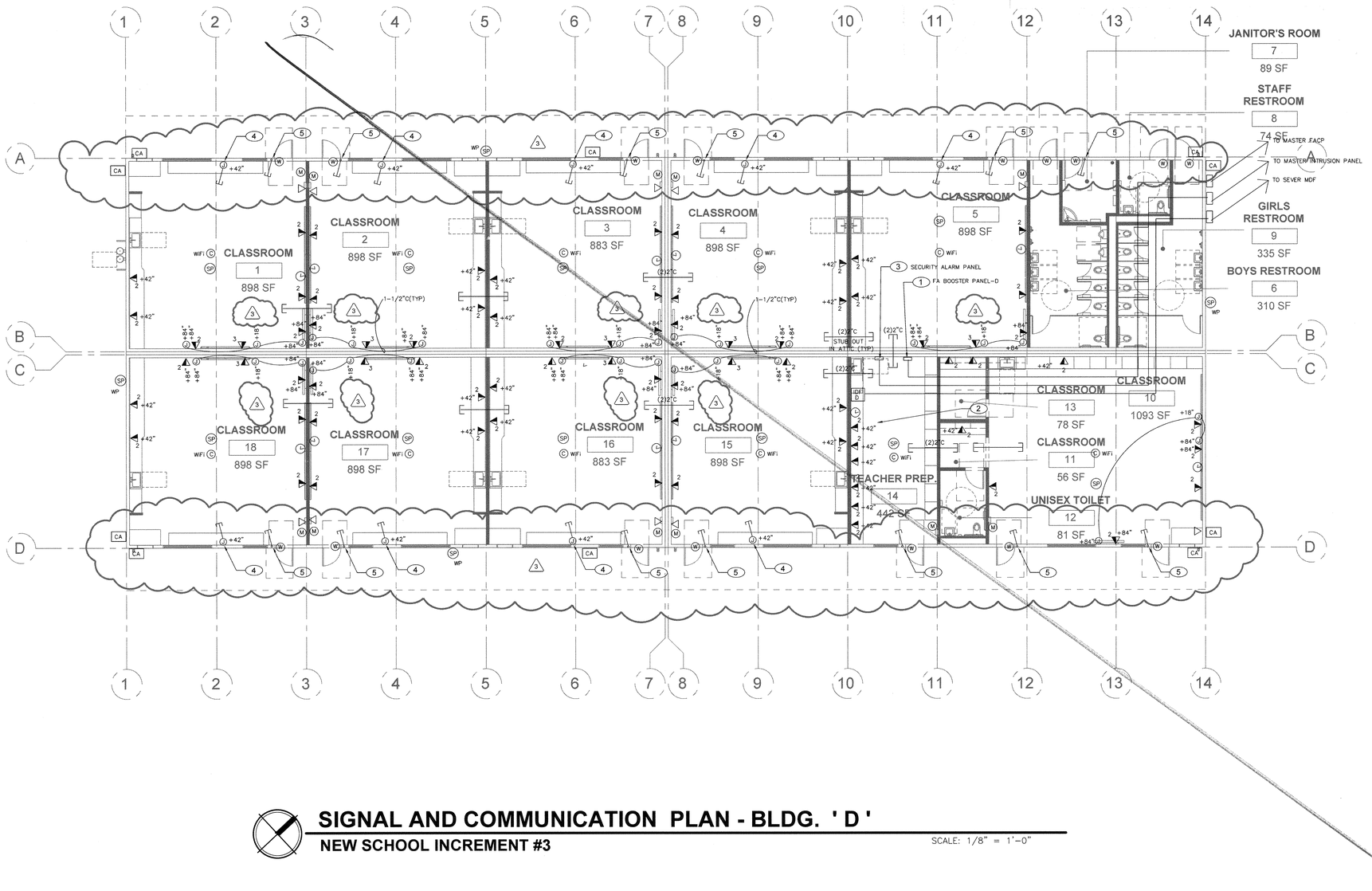
1. Classroom A/V system and projector are furnished and installed by Owner, Contractor provides conduit raceway with pull rope, blocking and support per plans and spec.

2. Intrusion/Alarm equipment and system are furnished and installed by Owner, Contractor provides conduits and raceway per plans and spec.

3. Telephone equipment furnished and installed by Owner, Contractor provides phone jack and complete wiring per plans and spec.

4. PA/IC/Clock head end equipment furnished and installed by Owner, Contractor provides PA/IC speakers, clock and complete wiring per plans and spec.

5. IDF Data switching equipment are furnished by Owner, Contractor provides IDF cabinets, patch panels, patch cord and complete data cabling per plans and spec.




## SIGNAL AND COMMUNICATION PLAN - BLDG. ' D '

**NEW SCHOOL INCREMENT #3**

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

ADDENDUM DRAWING 3 - 05

# KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.
4. PROVIDE 4"SQ. BACK BOX +18"AFF WITH SINGLE GANG DEEP RING AND 1-1/4"C STUB TO ACCESSIBLE ATTIC WITH PULL ROPE FOR FUTURE DATA OUTLET.
5. PROVIDE 1/2"C AT DOOR JAMB AND STUB TO ACCESSIBLE ATTIC WITH PULL ROPE FOR FUTURE CARD ACCESS CONTROL. (3)

# LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

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(M) WALL MOUNTED INTRUSION DETECTOR +84"AFF. PROVIDE 4"SQ BACK BOX WITH 3/4"C STUB INTO ACCESSIBLE ATTIC SPACE. SEE SPECIFICATION FOR MORE INFORMATION.

(W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE, ROUGH-IN 3/4"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

▽ HANDSET/IP PHONE OUTLET AT 46"AFF – PROVIDE BLUE COLOR CAT.6e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.

(3)

(L) WIRELESS WALL CLOCK AT +96"AFF. SEE SPECIFICATION FOR MORE INFORMATION.

(SP) CEILING SPEAKER – RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

WP (SP) OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFWR AND LOWELL (#CB84 FOR SURFACE, #P875X FOR RECESS) BACK BOX W/SQLW GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

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— C1 — GENERAL CABLE BLUE COLOR CAT 6e 22AWG 4UTP.
— C2 — GENERAL CABLE BLUE COLOR CAT 6A 22AWG 4UTP. (WIRELESS ACCESS POINT)

CA EXTERIOR WALL MOUNT SECURITY CAMERA AT +96", ROUGH IN 4"SQ BACK BOX WITH 3/4"C STUB INTO ACCESSIBLE ATTIC SPACE, PROVIDE WP FACEPLATE. SEE DIV 27 SPEC FOR ADDITIONAL INFORMATION. (3)


CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE #129 FRESNO CA 93727
(559) 325-9388 • FAX 297-9401
jcengineer@aol.com



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ADDENDUM 3


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| Revision | Rev. Date | Revision Description |
|---|---|---|
| 3 | 8-26-18 | ADDENDUM NO.3 |

Sheet Title: SIGNAL & COMMUNICATION BLDG 'D'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designer: | Drawn: | P/C: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | — |
| Date: 12/06/16 | | | |

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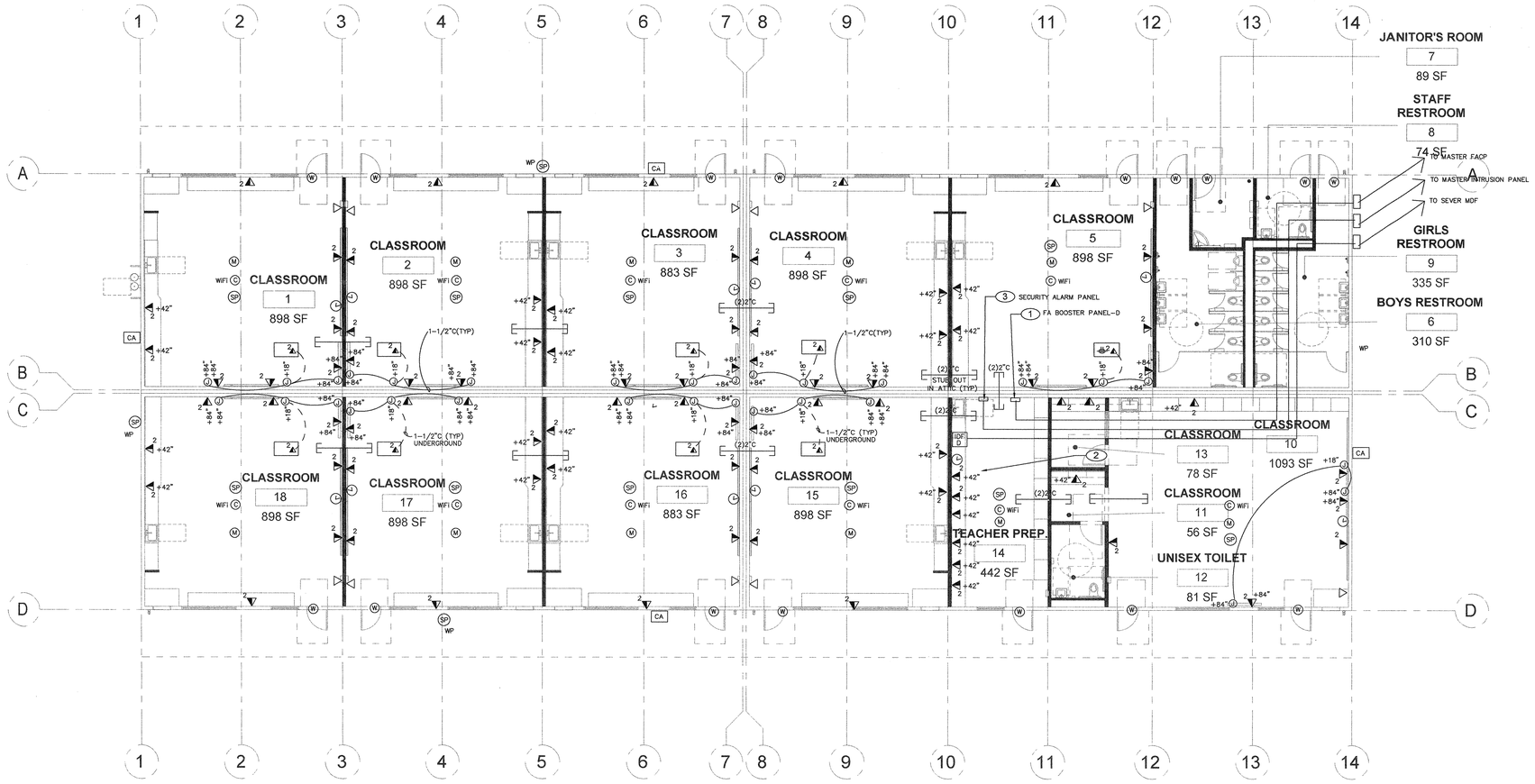
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JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E2.20

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1" = 50'-0" 1" = 40'-0" 1" = 30'-0" 1" = 20'-0" 1/8" = 1'-0" 1/4" = 1'-0"

# SIGNAL AND COMMUNICATION PLAN - BLDG. 'D'

## NEW SCHOOL INCREMENT #3

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

## KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVIDE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.

## LEGEND

SECURITY ALARM SYSTEM

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- (K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.
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- (W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 1/2"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

- ▽ HANDSET/IP PHONE OUTLET AT 46"AFF – PROVIDE BLUE COLOR CAT.6e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.
- S (L) WALL MOUNTED CLOCK/SPEAKER COMBO AT +84"AFF. PROVIDE BACK BOX, 3/4"C WITH CABLE TO MASTER CLOCK AND 3/4"C (1)SPEAKER CABLE TO MASTER PA/IC. SEE SPECIFICATION FOR MORE INFORMATION.
- (L) WIRELESS WALL CLOCK AT +84"AFF. SEE SPECIFICATION FOR MORE INFORMATION.
- (SP) CEILING SPEAKER – RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.
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DATA COMMUNICATION SYSTEM

- 3 — LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.
- WALL DATA OUTLET AT +18"AFF – NUMBER 3 INDICATED (THREE DATA DROP) HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6e 4UTP CABLE TO IDF PATCH PANEL.
- WIFI (C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK. HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.
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CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1349 N HELM AVE #63 FRESNO CA 93727
(559) 325-9386 • FAX 297-3401
jcengineer@aol.com



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Sheet Title: SIGNAL & COMMUNICATION BLDG 'D'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3, BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designer: | DR: | PC: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | --- |
| Date: 12/06/16 | | | |

Agency Approval Stamp:

FILE #: 15-6
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03-118394
AC SC FLS SH SSTN
DATE 3/6/18

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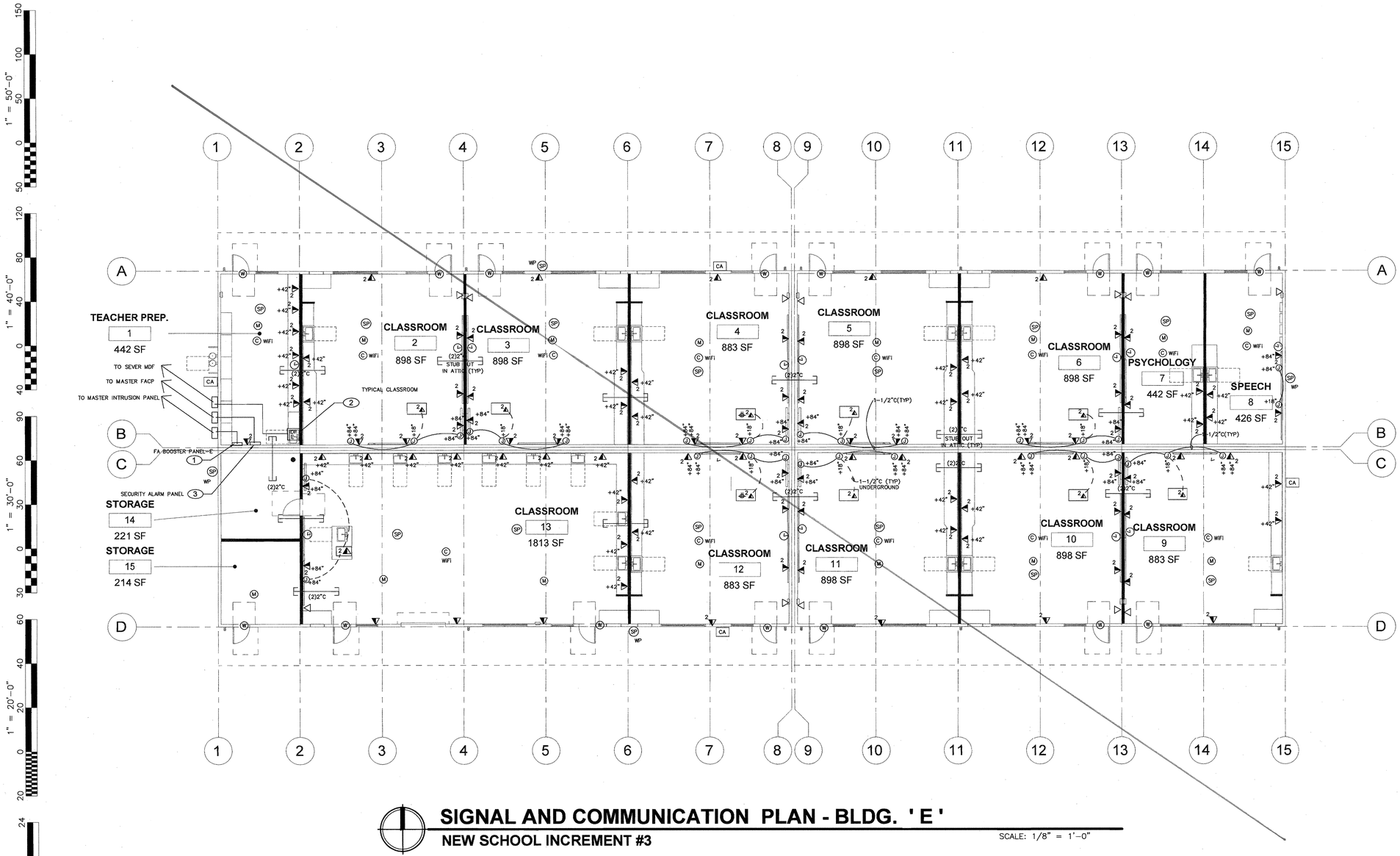
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JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

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Job No.: 5262

Sheet No.: E2.20

Release:




## SIGNAL AND COMMUNICATION PLAN - BLDG. 'E'

**NEW SCHOOL INCREMENT #3**

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

# KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.

# LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

(K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

(M) CEILING MOUNTED INTRUSION DETECTOR +84"AFF. PROVIDE LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

(W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 1/2"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

▽ HANDSET/IP PHONE OUTLET AT 46"AFF – PROVIDE BLUE COLOR CAT.5e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.

S (L) WALL MOUNTED CLOCK/SPEAKER COMBO AT +84"AFF. PROVIDE BACK BOX, 3/4"C WITH CABLE TO MASTER CLOCK AND 3/4"C (1)SPEAKER CABLE TO MASTER PA/IC. SEE SPECIFICATION FOR MORE INFORMATION.

(L) WIRELESS WALL CLOCK AT +84"AFF. SEE SPECIFICATION FOR MORE INFORMATION.

(SP) CEILING SPEAKER – RAULAND #USO221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

WP (SP) OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#CBB4 FOR SURFACE, #PB75X FOR RECESS) BACK BOX W/SQLX GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

2 — LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.
WALL DATA OUTLET AT +18"AFF – NUMBER 3 INDICATED (THREE DATA DROP) HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6e 4UTP CABLE TO IDF PATCH PANEL.

WIFI (C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK. HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.

IDF WALL MOUNT DATA CABINET, MODEL: HUBBELL 36"H WITH SWING OUT DOOR AND RACK. PROVIDE EXHAUST FAN INSIDE. PROVIDE (4) 48 PORT PATCH PANEL. MODEL: HUBBELL #UDX48E1U. DATA SWITCH FURNISH BY OWNER. INSTALL BY CONTRACTOR. PROVIDE ALL HARDWARE AND PATCH CABLE AS REQUIRED FOR A COMPLETE FUNCTION SYSTEM. PROVIDE 66 BLOCK INSIDE CABINET FOR SPEAKER WIRING TERMINATION.

WIREMOLD RFB4E ON GRADE FLOOR BOX WITH 2HUB CONDUIT HUB FITTING. COORDINATE FINISH WITH ARCHITECT. PROVIDE FOURPLEX RECEPTACLE AND DATA OUTLETS, AND UNDERGROUND CONDUIT AND WIRING PER PLANS.

— T — OUTDOOR TELE/IC CABLE. 22AWG SOILD COPPER 25 PAIR OSP TELEPHONE CABLE.
— P1 — PA/IC CABLE. CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.
— FO — FIBER OPTIC CABLE VIA INNER DUCT WITH J-HOOK IN ATTIC AND 2"C FOR OUTDOOR. 12 STAND OM4 MULTIMODE CABLE. TERMINATED IN TO FUSION SPLICED CONNECTORS AND PUT INTO HUBBLE BULKHEADS INSIDE IDF
— C1 — GENERAL CABLE BLUE COLOR CAT 6e 22AWG 4UTP.
— C2 — GENERAL CABLE BLUE COLOR CAT 6A 22AWG 4UTP. (WIRELESS ACCESS POINT)

CA EXTERIOR WALL MOUNT SECURITY CAMERA. ROUGH IN DATA JACK AND MOUNTING BACK BOX. SEE SPECIFICATION. PROVIDE ONE CAT 6A 4UTP CABLE TO IDF PATCH PANEL.


CONSULTING ENGINEERS

JOHN CHONG ENGINEERING

1345 N HELM AVE #103 FRESNO CA 93727
(559) 325-9388 • FAX 237-3421
jcengineer@aol.com



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6311 N. Fresno, Suite 130 – Fresno, California 93710
Phone (559) 438-0881 Fax (559) 438-0887 E-MAIL: design@somam.com
www.integrateddesigns.com


Revision: / Revision Description: / Rev. Date:

Sheet Title: SIGNAL & COMMUNICATION BLDG 'E'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PIC: --

Agency Approval Stamp:

FILE #: 15-6
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
03-118394
AC. FLS SS
DATE JUN 27 2018
TRACKING #: -

Stamp(s):

REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E2.30

Release:

**7-03 DRAWING E2.30 - SIGNAL AND COMMUNICATION PLAN - BLDG E:**

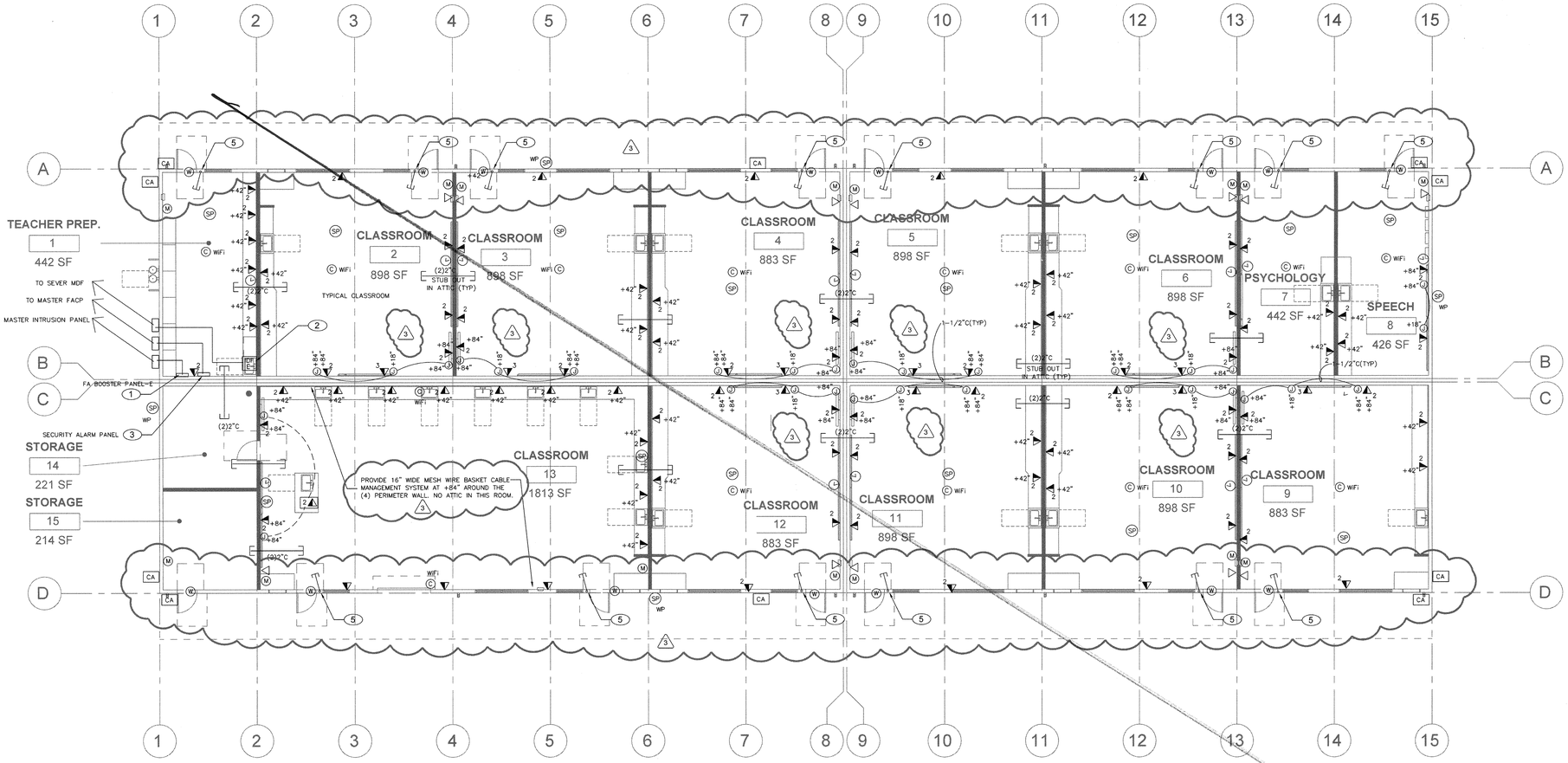
1. Classroom A/V system and projector are furnished and installed by Owner, Contractor provides conduit raceway with pull rope, blocking and support per plans and spec.

2. Intrusion/Alarm equipment and system are furnished and installed by Owner, Contractor provides conduits and raceway per plans and spec.

3. Telephone equipment furnished and installed by Owner, Contractor provides phone jack and complete wiring per plans and spec.

4. PA/IC/Clock head end equipment furnished and installed by Owner, Contractor provides PA/IC speakers, clock and complete wiring per plans and spec.

5. IDF Data switching equipment are furnished by Owner, Contractor provides IDF cabinets, patch panels, patch cord and complete data cabling per plans and spec.




## SIGNAL AND COMMUNICATION PLAN - BLDG. ' E '

**NEW SCHOOL INCREMENT #3**

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

ADDENDUM DRAWING 3 - 06

# KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF., AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.
4. PROVIDE 4"SQ. BACK BOX +18"AFF WITH SINGLE GANG DEEP RING AND 1-1/4"C. STUB TO ACCESSIBLE ATTIC WITH PULL ROPE FOR FUTURE DATA OUTLET.
5. PROVIDE 1/2"C AT DOOR JAMB AND STUB TO ACCESSIBLE ATTIC WITH PULL ROPE FOR FUTURE CARD ACCESS CONTROL. (3)

# LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

(K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

(M) WALL MOUNTED INTRUSION DETECTOR +84"AFF. PROVIDE 4"SQ BACK BOX WITH 3/4"C STUB INTO ACCESSIBLE ATTIC SPACE. SEE SPECIFICATION FOR MORE INFORMATION.

(W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 3/4"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

▽ HANDSET/IP PHONE OUTLET AT 46"AFF – PROVIDE BLUE COLOR CAT.6e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.

(3)

(L) WIRELESS WALL CLOCK AT +96"AFF. SEE SPECIFICATION FOR MORE INFORMATION.

(SP) CEILING SPEAKER – RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

WP (SP) OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#CB84 FOR SURFACE, #P87SX FOR RECESS) BACK BOX W/SQLX GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

3 LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.

WALL DATA OUTLET AT +18"AFF – NUMBER 3 INDICATED (THREE DATA DROP) HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6e 4UTP CABLE TO IDF PATCH PANEL.

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(3)

— T — OUTDOOR TELE/IC CABLE. 22AWG SOILD COPPER 25 PAIR OSP TELEPHONE CABLE.

— P1 — PA/IC CABLE. CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

— FO — FIBER OPTIC CABLE VIA INNER DUCT WITH J-HOOK IN ATTIC AND 2"C FOR OUTDOOR. 12 STAND OM4 MULTIMODE CABLE. TERMINATED IN TO FUSION SPLICED CONNECTORS AND PUT INTO HUBBLE BULKHEADS INSIDE IDF

— C1 — GENERAL CABLE BLUE COLOR CAT 6e 22AWG 4UTP.

— C2 — GENERAL CABLE BLUE COLOR CAT 6A 22AWG 4UTP. (WIRELESS ACCESS POINT)

CA EXTERIOR WALL MOUNT SECURITY CAMERA AT +96". ROUGH IN 4"SQ BACK BOX WITH 3/4"C STUB INTO ACCESSIBLE ATTIC SPACE, PROVIDE WP FACEPLATE. SEE DIV 27 SPEC FOR ADDITIONAL INFORMATION.

(3)


CONSULTING ENGINEERS

JOHN CHONG ENGINEERING

1849 N HELM AVE #103 FRESNO CA 93727

(559) 325-9388 • FAX 297-9401

jcengineer@aol.com



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ADDENDUM 3


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4201 N. Freeno, Suite 130 · Freeno, California 93710

Phone (559) 436-0801 · Fax (559) 436-0802 · E-Mail: design@somam.com

www.IntegratedDesigns.com


| Revision | Revision Description | Rev. Date |
|---|---|---|
| 3 | ADDENDUM NO.3 | 8-26-18 |

Sheet Title: SIGNAL & COMMUNICATION BLDG 'E'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3, BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date | Drawn | Ck'd | PC |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | — |
| 12/06/16 | | | |

Agency Approval Stamp:

FILE #: 15-6

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
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03-118395

AC_____FLS_____SS_____

DATE_____

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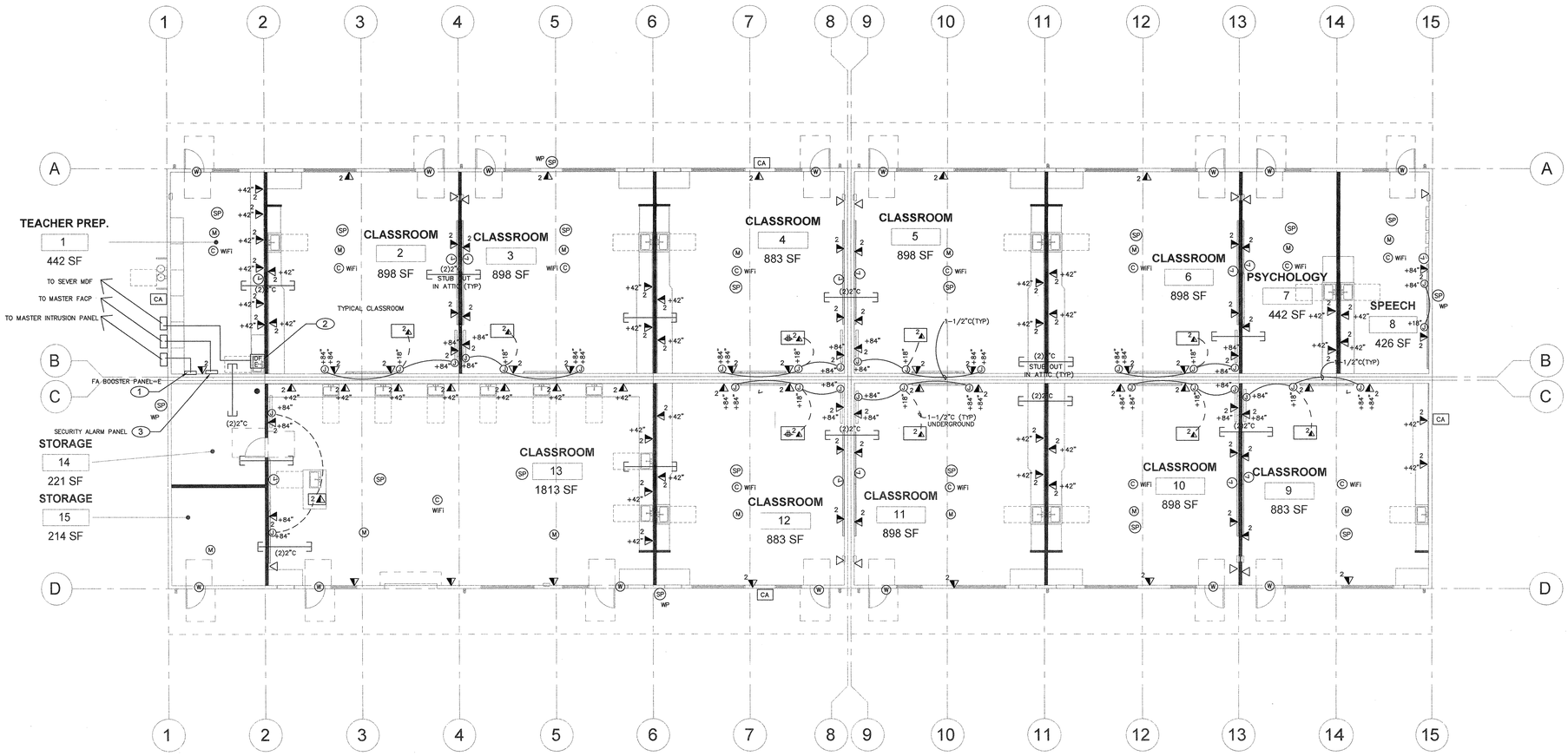
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REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E2.30

Release: ADDENDUM 3




## SIGNAL AND COMMUNICATION PLAN - BLDG. 'E'

**NEW SCHOOL INCREMENT #3**

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

# KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVIDE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.

# LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

- (K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.
- (M) CEILING MOUNTED INTRUSION DETECTOR +84"AFF. PROVIDE LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.
- (W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 1/2"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

- ▽ HANDSET/IP PHONE OUTLET AT 46"AFF – PROVIDE BLUE COLOR CAT.6e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.
- (S)(C) WALL MOUNTED CLOCK/SPEAKER COMBO AT +84"AFF. PROVIDE BACK BOX, 3/4"C WITH CABLE TO MASTER CLOCK AND 3/4"C (1)SPEAKER CABLE TO MASTER PA/IC. SEE SPECIFICATION FOR MORE INFORMATION.
- (L) WIRELESS WALL CLOCK AT +84"AFF. SEE SPECIFICATION FOR MORE INFORMATION.
- (SP) CEILING SPEAKER – RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.
- WP (SP) OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#CB84 FOR SURFACE, #P875X FOR RECESS) BACK BOX W/SQLK GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

- LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.
- WALL DATA OUTLET AT +18"AFF – NUMBER 3 INDICATED (THREE DATA DROP) HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6e 4UTP CABLE TO IDF PATCH PANEL.
- (WIFI)(C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK. HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.
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- WIREMOLD RFB4E ON GRADE FLOOR BOX WITH 2HUB CONDUIT HUB FITTING. COORDINATE FINISH WITH ARCHITECT. PROVIDE FOURPLEX RECEPTACLE AND DATA OUTLETS, AND UNDERGROUND CONDUIT AND WIRING PER PLANS.
- —T— OUTDOOR TELE/IC CABLE. 22AWG SOILD COPPER 25 PAIR OSP TELEPHONE CABLE.
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- CA EXTERIOR WALL MOUNT SECURITY CAMERA. ROUGH IN DATA JACK AND MOUNTING BACK BOX. SEE SPECIFICATION. PROVIDE ONE CAT 6A 4UTP CABLE TO IDF PATCH PANEL.


CONSULTING ENGINEERS

JOHN CHONG ENGINEERING

1849 N HELM AVE #103 FRESNO CA 93727

(559) 325-9388 • FAX 237-3401

jcengineer@aol.com



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6011 N. Fresno, Suite 130 – Fresno, California 93710

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|---|---|---|
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| | | |
| | | |

Sheet Title: SIGNAL & COMMUNICATION BLDG 'E'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designed: | Drawn: | Checked: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | -- |
| Date: 12/06/16 | | | |

Agency Approval Stamp:

FILE # 15-6
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DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
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AC 8 FLS SH SS TN
DATE 5/6/19
TRACKING # ADDENDUM #3

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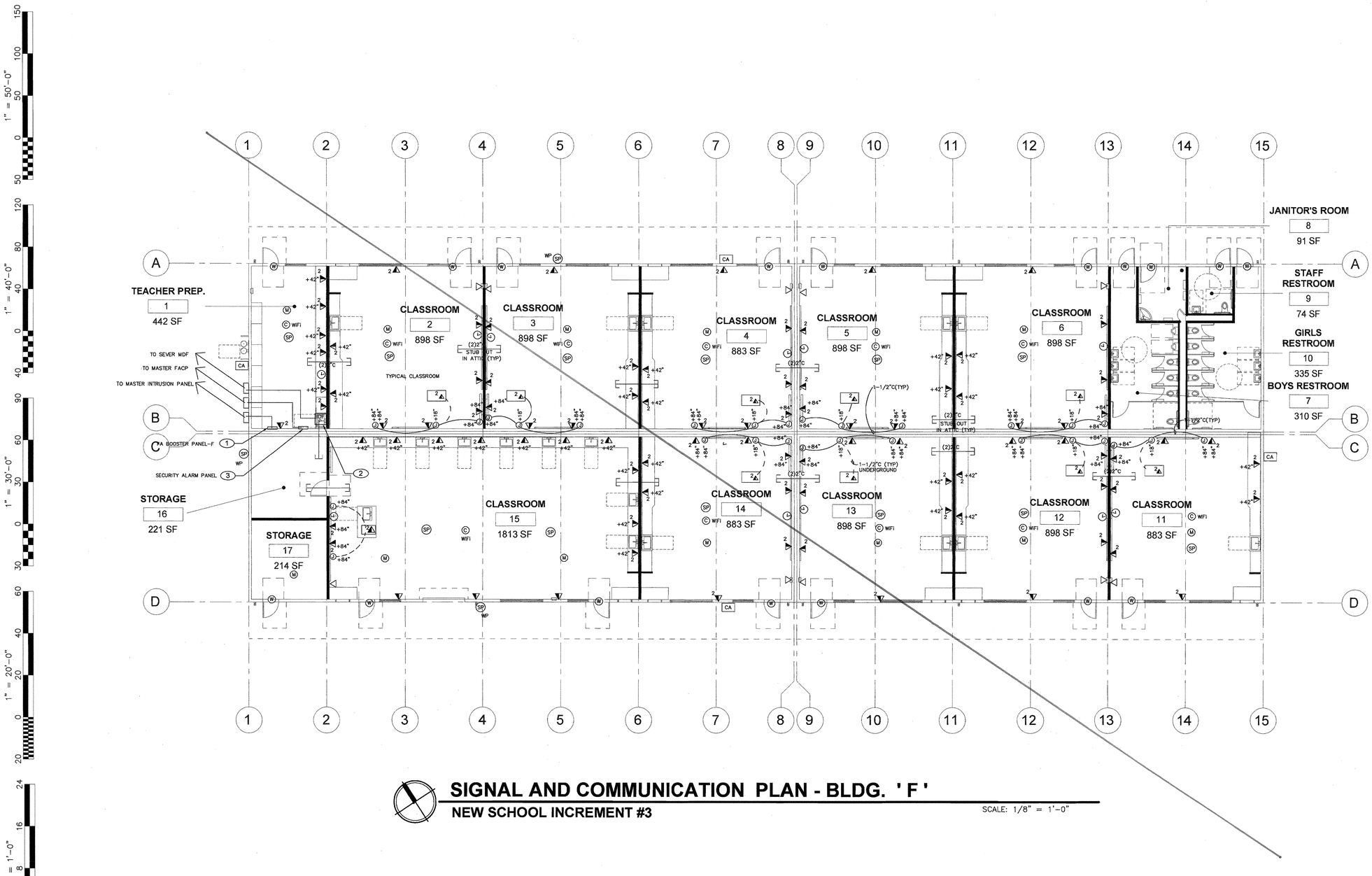
REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

ADDENDUM NO.3

Job No.: 5262

Sheet No.: E2.30

Release:




# SIGNAL AND COMMUNICATION PLAN - BLDG. ' F '

## NEW SCHOOL INCREMENT #3

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

# KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
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# LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

- 64 ZONE NETWORK INTRUSION PANEL. PROVIDE 110V DEDICATED CIRCUIT AND OUTLET. PROVIDE NETWORK CABLE TO MASTER PANEL IN ADMIN OFFICE SERVER ROOM.
- (K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.
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DATA COMMUNICATION SYSTEM

- 2 — LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.
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- WIFI (C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK. HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.
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(559) 325-9366 • FAX 237-9401

joengineer@aol.com



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Sheet Title: SIGNAL & COMMUNICATION BLDG ' F '

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3, BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18

Date: 12/06/16

Designer: J CHONG

DR: J CHONG

PIC: --

Agency Approval Stamp:

FILE #: 15-6

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OFFICE OF REGULATION SERVICES

03-11839:4

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DATE JUN 2 7 2018

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Stamp(s):

REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E2.40

Release:

**7-04 DRAWING E2.40 - SIGNAL AND COMMUNICATION PLAN - BLDG F:**

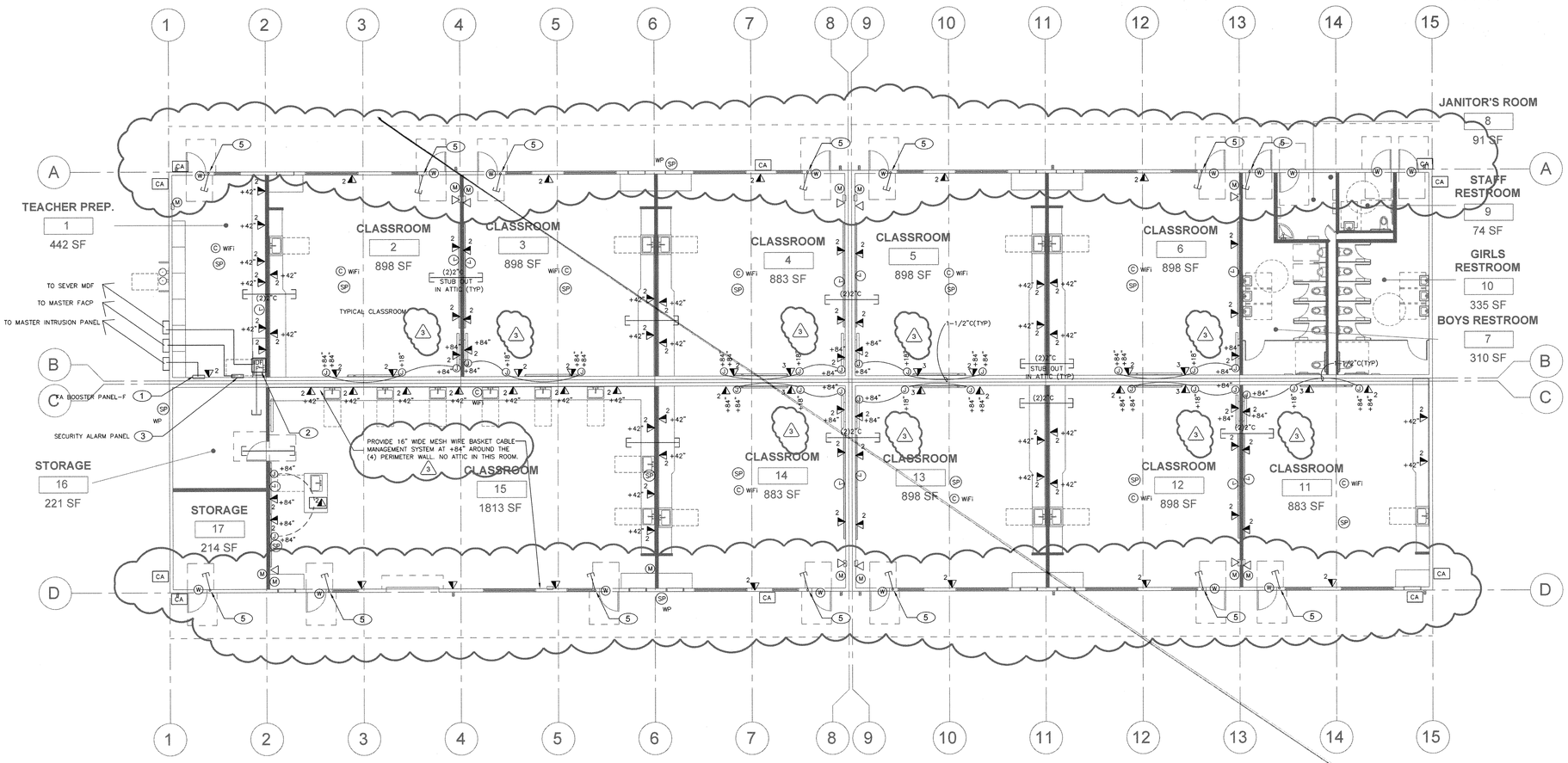
1. Classroom A/V system and projector are furnished and installed by Owner, Contractor provides conduit raceway with pull rope, blocking and support per plans and spec.

2. Intrusion/Alarm equipment and system are furnished and installed by Owner, Contractor provides conduits and raceway per plans and spec.

3. Telephone equipment furnished and installed by Owner, Contractor provides phone jack and complete wiring per plans and spec.

4. PA/IC/Clock head end equipment furnished and installed by Owner, Contractor provides PA/IC speakers, clock and complete wiring per plans and spec.

5. IDF Data switching equipment are furnished by Owner, Contractor provides IDF cabinets, patch panels, patch cord and complete data cabling per plans and spec.




# SIGNAL AND COMMUNICATION PLAN - BLDG. ' F '

**NEW SCHOOL INCREMENT #3**

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

ADDENDUM DRAWING 3 - 07

## KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"AFF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"AFF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"AFF. PROVE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.
4. PROVIDE 4"SQ. BACK BOX +18"AFF WITH SINGLE GANG DEEP RING AND 1-1/4"C STUB TO ACCESSIBLE ATTIC WITH PULL ROPE FOR FUTURE DATA OUTLET.
5. PROVIDE 1/2"C AT DOOR JAMB AND STUB TO ACCESSIBLE ATTIC WITH PULL ROPE FOR FUTURE CARD ACCESS CONTROL.

## LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

(K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

(M) WALL MOUNTED INTRUSION DETECTOR +84"AFF. PROVIDE 4"SQ BACK BOX WITH 3/4"C STUB INTO ACCESSIBLE ATTIC SPACE. SEE SPECIFICATION FOR MORE INFORMATION.

(W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 3/4"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

▽ HANDSET/IP PHONE OUTLET AT 46"AFF – PROVIDE BLUE COLOR CAT.6e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.

(3)

(L) WIRELESS WALL CLOCK AT +96"AFF. SEE SPECIFICATION FOR MORE INFORMATION.

(SP) CEILING SPEAKER – RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

WP (SP) OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#CXB4 FOR SURFACE, #FB7SX FOR RECESS) BACK BOX W/SQLK GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

3 LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.
WALL DATA OUTLET AT +18"AFF – NUMBER 3 INDICATED (THREE DATA DROP) HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6e 4UTP CABLE TO IDF PATCH PANEL.

WIFI (C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK. HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.

IDF WALL MOUNT DATA CABINET, MODEL: HUBBELL 36"H WITH SWING OUT DOOR AND RACK, PROVIDE EXHAUST FAN INSIDE. PROVIDE (4) 48 PORT PATCH PANEL, MODEL: HUBBELL #UDX48E1U. DATA SWITCH FURNISH BY OWNER, INSTALL BY CONTRACTOR. PROVIDE ALL HARDWARE AND PATCH CABLE AS REQUIRED FOR A COMPLETE FUNCTION SYSTEM. PROVIDE 66 BLOCK INSIDE CABINET FOR SPEAKER WIRING TERMINATION.

(3)

— T — OUTDOOR TELE/IC CABLE. 22AWG SOLID COPPER 25 PAIR OSP TELEPHONE CABLE.
— P1 — PA/IC CABLE. CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.
— FO — FIBER OPTIC CABLE VIA INNER DUCT WITH J-HOOK IN ATTIC AND 2"C FOR OUTDOOR. 12 STAND OM4 MULTIMODE CABLE TERMINATED IN TO FUSION SPLICED CONNECTORS AND PUT INTO HUBBLE BULKHEADS INSIDE IDF
— C1 — GENERAL CABLE BLUE COLOR CAT 6e 22AWG 4UTP.
— C2 — GENERAL CABLE BLUE COLOR CAT 6A 22AWG 4UTP. (WIRELESS ACCESS POINT)

CA EXTERIOR WALL MOUNT SECURITY CAMERA AT +96". ROUGH IN 4"SQ BACK BOX WITH 3/4"C STUB INTO ACCESSIBLE ATTIC SPACE, PROVIDE WP FACEPLATE. SEE DIV 27 SPEC FOR ADDITIONAL INFORMATION.

(3)


CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE #109 FRESNO CA 93727
(559) 325-9388 • FAX 297-9401
jcengineer@aol.com



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Phone (559) 436-0881 Fax (559) 436-0887 E-Mail: design@somam.com
www.integrateddesigns.com


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|---|---|---|
| 3 | ADDENDUM NO.3 | 8-26-18 |

ADDENDUM 3

Sheet Title: SIGNAL & COMMUNICATION BLDG 'F'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 — BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date | Date | Designer | Dr. | PIC |
|---|---|---|---|---|
| 01/31/18 | 12/06/16 | J CHONG | J CHONG | --- |

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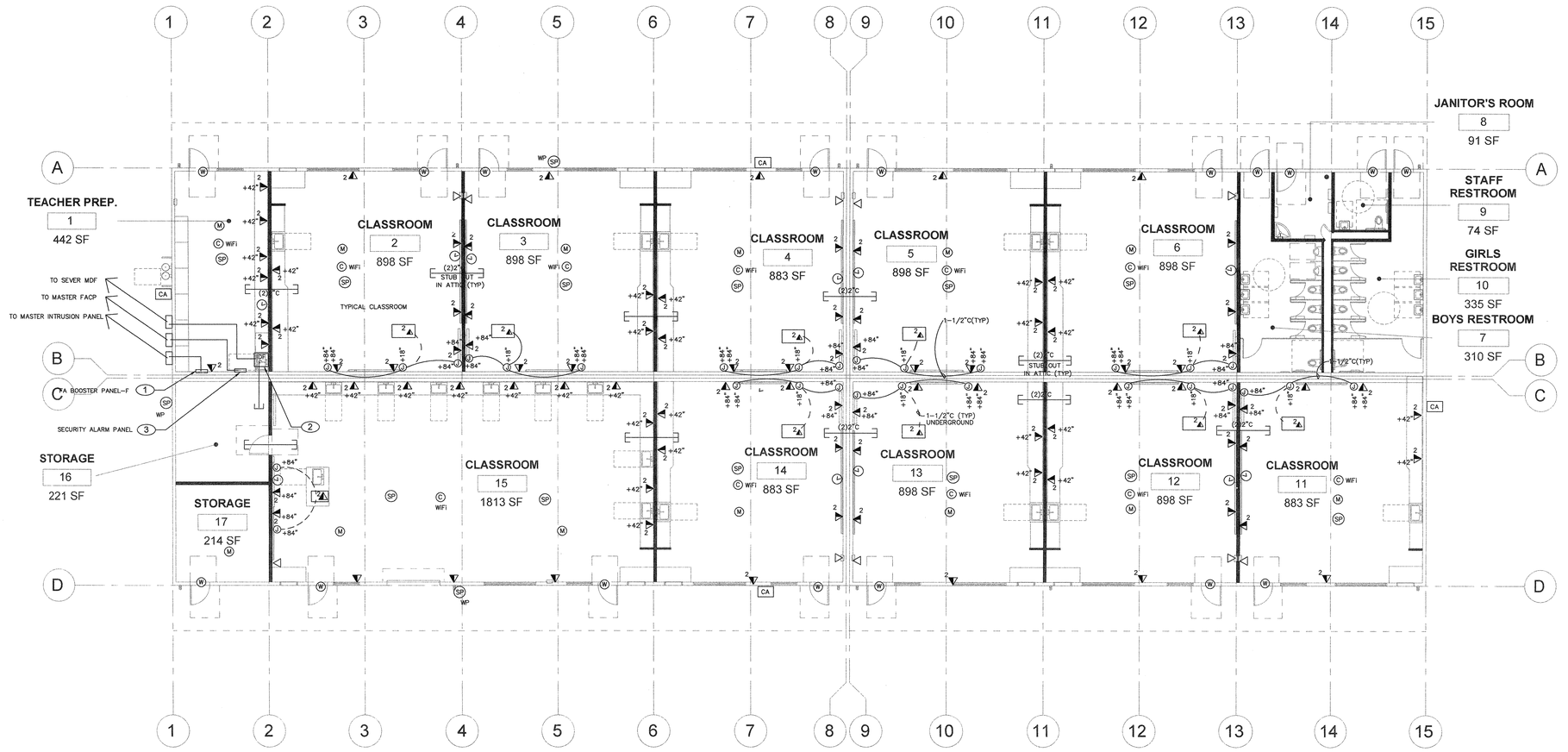
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Job No.: 5262

Sheet No.: E2.40

Release: ADDENDUM 3




## SIGNAL AND COMMUNICATION PLAN - BLDG. ' F '

**NEW SCHOOL INCREMENT #3**

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

1" = 50'-0" 1" = 40'-0" 1" = 30'-0" 1" = 20'-0" 1/8" = 1'-0" 1/4" = 1'-0"

# KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +48"A/FF, AND INTERFACE CABLE TO MASTER FACP IN ADMIN. OFFICE. SEE FA RISER DIAGRAM 1/E4.01.
2. IDF CABINET AND DATA EQUIPMENT. PROVIDE 120V DEDICATE CIRCUIT AND OUTLET AT +84"A/FF. PROVIDE FIBER OPTIC CABLE TO MDF IN ADMIN. OFFICE. SEE RISER DIAGRAM 2/E4.02.
3. NETWORK SECURITY ALARM PANEL. PROVIDE 120V DEDICATED CIRCUIT AND OUTLET AT +48"A/FF. PROVE INTERCONNECT CABLE TO MASTER SECURITY ALARM PANEL IN ADMIN. OFFICE. SEE RISER DIAGRAM 1/E4.02.

# LEGEND

SECURITY ALARM SYSTEM

FURNISH AND INSTALL BY OWNER'S VENDER. COORDINATE AND PROVIDE RACEWAY FOR SECURITY ALARM DEVICES PER PLANS.

64 ZONE NETWORK INTRUSION PANEL, PROVIDE 110V DEDICATED CIRCUIT AND OUTLET, PROVIDE NETWORK CABLE TO MASTER PANEL IN ADMIN OFFICE SERVER ROOM.

(K) LCD KEYPAD, PROVIDE 4"SQ. BACK BOX, SINGLE GANG AND DEVICE MOUNTING PLATE. PROVIDE 3/4"C TO ACCESSIBLE ATTIC SPACE AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

(M) CEILING MOUNTED INTRUSION DETECTOR +84"A/FF. PROVDE LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

(W) DOOR CONTACT SWITCH. RECESS ABOVE DOOR JAMB AT OPEN SIDE. ROUGH-IN 1/2"C AND LOW VOLTAGE CABLE TO MASTER PANEL. SEE SPECIFICATION FOR MORE INFORMATION.

PA/TELEPHONE/INTERCOM SYSTEM

HANDSET/IP PHONE OUTLET AT 46"A/FF – PROVIDE BLUE COLOR CAT.5e 4UTP CABLE TO IDF PATCH PANEL. HUBBELL WHITE COLOR JACK AND FACEPLATE.

S WALL MOUNTED CLOCK/SPEAKER COMBO AT +84"A/FF. PROVIDE BACK BOX, 3/4"C WITH CABLE TO MASTER CLOCK AND 3/4"C (1)SPEAKER CABLE TO MASTER PA/C. SEE SPECIFICATION FOR MORE INFORMATION.

(L) WIRELESS WALL CLOCK AT +84"A/FF. SEE SPECIFICATION FOR MORE INFORMATION.

(SP) CEILING SPEAKER – RAULAND #US0221 W/ACC1401 BAFFLE. PROVIDE BACKBOX AND CEILING SUPPORT AS REQUIRED. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

WP (SP) OUTDOOR SPEAKER – ATLAS #APF15 HORN W/XFMR AND LOWELL (#CBB4 FOR SURFACE, #P875X FOR RECESS) BACK BOX W/SQLK GRILL. PROVIDE CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

DATA COMMUNICATION SYSTEM

LETTER INDICATED NUMBER OF CABLE DROP AND DATA JACK REQUIREMENT.

WALL DATA OUTLET AT +18"A/FF – NUMBER 3 INDICATED (THREE DATA DROP) HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6e 4UTP CABLE TO IDF PATCH PANEL.

WIFI (C) CEILING DATA OUTLET FOR WIRELESS ACCESS POINT WITH (TWO) RJ45 JACK. HUBBELL WHITE COLOR JACKS AND FACEPLATE WITH CAT 6A 4UTP CABLE TO IDF PATCH PANEL.

IDF WALL MOUNT DATA CABINET, MODEL: HUBBELL 36"H WITH SWING OUT DOOR AND RACK, PROVDE EXHAUST FAN INSIDE. PROVIDE (4) 48 PORT PATCH PANEL, MODEL: HUBBELL #UDXAR61U. DATA SWITCH FURNISH BY OWNER, INSTALL BY CONTRACTOR. PROVDE ALL HARDWARE AND PATCH CABLE AS REQUIRED FOR A COMPLETE FUNCTION SYSTEM. PROVIDE 66 BLOCK INSIDE CABINET FOR SPEAKER WIRING TERMINATION.

WIREMOLD RFB4E ON GRADE FLOOR BOX WITH 2HUB CONDUIT HUB FITTING. COORDINATE FINISH WITH ARCHITECT. PROVIDE FOURPLEX RECEPTACLE AND DATA OUTLETS, AND UNDERGROUND CONDUIT AND WIRING PER PLANS.

— T — OUTDOOR TELE/IC CABLE. 22AWG SOILD COPPER 25 PAIR OSP TELEPHONE CABLE.

— P1 — PA/IC CABLE. CAT.5e YELLOW CABLE TO IDF 66 BLOCK FOR TERMINATION.

— FO — FIBER OPTIC CABLE VIA INNER DUCT WITH J-HOOK IN ATTIC AND 2"C FOR OUTDOOR. 12 STAND OM4 MULTIMODE CABLE. TERMINATED IN TO FUSION SPLICED CONNECTORS AND PUT INTO HUBBLE BULKHEADS INSIDE IDF

— C1 — GENERAL CABLE BLUE COLOR CAT 6e 22AWG 4UTP.

— C2 — GENERAL CABLE BLUE COLOR CAT 6A 22AWG 4UTP. (WIRELESS ACCESS POINT)

CA EXTERIOR WALL MOUNT SECURITY CAMERA. ROUGH IN DATA JACK AND MOUNTING BACK BOX. SEE SPECIFICATION. PROVIDE ONE CAT 6A 4UTP CABLE TO IDF PATCH PANEL.

CONSULTING ENGINEERS

JOHN CHONG ENGINEERING
1349 N HELM AVE #103 FRESNO CA 93727
(559) 325-3288 • FAX 251-9401
jcengineer@aol.com

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Revision: Revision Description: Rev. Date:

Sheet Title: SIGNAL & COMMUNICATION BLDG 'F'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PC: ---

Agency Approval Stamp:

FILE # 15-6
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OFFICE OF REGULATION SERVICES
03-118394
AC SC FLS SW SS TN
DATE 3/6/18
TRACKING #: ADDENDUM # 3

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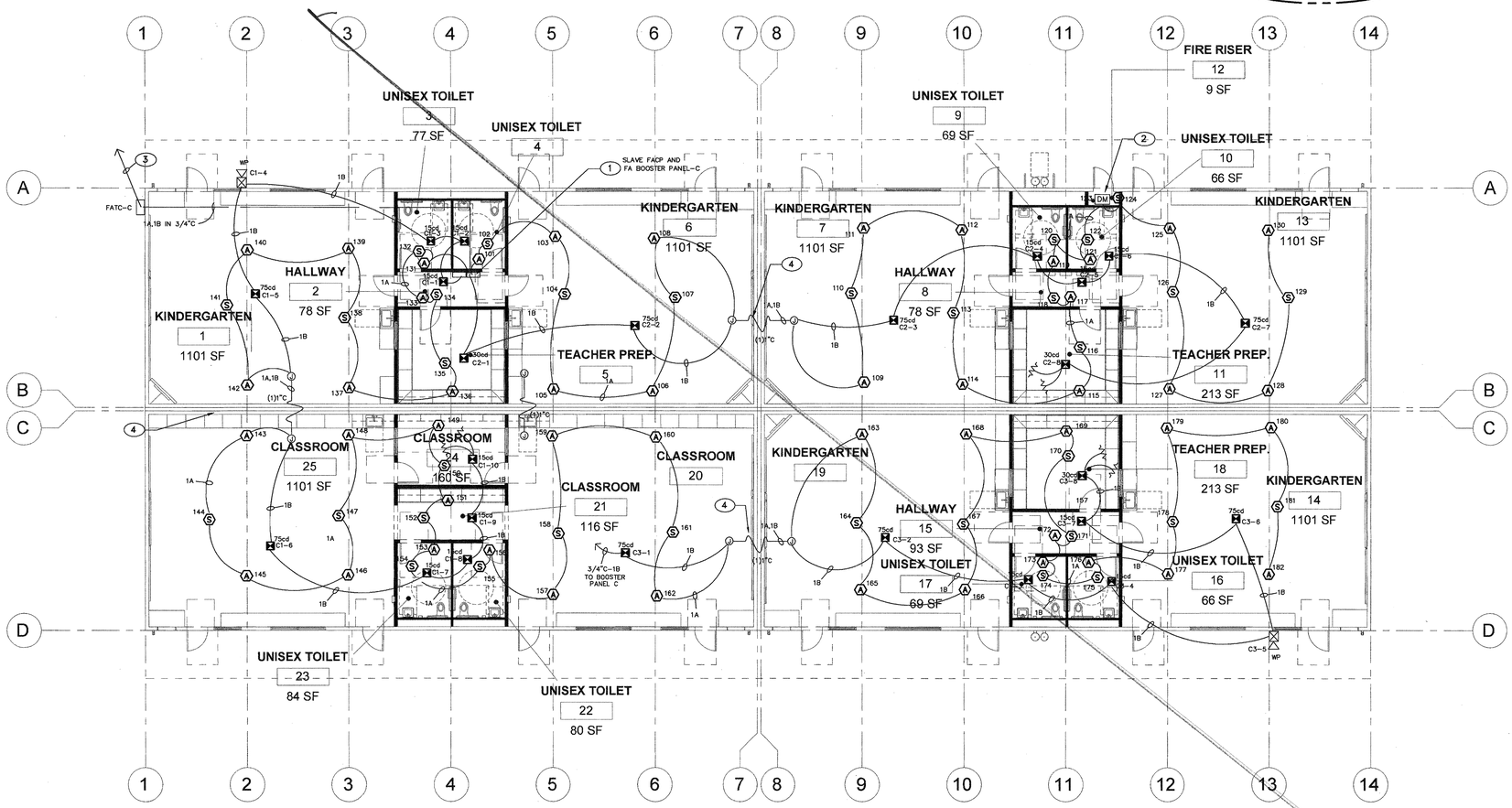
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JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

ADDENDUM NO.3

Job No.: 5262

Sheet No.: E2.40

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# FIRE ALARM PLAN - BLDG. 'C'

## NEW SCHOOL INCREMENT #3

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

## FA CABLE SCHEDULE

| TYPE | DESCRIPTION |
|---|---|
| A | INITIALING CIRCUIT CABLE 2#16 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, MIN. 3/4" CONDUIT INSTALLATION |
| B | NAC SIGNAL CIRCUIT CABLE 2#12 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE AND 2#16 TWIST SHIELD SPEAKER CABLE. MIN. 3/4" CONDUIT INSTALLATION |
| C | INITIALING CIRCUIT CABLE 4#14 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR OUTDOOR CABLE, MIN. 3/4" CONDUIT INSTALLATION |

## KEY NOTES

1. SLAVE FACP AND FIRE ALARM NAC SIGNAL & EMERGENCY VOICE BOOSTER PANEL. PROVIDE 110V DEDICATE CIRCUIT AND CONNECT TO PANEL CR1 CIRCUIT #30 WITH MECHANICAL LOCK ON BREAKER. PROVIDE CONNECTION FOR NEW FA DEVICES INTERFACE WITH MASTER FACP IN ADMIN BUILDING. SEE FA RISER DIAGRAM FOR DETAIL.
2. FURNISH AND INSTALL MONITOR MODULES AND FA MONITORING CABLE FOR FIRE SPRINKLER FLOW SWITCH AND TAMPER SWITCH. SEE FIRE SPRINKLER PLANS FOR EXACT LOCATION AND DETAILS.
3. NEW 1" U.G CONDUIT WITH 1C, 1B FA CABLE INTERCONNECT TO EXISTING MASTER FACP IN ADMIN. OFFICE VIA EXISTING U.G SIGNAL CONDUITS AND PULL BOX.
4. PROVIDE 1" WP FLEX CONDUIT IN ATTIC SPACE BETWEEN BUILDING FOR FA CABLE RACEWAY. FIELD VERIFY LOCATION. CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED.

## LEGEND

- FACP — FIRE ALARM CONTORL PANEL
- NAC — NAC SIGNAL POWER SUPPLY
- DVC — DIGITAL VOICE COMMAND CENTER
- ANN — REMOTE ANNUNCIATOR
- C1-4 / 15cd — INDICATE NUMBER 4 DEVICES IN CIRCUIT C1
- CEILING MOUNT SPEAKER STROBE 15cd 30cd 75cd 110cd TEMPORAL CODE 3
- WP — OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3
- c02 / S — INDICATE INITIATING DEVICES ADDRESS; ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE
- H — CEILING HEAT DETECTOR 190°F TEMP WITH BASE
- DM — DUAL MONITORING MODULE
- SM — SYNC MODULE
- 1A — INDICATE (1)FA CABLE TYPE A
- END OF LINE RESISTOR

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4001 N. Wilson Way, Suite 150, Stockton, CA 95205
Phone (559) 436-0857 Fax (559) 436-0881 E-Mail: design@somam.com
www.integrateddesigns.com

Revision: / Revision Description: / Rev. Date:

Sheet Title: FIRE ALARM PLAN BLDG 'C'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PC: --

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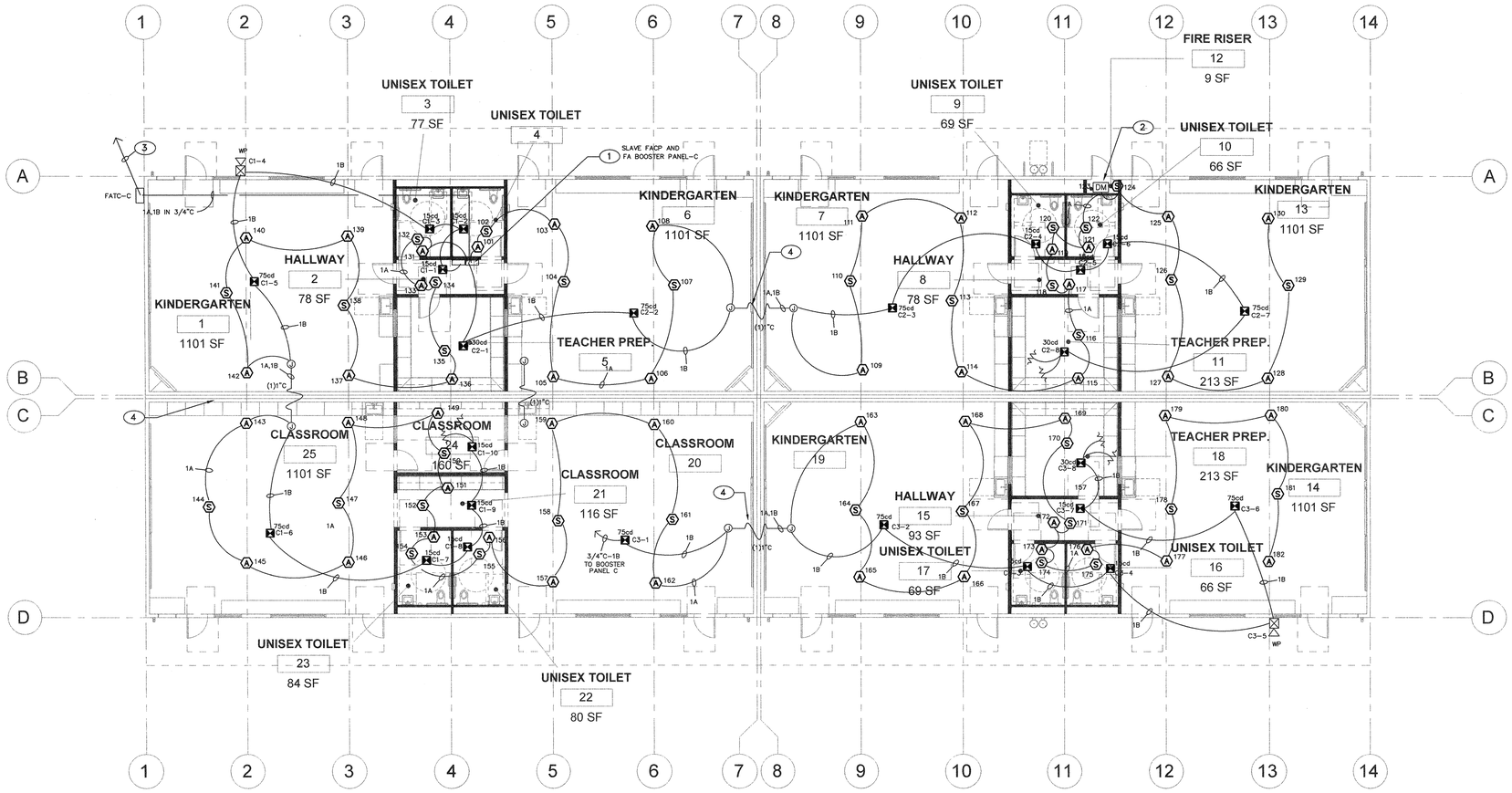
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JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E3.10

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CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE #103 FRESNO CA 93727
(559) 325-9366 • FAX 237-9401
jcengineer@aol.com




# FIRE ALARM PLAN - BLDG. ' C '

## NEW SCHOOL INCREMENT #3

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

| FA CABLE SCHEDULE | |
|---|---|
| TYPE | DESCRIPTION |
| A | INITIALING CIRCUIT CABLE 2#16 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, MIN. 3/4" CONDUIT INSTALLATION |
| B | NAC SIGNAL CIRCUIT CABLE 2#12 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, AND 2#16 TWIST SHEILD SPEAKER CABLE. MIN. 3/4" CONDUIT INSTALLATION |
| C | INITIALING CIRCUIT CABLE 4#14 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR OUTDOOR CABLE, MIN. 3/4" CONDUIT INSTALLATION |

## KEY NOTES

1. SLAVE FACP AND FIRE ALARM NAC SIGNAL & EMERGENCY VOICE BOOSTER PANEL. PROVIDE 110V DEDICATE CIRCUIT AND CONNECT TO PANEL CR1 CIRCUIT #30 WITH MECHANICAL LOCK ON BREAKER. PROVIDE CONNECTION FOR NEW FA DEVICES INTERFACE WITH MASTER FACP IN ADMIN BUILDING. SEE FA RISER DIAGRAM FOR DETAIL.
2. FURNISH AND INSTALL MONITOR MODULES AND FA MONITORING CABLE FOR FIRE SPRINKLER FLOW SWITCH AND TAMPER SWITCH. SEE FIRE SPRINKLER PLANS FOR EXACT LOCATION AND DETAILS.
3. NEW 1" U.G CONDUIT WITH 1C, 1B FA CABLE INTERCONNECT TO EXISTING MASTER FACP IN ADMIN. OFFICE VIA EXISTING U.G SIGNAL CONDUITS AND PULL BOX.
4. PROVIDE 1" WP FLEX CONDUIT IN ATTIC SPACE BETWEEN BUILDING FOR FA CABLE RACEWAY. FIELD VERIFY LOCATION. CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED.

## LEGEND

- FACP — FIRE ALARM CONTORL PANEL
- NAC — NAC SIGNAL POWER SUPPLY
- DVC — DIGITAL VOICE COMMAND CENTER
- ANN — REMOTE ANNUNCIATOR
- C1-4 / 15cd — INDICATE NUMBER 4 DEVICES IN CIRCUIT C1
- CEILING MOUNT SPEAKER STROBE 15cd 30cd 75cd 110cd TEMPORAL CODE 3
- WP — OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3
- a02 / S — INDICATE INITIATING DEVICES ADDRESS; ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE
- H — CEILING HEAT DETECTOR 190°F TEMP WITH BASE
- DM — DUAL MONITORING MODULE
- SM — SYNC MODULE
- 1A — INDICATE (1)FA CABLE TYPE A
- END OF LINE RESISTOR


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Sheet Title: FIRE ALARM PLAN BLDG 'C'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designer: | Dft: | Fc: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | -- |
| 12/06/16 | | | |

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REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
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STATE OF CALIFORNIA

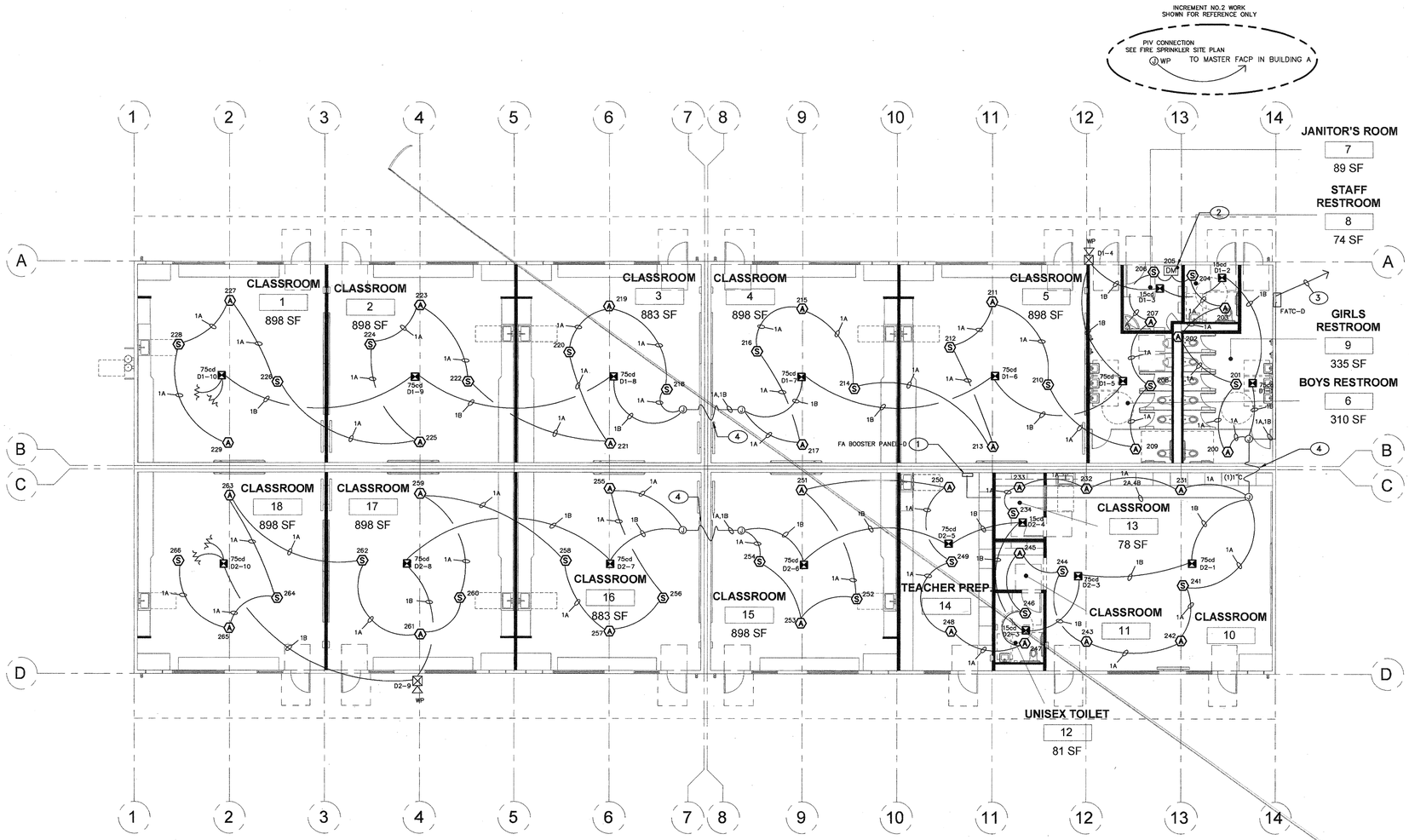
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Sheet No.: E3.10

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CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1845 N HELM AVE #103 FRESNO CA 93727
(559) 325-9388 • FAX 237-3401
jcengineer@aol.com




# FIRE ALARM PLAN - BLDG. 'D'

## NEW SCHOOL INCREMENT #3

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

| FA CABLE SCHEDULE | |
|---|---|
| TYPE | DESCRIPTION |
| A | INITIALING CIRCUIT CABLE 2#16 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, MIN. 3/4" CONDUIT INSTALLATION |
| B | NAC SIGNAL CIRCUIT CABLE 2#12 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, AND 2#16 TWIST SHEILD SPEAKER CABLE. MIN. 3/4" CONDUIT INSTALLATION |
| C | INITIALING CIRCUIT CABLE 4#14 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR OUTDOOR CABLE, MIN. 3/4" CONDUIT INSTALLATION |

## KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 110V DEDICATE CIRCUIT AND CONNECT TO PANEL DP2 CIRCUIT #29 WITH MECHANICAL LOCK ON BREAKER. PROVIDE CONNECTION FOR NEW FA DEVICES INTERFACE WITH MASTER FACP IN ADMIN BUILDING. SEE FA RISER DIAGRAM FOR DETAIL.
2. FURNISH AND INSTALL MONITOR MODULES AND FA MONITORING CABLE FOR FIRE SPRINKLER FLOW SWITCH AND TAMPER SWITCH. SEE FIRE SPRINKLER PLANS FOR EXACT LOCATION AND DETAILS.
3. NEW 1" U.G CONDUIT WITH 1C, 18 FA CABLE INTERCONNECT TO EXISTING MASTER FACP IN ADMIN. OFFICE VIA EXISTING U.G SIGNAL CONDUITS AND PULL BOX.
4. PROVIDE 1" WP FLEX CONDUIT IN ATTIC SPACE BETWEEN BUILDING FOR FA CABLE RACEWAY. FIELD VERIFY LOCATION. CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED.

## LEGEND

- FACP — FIRE ALARM CONTORL PANEL
- NAC — NAC SIGNAL POWER SUPPLY
- DVC — DIGITAL VOICE COMMAND CENTER
- ANN — REMOTE ANNUNCIATOR
- D1-4 15cd — INDICATE NUMBER 4 DEVICES IN CIRCUIT D1
- CEILING MOUNT SPEAKER STROBE 15cd 30cd 75cd 110cd TEMPORAL CODE 3
- WP — OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3
- o02 S — INDICATE INITIATING DEVICES ADDRESS; ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE
- H — CEILING HEAT DETECTOR 190°F TEMP WITH BASE
- DM — DUAL MONITORING MODULE
- SM — SYNC MODULE
- 1A — INDICATE (1)FA CABLE TYPE A
- END OF LINE RESISTOR

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www.integrateddesigns.com

| Revision: | Revision Description: | Rev. Date: |
|---|---|---|
| | | |

Sheet Title: FIRE ALARM PLAN BLDG 'D'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designed: | Drawn: | PIC: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | --- |
| Date: 12/06/16 | | | |

Agency Approval Stamp:

FILE #: 15-6
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DATE JUN 27 2018
TRACKING #: -

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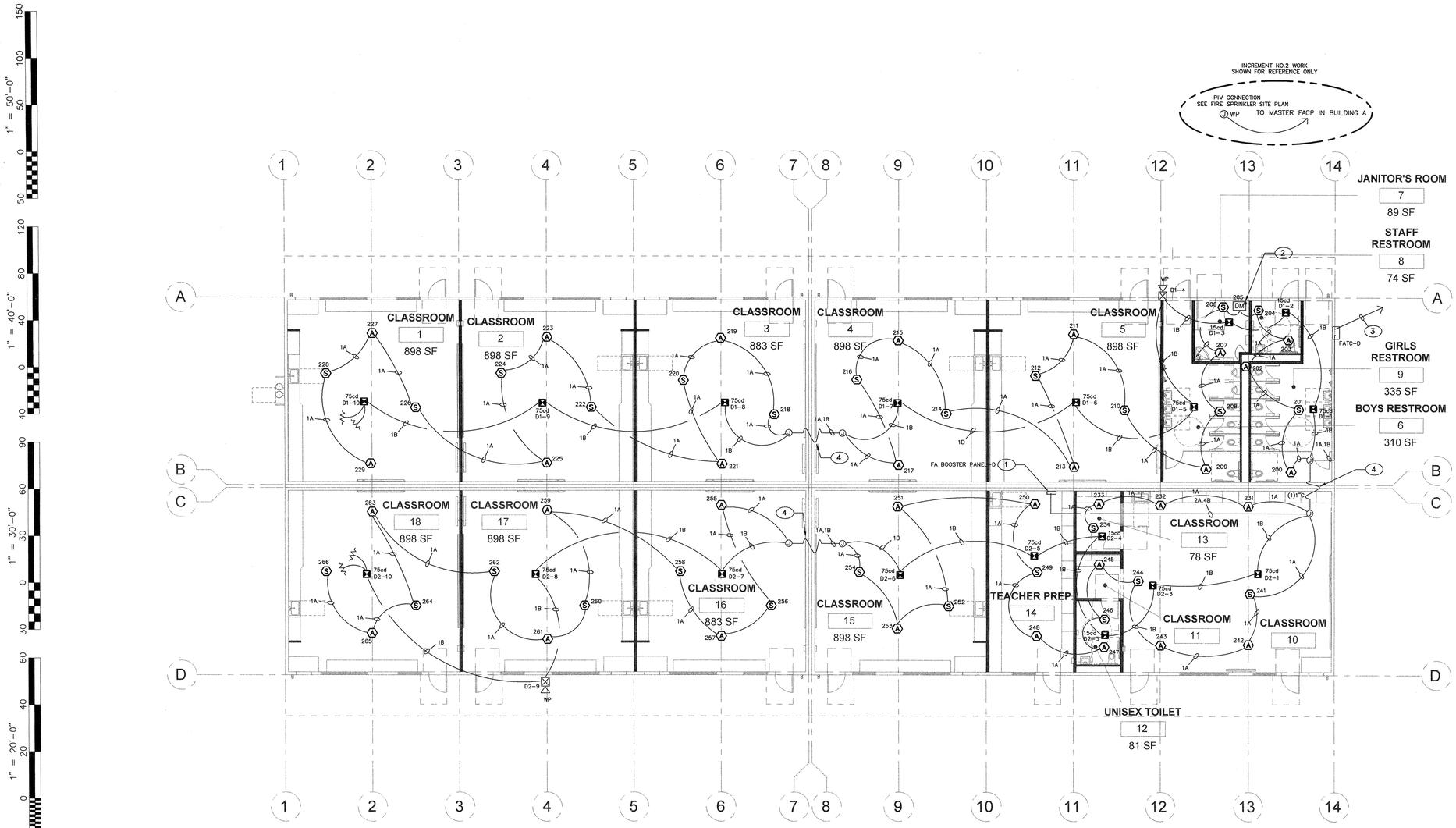
REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1543 N HELM AVE #103 FRESNO CA 93727
(559) 375-9388 • FAX 237-3401
jcengineer@aol.com

Job No.: 5262

Sheet No.: E3.20

Release:




# FIRE ALARM PLAN - BLDG. 'D'

## NEW SCHOOL INCREMENT #3

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

## FA CABLE SCHEDULE

| TYPE | DESCRIPTION |
|---|---|
| A | INITIALING CIRCUIT CABLE 2#16 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, MIN. 3/4" CONDUIT INSTALLATION |
| B | NAC SIGNAL CIRCUIT CABLE 2#12 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, AND 2#16 TWIST SHEILD SPEAKER CABLE. MIN. 3/4" CONDUIT INSTALLATION |
| C | INITIALING CIRCUIT CABLE 4#14 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR OUTDOOR CABLE, MIN. 3/4" CONDUIT INSTALLATION |

## KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 110V DEDICATE CIRCUIT AND CONNECT TO PANEL DR2 CIRCUIT #29 WITH MECHANICAL LOCK ON BREAKER. PROVIDE CONNECTION FOR NEW FA DEVICES INTERFACE WITH MASTER FACP IN ADMIN BUILDING. SEE FA RISER DIAGRAM FOR DETAIL.
2. FURNISH AND INSTALL MONITOR MODULES AND FA MONITORING CABLE FOR FIRE SPRINKLER FLOW SWITCH AND TAMPER SWITCH. SEE FIRE SPRINKLER PLANS FOR EXACT LOCATION AND DETAILS.
3. NEW 1" U.G CONDUIT WITH 1C, 1B FA CABLE INTERCONNECT TO EXISTING MASTER FACP IN ADMIN. OFFICE VIA EXISTING U.G SIGNAL CONDUITS AND PULL BOX.
4. PROVIDE 1" WP FLEX CONDUIT IN ATTIC SPACE BETWEEN BUILDING FOR FA CABLE RACEWAY. FIELD VERIFY LOCATION, CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED.

## LEGEND

- FACP — FIRE ALARM CONTORL PANEL
- NAC — NAC SIGNAL POWER SUPPLY
- DVC — DIGITAL VOICE COMMAND CENTER
- ANN — REMOTE ANNUNCIATOR
- D1-4 / 15cd — INDICATE NUMBER 4 DEVICES IN CIRCUIT D1
- CEILING MOUNT SPEAKER STROBE 15cd 30cd 75cd 110cd TEMPORAL CODE 3
- WP — OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3
- oO2 / S — INDICATE INITIATING DEVICES ADDRESS; ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE
- H — CEILING HEAT DETECTOR 190°F TEMP WITH BASE
- DM — DUAL MONITORING MODULE
- SM — SYNC MODULE
- 1A — INDICATE (1)FA CABLE TYPE A
- END OF LINE RESISTOR

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Phone (559) 436-0881 Fax (559) 436-0887 E-Mail: design@somam.com
www.integrateddesigns.com

Revision / Revision Description / Rev. Date:

Sheet Title: FIRE ALARM PLAN BLDG 'D'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARD GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PC: --

Agency Approval Stamp:

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ADDENDUM # 3

Stamp(s):
REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

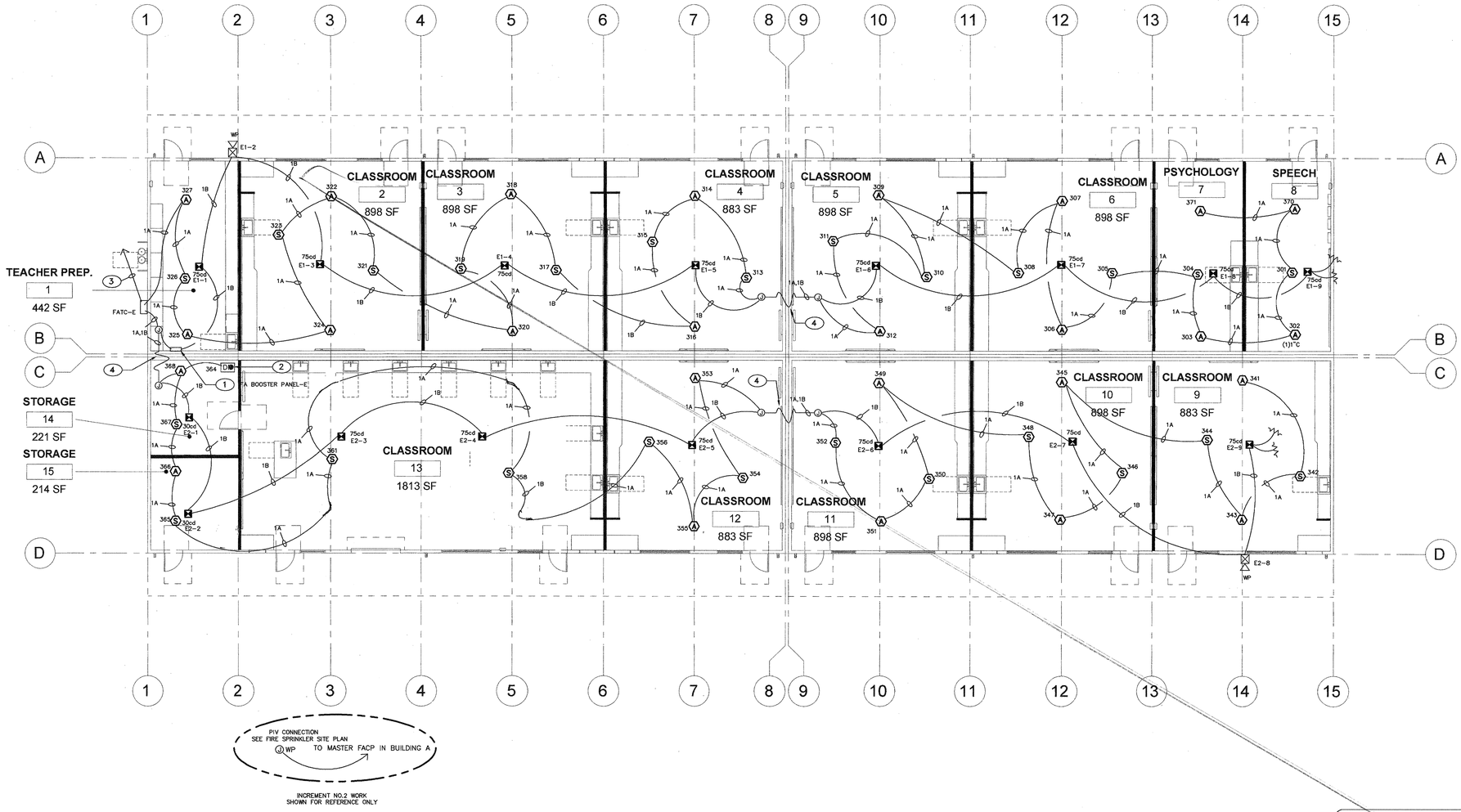
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Job No.: 5262

Sheet No.: E3.20

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JOHN CHONG ENGINEERING
1845 N HELM AVE #103 FRESNO CA 93727
(559) 325-9388 • FAX 297-5401
jcengineer@aol.com




P/V CONNECTION
SEE FIRE SPRINKLER SITE PLAN
WP TO MASTER FACP IN BUILDING A

INCREMENT NO.2 WORK
SHOWN FOR REFERENCE ONLY

# FIRE ALARM PLAN - BLDG. 'E'

## NEW SCHOOL INCREMENT #3

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

## FA CABLE SCHEDULE

| TYPE | DESCRIPTION |
|---|---|
| A | INITIALING CIRCUIT CABLE 2#16 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, MIN. 3/4" CONDUIT INSTALLATION |
| B | NAC SIGNAL CIRCUIT CABLE 2#12 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, AND 2#16 TWIST SHEILD SPEAKER CABLE. MIN. 3/4" CONDUIT INSTALLATION |
| C | INITIALING CIRCUIT CABLE 4#14 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR OUTDOOR CABLE, MIN. 3/4" CONDUIT INSTALLATION |

## KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 110V DEDICATE CIRCUIT AND CONNECT TO PANEL E81 CIRCUIT #28 WITH MECHANICAL LOCK ON BREAKER. PROVIDE CONNECTION FOR NEW FA DEVICES INTERFACE WITH MASTER FACP IN ADMIN BUILDING. SEE FA RISER DIAGRAM FOR DETAIL.
2. FURNISH AND INSTALL MONITOR MODULES AND FA MONITORING CABLE FOR FIRE SPRINKLER FLOW SWITCH AND TAMPER SWITCH. SEE FIRE SPRINKLER PLANS FOR EXACT LOCATION AND DETAILS.
3. NEW 1" U.G CONDUIT WITH 1C, 1B FA CABLE INTERCONNECT TO EXISTING MASTER FACP IN ADMIN. OFFICE VIA EXISTING U.G SIGNAL CONDUITS AND PULL BOX.
4. PROVIDE 1" WP FLEX CONDUIT IN ATTIC SPACE BETWEEN BUILDING FOR FA CABLE RACEWAY, FIELD VERIFY LOCATION, CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED.

## LEGEND

- FACP — FIRE ALARM CONTORL PANEL
- NAC — NAC SIGNAL POWER SUPPLY
- DVC — DIGITAL VOICE COMMAND CENTER
- ANN — REMOTE ANNUNCIATOR
- E1-4 15cd — INDICATE NUMBER 4 DEVICES IN CIRCUIT E1
- CEILING MOUNT SPEAKER STROBE 15cd 30cd 75cd 110cd TEMPORAL CODE 3
- WP OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3
- a02 S — INDICATE INITIATING DEVICES ADDRESS; ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE
- H — CEILING HEAT DETECTOR 190°F TEMP WITH BASE
- DM — DUAL MONITORING MODULE
- SM — SYNC MODULE
- 1A — INDICATE (1)FA CABLE TYPE A
- END OF LINE RESISTOR

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www.integrateddesigns.com

Revision: / Revision Description: / Rev. Date:

Sheet Title: FIRE ALARM PLAN BLDG 'E'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J. CHONG
DR: J. CHONG
PIC: --

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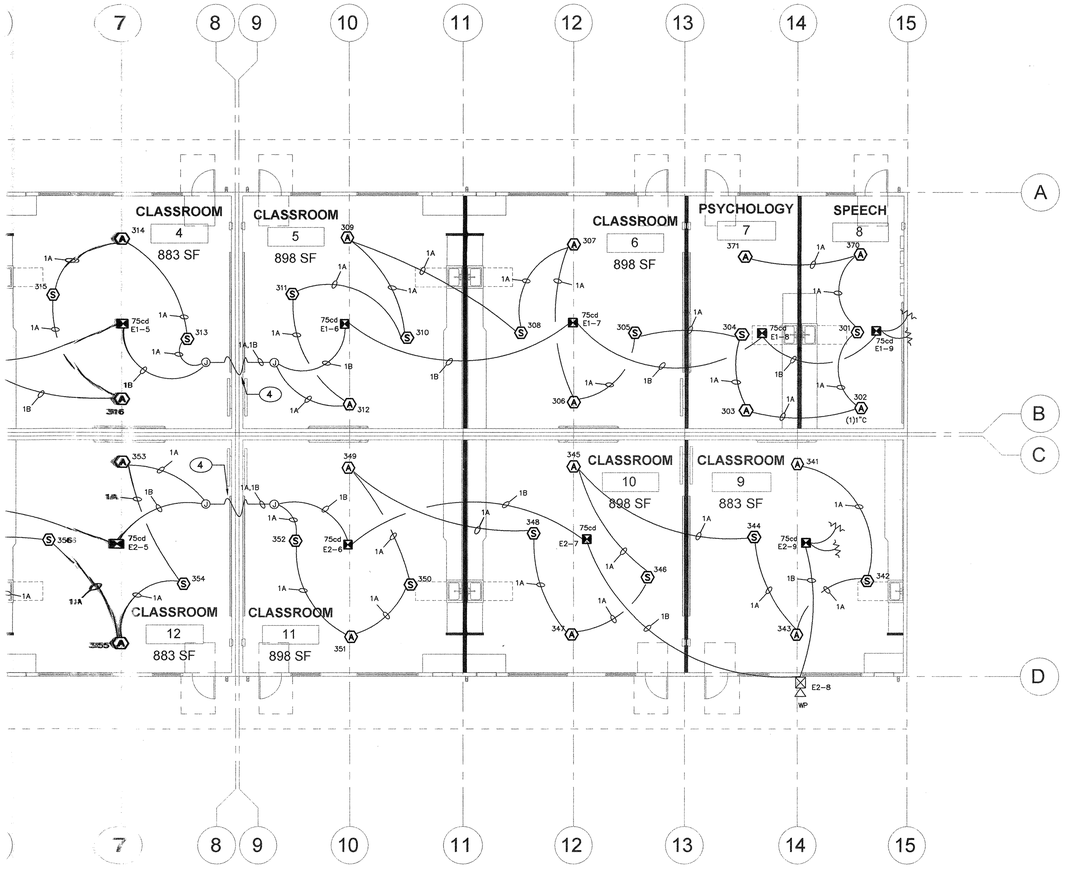
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JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E3.30

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CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1543 N HELM AVE #103 FRESNO CA 93727
(559) 325-9286 • FAX 237-5401
jcengineer@aol.com




## BLDG.. " E '

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

| FA CABLE SCHEDULE | |
|---|---|
| TYPE | DESCRIPTION |
| A | INITIALING CIRCUIT CABLE 2#16 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, MIN. 3/4" CONDUIT INSTALLATION |
| B | NAC SIGNAL CIRCUIT CABLE 2#12 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, AND 2#16 TWIST SHEILD SPEAKER CABLE. MIN. 3/4" CONDUIT INSTALLATION |
| C | INITIALING CIRCUIT CABLE 4#14 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR OUTDOOR CABLE, MIN. 3/4" CONDUIT INSTALLATION |

3 ADDENDUM NO.3
1. DELETED ATTIC HEAT DETECTORS IN CLASSROOM NO.13
2. RELOCATED FIRE SPRINKLER RISER MONITOR MODULAR

# KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 110V DEDICATE CIRCUIT AND CONNECT TO PANEL ER1 CIRCUIT #28 WITH MECHANICAL LOCK ON BREAKER. PROVIDE CONNECTION FOR NEW FA DEVICES INTERFACE WITH MASTER FACP IN ADMIN BUILDING. SEE FA RISER DIAGRAM FOR DETAIL.
2. FURNISH AND INSTALL MONITOR MODULES AND FA MONITORING CABLE FOR FIRE SPRINKLER FLOW SWITCH AND TAMPER SWITCH. SEE FIRE SPRINKLER PLANS FOR EXACT LOCATION AND DETAILS.
3. NEW 1" U.G CONDUIT WITH 1C, 1B FA CABLE INTERCONNECT TO EXISTING MASTER FACP IN ADMIN. OFFICE VIA EXISTING U.G SIGNAL CONDUITS AND PULL BOX.
4. PROVIDE 1" WP FLEX CONDUIT IN ATTIC SPACE BETWEEN BUILDING FOR FA CABLE RACEWAY. FIELD VERIFY LOCATION. CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED.

# LEGEND

- FACP — FIRE ALARM CONTORL PANEL
- NAC — NAC SIGNAL POWER SUPPLY
- DVC — DIGITAL VOICE COMMAND CENTER
- ANN — REMOTE ANNUNCIATOR
- E1-4 15cd — INDICATE NUMBER 4 DEVICES IN CIRCUIT E1
- CEILING MOUNT SPEAKER STROBE 15cd 30cd 75cd 110cd TEMPORAL CODE 3
- WP — OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3
- a02 — INDICATE INITIATING DEVICES ADDRESS
- S — ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE
- H — CEILING HEAT DETECTOR 190°F TEMP WITH BASE
- DM — DUAL MONITORING MODULE
- SM — SYNC MODULE
- 1A — INDICATE (1)FA CABLE TYPE A
- END OF LINE RESISTOR

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Revision: / Revision Description: / Rev. Date:

Sheet Title: FIRE ALARM PLAN BLDG 'E'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
Drn: J CHONG
P/C: --

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FILE #:15-6
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DATE 5/6/18
TRACKING #: ADDENDUM #3

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REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

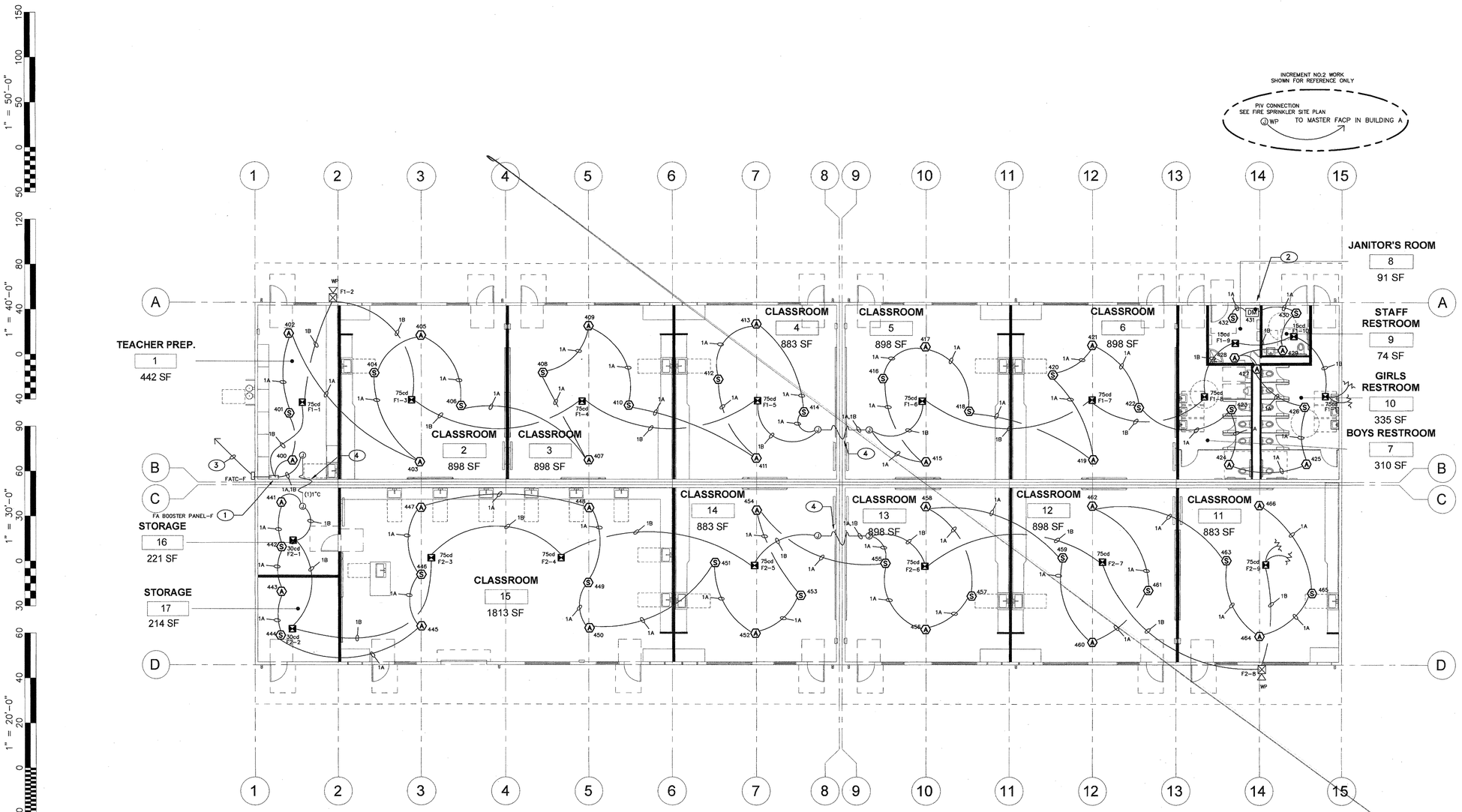
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Job No.: 5262

Sheet No.: E3.30

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CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1343 N HELM AVE #103 FRESNO CA 93727
(559) 325-9286 • FAX 237-5401
jcengineer@aol.com




## FIRE ALARM PLAN - BLDG. ' F '

**NEW SCHOOL INCREMENT #3**

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

| FA CABLE SCHEDULE | |
|---|---|
| TYPE | DESCRIPTION |
| A | INITIALING CIRCUIT CABLE 2#16 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, MIN. 3/4" CONDUIT INSTALLATION |
| B | NAC SIGNAL CIRCUIT CABLE 2#12 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, AND 2#16 TWIST SHIELD SPEAKER CABLE. MIN. 3/4" CONDUIT INSTALLATION |
| C | INITIALING CIRCUIT CABLE 4#14 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR OUTDOOR CABLE, MIN. 3/4" CONDUIT INSTALLATION |

## KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 110V DEDICATE CIRCUIT AND CONNECT TO PANEL FR1 CIRCUIT #33 WITH MECHANICAL LOCK ON BREAKER. PROVIDE CONNECTION FOR NEW FA DEVICES INTERFACE WITH MASTER FACP IN ADMIN BUILDING. SEE FA RISER DIAGRAM FOR DETAIL.
2. FURNISH AND INSTALL MONITOR MODULES AND FA MONITORING CABLE FOR FIRE SPRINKLER FLOW SWITCH AND TAMPER SWITCH. SEE FIRE SPRINKLER PLANS FOR EXACT LOCATION AND DETAILS.
3. NEW 1" U.G CONDUIT WITH 1C, 18 FA CABLE INTERCONNECT TO EXISTING MASTER FACP IN ADMIN. OFFICE VIA EXISTING U.G SIGNAL CONDUITS AND PULL BOX.
4. PROVIDE 1" WP FLEX CONDUIT IN ATTIC SPACE BETWEEN BUILDING FOR FA CABLE RACEWAY. FIELD VERIFY LOCATION. CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED.

## LEGEND

- FACP — FIRE ALARM CONTORL PANEL
- NAC — NAC SIGNAL POWER SUPPLY
- DVC — DIGITAL VOICE COMMAND CENTER
- ANN — REMOTE ANNUNCIATOR
- A1-4 15cd — INDICATE NUMBER 4 DEVICES IN CIRCUIT A1
- CEILING MOUNT SPEAKER STROBE 15cd 30cd 75cd 110cd TEMPORAL CODE 3
- WP — OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3
- 102 — INDICATE INITIATING DEVICES ADDRESS
- S — ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE
- H — CEILING HEAT DETECTOR 190°F TEMP WITH BASE
- DM — DUAL MONITORING MODULE
- SM — SYNC MODULE
- 1A — INDICATE (1)FA CABLE TYPE A
- END OF LINE RESISTOR


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JOHN CHONG ENGINEERING
1849 N HELM AVE #103 FRESNO CA 93727
(559) 325-9388 • FAX 297-9401
jcengineer@aol.com



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Sheet Title: FIRE ALARM PLAN BLDG 'F'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PC: --

Agency Approval Stamp:

FILE #: 15-6
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OFFICE OF REGULATION SERVICES
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DATE: JUN 27 2018
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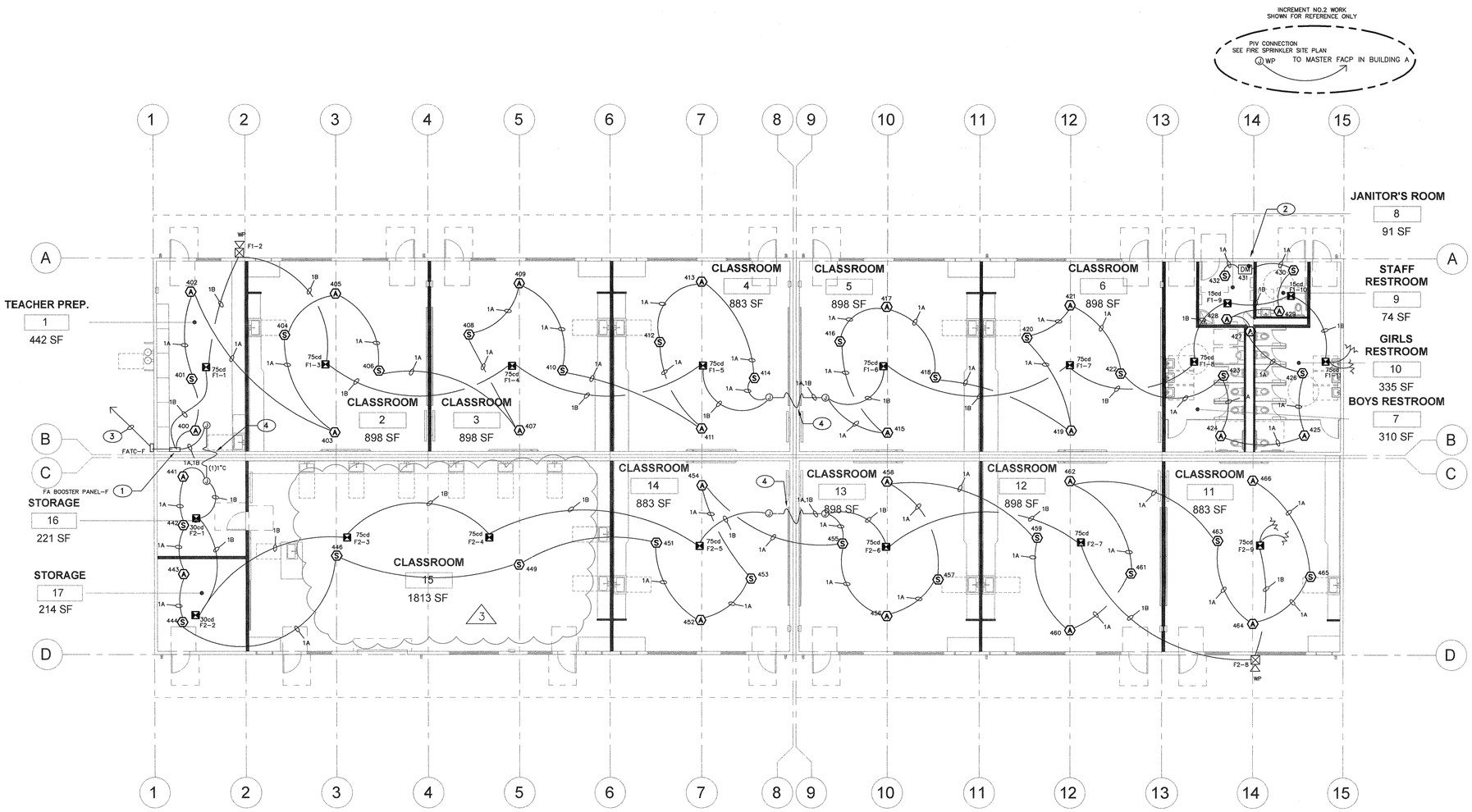
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JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

Sheet No.: E3.40

Release:




# FIRE ALARM PLAN - BLDG. 'F'

## NEW SCHOOL INCREMENT #3

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

| FA CABLE SCHEDULE | |
|---|---|
| TYPE | DESCRIPTION |
| A | INITIALING CIRCUIT CABLE 2#16 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, MIN. 3/4" CONDUIT INSTALLATION |
| B | NAC SIGNAL CIRCUIT CABLE 2#12 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR CABLE, AND 2#16 TWIST SHEILD SPEAKER CABLE. MIN. 3/4" CONDUIT INSTALLATION |
| C | INITIALING CIRCUIT CABLE 4#14 AWG SOLID COPPER PVC JACKET POWER LIMITED FPLR OUTDOOR CABLE, MIN. 3/4" CONDUIT INSTALLATION |

ADDENDUM NO.3

1. DELETED ATTIC HEAT DETECTORS IN CLASSROOM NO.15

## KEY NOTES

1. FIRE ALARM NAC SIGNAL AND EMERGENCY VOICE BOOSTER PANEL. PROVIDE 110V DEDICATE CIRCUIT AND CONNECT TO PANEL FR1 CIRCUIT #33 WITH MECHANICAL LOCK ON BREAKER. PROVIDE CONNECTION FOR NEW FA DEVICES INTERFACE WITH MASTER FACP IN ADMIN BUILDING. SEE FA RISER DIAGRAM FOR DETAIL.
2. FURNISH AND INSTALL MONITOR MODULES AND FA MONITORING CABLE FOR FIRE SPRINKLER FLOW SWITCH AND TAMPER SWITCH. SEE FIRE SPRINKLER PLANS FOR EXACT LOCATION AND DETAILS.
3. NEW 1" U.G CONDUIT WITH 1C, 1B FA CABLE INTERCONNECT TO EXISTING MASTER FACP IN ADMIN. OFFICE VIA EXISTING U.G SIGNAL CONDUITS AND PULL BOX.
4. PROVIDE 1" WP FLEX CONDUIT IN ATTIC SPACE BETWEEN BUILDING FOR FA CABLE RACEWAY. FIELD VERIFY LOCATION. CORE DRILL AND SEAL EXTERIOR WALL AS REQUIRED.

## LEGEND

- FACP — FIRE ALARM CONTORL PANEL
- NAC — NAC SIGNAL POWER SUPPLY
- DVC — DIGITAL VOICE COMMAND CENTER
- ANN — REMOTE ANNUNCIATOR
- A1-4 / 15cd — INDICATE NUMBER 4 DEVICES IN CIRCUIT A1
- CEILING MOUNT SPEAKER STROBE 15cd 30cd 75cd 110cd TEMPORAL CODE 3
- WP — OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3
- 102 / S — INDICATE INITIATING DEVICES ADDRESS; ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE
- H — CEILING HEAT DETECTOR 190°F TEMP WITH BASE
- DM — DUAL MONITORING MODULE
- SM — SYNC MODULE
- 1A — INDICATE (1)FA CABLE TYPE A
- END OF LINE RESISTOR

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Revision: / Revision Description: / Rev. Date:

Sheet Title: FIRE ALARM PLAN BLDG 'F'

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PIC: --

Agency Approval Stamp:

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ADDENDUM #3

Stamp(s):

REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

ADDENDUM NO.3

Job No.: 5262

Sheet No.: E3.40

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JOHN CHONG ENGINEERING
1849 N HELM AVE #103 FRESNO CA 93727
(559) 705-7980 • FAX 237-9401
jcengineer@aol.com

## BATTERY POWER CALCULATIONS
NAC SIGNAL & AUDIO BOOSTER PANEL C

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.075A | 0.175A | 0.075A | 0.175A |
| OUTDOOR SPEAKER | 2 | --- | 0.050A | --- | 0.100A |
| VISUAL 15cd | 0 | --- | 0.025A | --- | 0.000A |
| AUDIO/VISUAL 15cd | 13 | --- | 0.066A | --- | 0.858A |
| AUDIO/VISUAL 30cd | 3 | --- | 0.094A | --- | 0.272A |
| AUDIO/VISUAL 75cd | 8 | --- | 0.158A | --- | 1.264A |
| AUDIO/VISUAL 110cd | 0 | --- | 0.202A | --- | 0.000A |
| SYNC MODULES | 3 | --- | 0.035A | --- | 0.105A |
| 1/4 W SPEAKER | 26 | --- | 0.010A | --- | 0.260A |
| **SUB-TOTAL** | | | | 0.075A | 3.034A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 1.800AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.759AH |
| SUBTOTAL | 2.559AH |
| 20% SAFETY FACTOR | 0.512AH |
| TOTAL AMPS-HRS REQUIRED | 3.071AH |
| PROVIDE BATTERY WITH (2) 6AH BATTERY | |

## BATTERY POWER CALCULATIONS
NEW NAC SIGNAL & AUDIO BOOSTER PANEL D

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.075A | 0.175A | 0.075A | 0.175A |
| OUTDOOR SPEAKER | 2 | --- | 0.175A | --- | 0.350A |
| VISUAL 15cd | 0 | --- | 0.050A | --- | 0.000A |
| AUDIO/VISUAL 15cd | 4 | --- | 0.025A | --- | 0.100A |
| AUDIO/VISUAL 30cd | 0 | --- | 0.066A | --- | 0.000A |
| AUDIO/VISUAL 75cd | 14 | --- | 0.094A | --- | 1.316A |
| AUDIO/VISUAL 110cd | 0 | --- | 0.158A | --- | 0.000A |
| SYNC MODULES | 2 | --- | 0.202A | --- | 0.404A |
| 1/4 W SPEAKER | 20 | --- | 0.035A | --- | 0.700A |
| **SUB-TOTAL** | | 0.010A | | 0.075A | 3.045A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 1.800AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.761AH |
| SUBTOTAL | 2.561AH |
| 20% SAFETY FACTOR | 0.512AH |
| TOTAL AMPS-HRS REQUIRED | 3.073AH |
| PROVIDE BATTERY WITH (2) 6AH BATTERY | |

## BATTERY POWER CALCULATIONS
NEW NAC SIGNAL & AUDIO BOOSTER PANEL E

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.075A | 0.175A | 0.075A | 0.175A |
| OUTDOOR SPEAKER | 2 | --- | 0.050A | --- | 0.100A |
| VISUAL 15cd | 0 | --- | 0.025A | --- | 0.000A |
| AUDIO/VISUAL 15cd | 1 | --- | 0.066A | --- | 0.066A |
| AUDIO/VISUAL 30cd | 2 | --- | 0.094A | --- | 0.188A |
| AUDIO/VISUAL 75cd | 13 | --- | 0.158A | --- | 2.054A |
| AUDIO/VISUAL 110cd | 0 | --- | 0.202A | --- | 0.000A |
| SYNC MODULES | 2 | --- | 0.035A | --- | 0.700A |
| 1/4 W SPEAKER | 18 | --- | 0.010A | --- | 0.180A |
| **SUB-TOTAL** | | | | 0.075A | 3.463A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 1.800AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.866AH |
| SUBTOTAL | 2.686AH |
| 20% SAFETY FACTOR | 0.537AH |
| TOTAL AMPS-HRS REQUIRED | 3.223AH |
| PROVIDE BATTERY WITH (2) 6AH BATTERY | |

## BATTERY POWER CALCULATIONS
NEW NAC SIGNAL & AUDIO BOOSTER PANEL F

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.075A | 0.175A | 0.075A | 0.175A |
| OUTDOOR SPEAKER | 2 | --- | 0.050A | --- | 0.100A |
| VISUAL 15cd | 0 | --- | 0.025A | --- | 0.000A |
| AUDIO/VISUAL 15cd | 2 | --- | 0.066A | --- | 0.132A |
| AUDIO/VISUAL 30cd | 2 | --- | 0.094A | --- | 0.188A |
| AUDIO/VISUAL 75cd | 14 | --- | 0.158A | --- | 2.212A |
| AUDIO/VISUAL 110cd | 0 | --- | 0.202A | --- | 0.000A |
| SYNC MODULES | 2 | --- | 0.035A | --- | 0.070A |
| 1/4 W SPEAKER | 20 | --- | 0.010A | --- | 0.200A |
| **SUB-TOTAL** | | | | 0.075A | 3.077A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 1.800AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.769AH |
| SUBTOTAL | 2.569AH |
| 20% SAFETY FACTOR | 0.514AH |
| TOTAL AMPS-HRS REQUIRED | 3.083AH |
| PROVIDE BATTERY WITH (2) 6AH BATTERY | |

## BATTERY POWER CALCULATIONS
AUDIO AMPLIFIER DVC NOTIFIER#DVC
IN ADMIN BUILDING (INCREMENT NO.2)

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.130A | 1.000A | 0.130A | 1.000A |
| **SUB-TOTAL** | | | | 0.130A | 1.000A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 3.120AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.250AH |
| SUBTOTAL | 3.370AH |
| 20% SAFETY FACTOR | 0.674AH |
| TOTAL NEW AMPS-HRS REQUIRED | 4.044AH |
| PROVIDE BATTERY WITH (2) 12AH BATTERIES | |

## BATTERY POWER CALCULATIONS
SLAVE FIRE ALARM CONTROL PANEL FACP
IN BUILDING C

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.120A | 9A | 0.1200A | 9.000A |
| INCREMENT NO.3 SMOKE DETECTOR | 118 | 0.0003A | 0.0065A | 0.0354A | 0.767A |
| INCREMENT NO.3 HEAT DETECTOR | 120 | 0.0003A | 0.0065A | 0.0360A | 0.780A |
| INCREMENT NO.3 MODULE | 4 | 0.0003A | 0.0065A | 0.0012A | 0.026A |
| **SUB-TOTAL** | | | | 0.1922A | 10.573A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 4.613AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 2.643AH |
| SUBTOTAL | 7.256AH |
| 20% SAFETY FACTOR | 1.451AH |
| TOTAL NEW AMPS-HRS REQUIRED | 8.707AH |
| PROVIDE BATTERY WITH (2) 12AH BATTERIES | |

## FIRE ALARM SYMBOLS AND SCHEDULE

| ITEM | DESCRIPTION | MODEL NUMBER | CSFM NUMBER | MOUNT | BACK BOX |
|---|---|---|---|---|---|
| FACP | MASTER AND SLAVE FIRE ALARM CONTORL PANEL ADDRESSABLE NETWORK SYSTEM | NOTIFIER #NFS-640 | 7165-0028:0243 | +60" | EQUIPMENT CABINET |
| DVC | (INCREMENT NO.2) DIGITAL VOICE COMMAND CENTER INTERCONNECT WITH FACP FOR REFERENCE ONLY | NOTIFIER #DVC SBB-C4 ADDR-C4 (NFS2-640) | 7165-0028:0243 | +60" | EQUIPMENT CABINET |
| NAC | NAC POWER SUPPLIES & AMPLIFIER BOOSTER PAENL | WHEELOCK #SPS-80/4 | 6911-0785:0157 | +60" | EQUIPMENT CABINET |
| DM | ADDRESSABLE DUAL MONITOR MODULE FOR TAMPER/FLOW SWITCH | NOTIFIER #FMM-2 | 7300-0028:0219 | +60" | 4"SQ X 2 1/2"D |
| S | ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE | NOTIFIER #FSP-851/B710P | 7272-0028:0206 | CEILING | 4"SQ X 2 1/2"D |
| A | ADDRESSABLE ATTIC HEAT DETECTOR 190°F TEMP WITH BASE | NOTIFIER #FST-851H/B710P | 7270-0028:0196 | CEILING | 4"SQ X 2 1/2"D |
| | CEILING MOUNT SPEAKER STROBE WITH EVACUATION SPEAKER 15cd 30cd 75cd 110cd 15/75cd TEMPORAL CODE 3 | NOTIFIER #SPSV WR | 7320-1653:0201 | +80" | 4"SQ X 2 1/2"D |
| WP | OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3 | NOTIFIER #SPRK WMBB | 7320-1653:0201 | +90" | 4"SQ X 2 1/2"D |
| SM | SYNC MODULE | WHEELOCK #OSM | 7300-0785:0132 | +60" | 4"SQ X 2 1/2"D |
| | POWER LIMITED CABLE | WEST PENN AQ SERIES | 7161-0859:0101 | | IN CONDUITS |
| EOL | END OF LINE RESISTOR | N/A | N/A | LAST DEVICE | 4"SQ X 2 1/2"D |

## FIRE ALARM SEQUENCE OF OPERATIONS

| | ACTIVATE ALARM FACP | ACTIVATE ALARM (1 ROUTE ANNUNCIATOR | ACTIVATE TROUBLE SIGNAL AT ROUTE ANNUNCIATOR | ACTIVATE SUPERVISORY SIGNAL AT FACP | ACTIVATE SUPERVISORY SIGNAL AT ROUTE ANNUNCIATOR | SEND ALARM OFF-SITE VIA COMMUNICATOR | SEND SUPERVISORY SIGNAL OFF-SITE VIA COMMUNICATOR | ACTIVATE AUDIBLE/VISUAL SIGNALS | ACTIVATE AUDIBLE/ABSEL SIGNALS | ACTIVATE WATER FLOW BELL | SHUTDOWN HVAC UNITS / MEA INCREMENT NO.2 | RESET SYNC INITIATING DEVICES | ACTIVATE BATTERY BACK-UP | DEACTIVATE BOOSTER CIRCUITS | DEACTIVATE AUDIBLE SIGNALS | RESET DEV & MISC DEVICES | SYSTEM NORMAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MANUAL PULL STATION | X | X | | | | X | | X | | | | | | | | | |
| SMOKE DETECTORS: | X | X | | | | X | | X | | | | | | | | | |
| SMOKE/CO DETECTORS (INCREMENT NO.2) | X | X | | | | X | | X | | | | | | | | | |
| HEAT DETECTORS: | X | X | | | | X | | X | | | | | | | | | |
| DUCT DETECTOR (INCREMENT NO.2) | | | | X | X | | X | | | X | | | | | | | |
| FIRE SPRINKLER WATERFLOW SWITCH | X | X | | | | X | | X | X | | | | | | | | |
| FIRE SPRINKLER TAMPER SWITCH | | | | X | X | | X | | | | | | | | | | |
| POST INDICATOR VALVE (INCREMENT NO.2) | | | | X | X | | X | | | | | | | | | | |
| WIRING CONDITIONS: | | | | | | | | | | | | | | | | | |
| SIGNALING LINE CIRCUIT (SLC)- | | | | | | | | | | | | | | | | | |
| WIRE-TO-WIRE SHORT | | | X | X | | | X | | | | | | | | | | |
| SINGLE OPEN | | | X | X | | | X | | | | | | | | | | |
| SINGLE GROUND | | | X | X | | | X | | | | | | | | | | |
| INITIATING DEVICE CIRCUIT (IDC)- | | | | | | | | | | | | | | | | | |
| WIRE-TO-WIRE SHORT | X | X | | | | X | | X | | | | | | | | | |
| SINGLE OPEN | | | X | X | | | X | | | | | | | | | | |
| SINGLE GROUND | | | X | X | | | X | | | | | | | | | | |
| NOTIFICATION APPLIANCE CIRCUIT (NAC)- | | | | | | | | | | | | | | | | | |
| WIRE-TO-WIRE SHORT | | | X | X | | | X | | | | | | | | | | |
| SINGLE OPEN | | | X | X | | | | | | | | | | | | | |
| SINGLE GROUND | | | X | X | | | | | | | | | | | | | |
| LOSS OF 120VAC POWER | | | X | X | | | X | | | | | X | | | | | |
| SIGNAL SILENCE | | | | | | | | | | | | | X | X | | | |
| RESET FACP | | | | | | | | | | | X | | X | X | X | X | |

NOTE: SOME SEQUENCE OF OPERATIONS SHOWN MAY NOT APPLY

## VOLTAGE DROP CALCULATION
WORST CASE VOLTAGE DROP AT THE LAST DEVICE

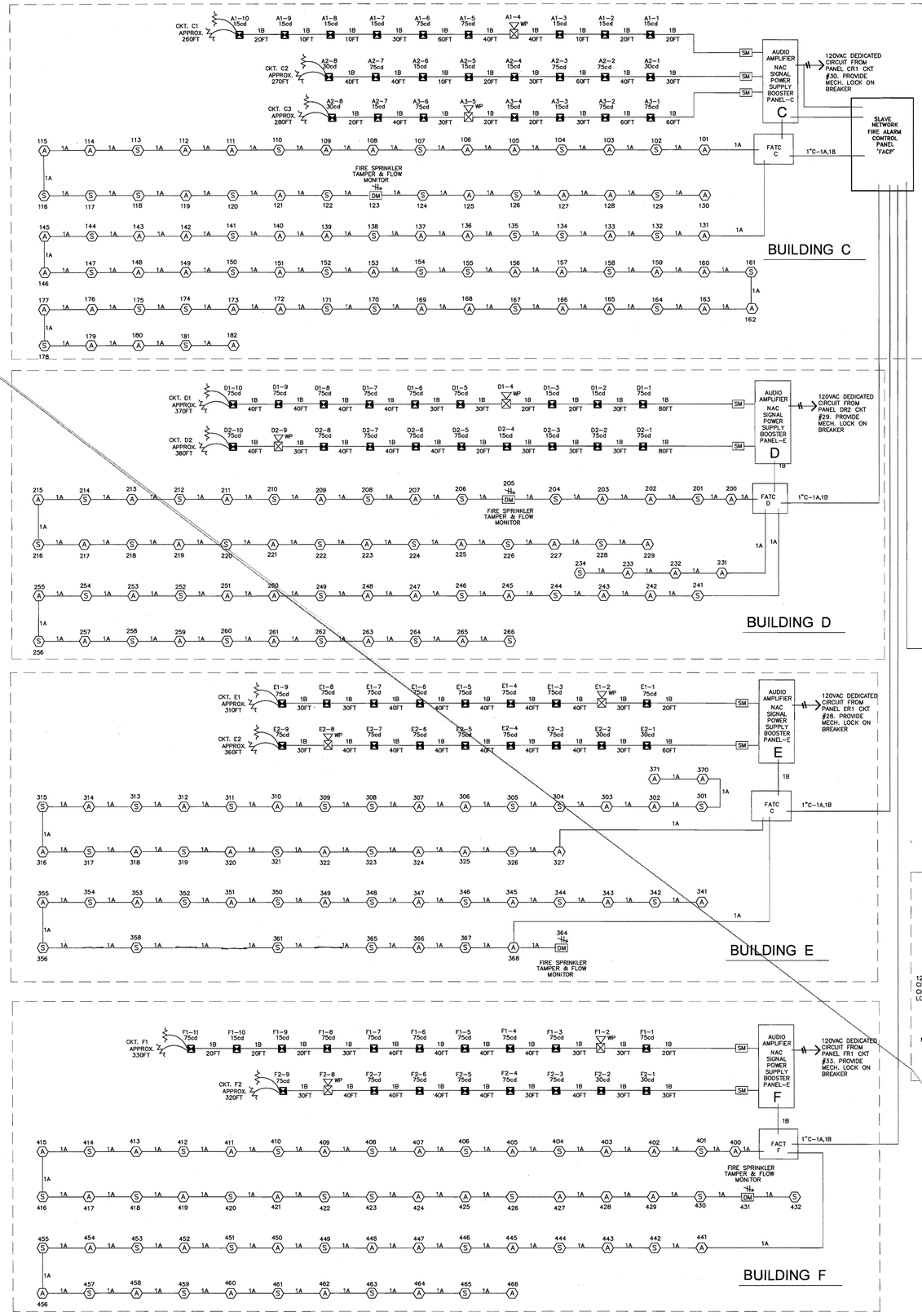
VD = VOLTAGE DROP
I = TOTAL LOAD
K = 11
L = DISTANCE TO THE LOAD
CM = CIRCULAR MILLS (CROSS SECTION OF 12 AWG = 6530) (16 AWG = 5283)
V = VOLTAGE (24vdc)
VD = K * I * 2L / CM

| CIRCUIT NUMBER | AMPERES | APPROX LENGTH | RESISTIVITY OHM | WIRE AWG | AREA CM | VOLTS DROPPED | % VOLTS DROP |
|---|---|---|---|---|---|---|---|
| CKT. C1 STROBE | 1.769A | 260' | 21.6 | 12 | 6530 | 0.7708V | 3.2% |
| CKT. C1 SPEAKER | 0.500A | 260' | 21.6 | 16 | 2583 | 0.7944V | 0.3% |
| CKT. C2 STROBE | 0.877A | 270' | 21.6 | 12 | 6530 | 0.7397V | 3.1% |
| CKT. C2 SPEAKER | 0.500A | 270' | 21.6 | 16 | 2583 | 1.066V | 4.4% |
| CKT. C3 STROBE | 0.475A | 280' | 21.6 | 12 | 6530 | 0.2828V | 1.2% |
| CKT. C3 SPEAKER | 1.769A | 280' | 21.6 | 12 | 6530 | 0.7708V | 3.2% |
| CKT. D1 STROBE | 0.500A | 370' | 21.6 | 16 | 2583 | 0.7944V | 0.3% |
| CKT. D1 SPEAKER | 0.877A | 370' | 21.6 | 12 | 6530 | 0.7397V | 3.1% |
| CKT. D2 STROBE | 0.500A | 380' | 21.6 | 16 | 2583 | 1.066V | 4.4% |
| CKT. D2 SPEAKER | 0.475A | 380' | 21.6 | 12 | 6530 | 0.2828V | 1.2% |
| CKT. E1 STROBE | 1.769A | 310' | 21.6 | 12 | 6530 | 0.7708V | 3.2% |
| CKT. E1 SPEAKER | 0.500A | 310' | 21.6 | 16 | 2583 | 0.7944V | 0.3% |
| CKT. E2 STROBE | 0.877A | 360' | 21.6 | 12 | 6530 | 0.7397V | 3.1% |
| CKT. E2 SPEAKER | 0.500A | 360' | 21.6 | 16 | 2583 | 1.066V | 4.4% |
| CKT. F1 STROBE | 0.475A | 330' | 21.6 | 12 | 6530 | 0.2828V | 1.2% |
| CKT. F1 SPEAKER | 1.769A | 330' | 21.6 | 12 | 6530 | 0.7708V | 3.2% |
| CKT. F2 STROBE | 0.500A | 320' | 21.6 | 16 | 2583 | 0.7944V | 0.3% |
| CKT. F2 SPEAKER | 0.877A | 320' | 21.6 | 12 | 6530 | 0.7397V | 3.1% |

## BATTERY POWER CALCULATIONS
MASTER FIRE ALARM CONTROL PANEL FACP
IN BUILDING A - DATA ROOM A1B (INCREMENT NO.2)

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.120A | 9A | 0.120A | 9A |
| INCREMENT NO.2 | | | | | |
| BUILDING A & B SMOKE DETECTOR | 78 | 0.0003A | 0.0065A | 0.0235A | 0.507A |
| BUILDING A & B SMOKE/CO DETECTOR | 20 | 0.0003A | 0.0065A | 0.0060A | 0.130A |
| BUILDING A & B HEAT DETECTOR | 9 | 0.0003A | 0.0065A | 0.0021A | 0.0455A |
| BUILDING A & B MODULE | 18 | 0.0003A | 0.0065A | 0.0045A | 0.0975A |
| **SUB-TOTAL** | | | | 0.1561A | 9.78A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 3.746AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 2.445AH |
| SUBTOTAL | 6.191AH |
| 20% SAFETY FACTOR | 1.238AH |
| TOTAL NEW AMPS-HRS REQUIRED | 7.429AH |
| PROVIDE BATTERY WITH (2) 12AH BATTERIES | |




NOTES:
1. RISER DIAGRAM IS DIAGRAMMATIC. SEE FIRE ALARM FLOOR PLAN AND FIELD VERIFY EXACT ROUTING AS REQUIRED.
2. ALL INTERIOR FIRE ALARM CONDUCTORS ARE INSTALLED IN EMT CONDUIT AND CONCEAL ABOVE CEILING OR INSIDE WALL WITH 3/4"C.
3. FIRE ALARM CONDUCTOR CANNOT SPLICE INSIDE PULL BOX. CONDUCTOR MUST BE CONTINUE RUN BETWEEN FIRE ALARM DEVICES BACK BOX OR TERMINAL CABINET.

1 FIRE ALARM RISER DIAGRAM
N.T.S.

## F.A SYSTEM SCOPE OF WORK

1. PROVIDE AUTOMATIC FIRE ALARM SYSTEM AND DEVICES FOR THE NEW BUILDINGS PER PLANS.
2. EXISTING FACP IS 24VDC ADDRESSABLE WITH EMERGENCY VOICE EVACUATION, AND CLASS B WIRING SYSTEM, AND WITH OFF SITE MONITORING SERVICE VIA AUTO DUAL LINE DIALER AND TELEPHONE LINES.
3. DURING THE FINAL TESTING, MEASURE ALL FIRE ALARM CURRENTS, VOLTAGE DROP FOR EACH SIGNAL CIRCUITS. SEND OWNER AND ENGINEER ONE COPY RECORD FOR REVIEW, AND PLASTIC LAMINATED ONE COPY INSIDE FACP CABINET DOOR.

HVAC NOTES:
1. REFER TO MECHANICAL PLANS, ALL HVAC UNITS IN BUILDING C D E F ARE HEAT PUMP, NO GAS FIRED UNIT.
2. NO DUCT SMOKE DETECTORS ARE SPECIFIED IN BUILDING C D E F.


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6011 N. Fresno, Suite 130 – Fresno, California 93710
Phone (559) 436-0981 Fax (559) 436-0987 E-Mail: design@somam.com
www.integratedesigns.com


Sheet Title: FIRE ALARM RISER DIAGRAM BATTERY CALCULATION

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designed: | Drawn: | Chkd: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | --- |
| Date: 12/06/16 | | | P.C. |

Agency Approval Stamp:
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CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE #103 FRESNO CA 93727
(559) 515-2286 • FAX 237-3401
jcengineer@aol.com


Job No.: 5262

Sheet No.: E4.01

Release:

| Revision: | Revision Description: | Rev. Date: |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

## BATTERY POWER CALCULATIONS
NAC SIGNAL & AUDIO BOOSTER PANEL C

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.075A | 0.175A | 0.075A | 0.175A |
| OUTDOOR SPEAKER | 2 | --- | 0.050A | --- | 0.100A |
| VISUAL 15cd | 0 | --- | 0.025A | --- | 0.000A |
| AUDIO/VISUAL 15cd | 13 | --- | 0.066A | --- | 0.858A |
| AUDIO/VISUAL 30cd | 3 | --- | 0.094A | --- | 0.272A |
| AUDIO/VISUAL 75cd | 8 | --- | 0.158A | --- | 1.264A |
| AUDIO/VISUAL 110cd | 0 | --- | 0.202A | --- | 0.000A |
| SYNC MODULES | 3 | --- | 0.035A | --- | 0.105A |
| 1/4 W SPEAKER | 26 | --- | 0.010A | --- | 0.260A |
| **SUB-TOTAL** | | | | 0.075A | 3.034A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 1.800AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.759AH |
| SUBTOTAL ---------- | 2.559AH |
| 20% SAFETY FACTOR ---------- | 0.512AH |
| TOTAL AMPS-HRS REQUIRED | 3.071AH |

PROVIDE BATTERY WITH (2) 6AH BATTERY

## BATTERY POWER CALCULATIONS
NEW NAC SIGNAL & AUDIO BOOSTER PANEL D

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.075A | 0.175A | 0.075A | 0.175A |
| OUTDOOR SPEAKER | 2 | --- | 0.175A | --- | 0.350A |
| VISUAL 15cd | 0 | --- | 0.050A | --- | 0.000A |
| AUDIO/VISUAL 15cd | 4 | --- | 0.025A | --- | 0.100A |
| AUDIO/VISUAL 30cd | 0 | --- | 0.066A | --- | 0.000A |
| AUDIO/VISUAL 75cd | 14 | --- | 0.094A | --- | 1.316A |
| AUDIO/VISUAL 110cd | 0 | --- | 0.158A | --- | 0.000A |
| SYNC MODULES | 2 | --- | 0.202A | --- | 0.404A |
| 1/4 W SPEAKER | 20 | --- | 0.035A | --- | 0.700A |
| **SUB-TOTAL** | | | 0.010A | 0.075A | 3.045A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 1.800AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.761AH |
| SUBTOTAL ---------- | 2.561AH |
| 20% SAFETY FACTOR ---------- | 0.512AH |
| TOTAL AMPS-HRS REQUIRED | 3.073AH |

PROVIDE BATTERY WITH (2) 6AH BATTERY

## BATTERY POWER CALCULATIONS
NEW NAC SIGNAL & AUDIO BOOSTER PANEL E

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.075A | 0.175A | 0.075A | 0.175A |
| OUTDOOR SPEAKER | 2 | --- | 0.050A | --- | 0.100A |
| VISUAL 15cd | 0 | --- | 0.025A | --- | 0.000A |
| AUDIO/VISUAL 15cd | 1 | --- | 0.066A | --- | 0.066A |
| AUDIO/VISUAL 30cd | 2 | --- | 0.094A | --- | 0.188A |
| AUDIO/VISUAL 75cd | 13 | --- | 0.158A | --- | 2.054A |
| AUDIO/VISUAL 110cd | 0 | --- | 0.202A | --- | 0.000A |
| SYNC MODULES | 2 | --- | 0.035A | --- | 0.700A |
| 1/4 W SPEAKER | 18 | --- | 0.010A | --- | 0.180A |
| **SUB-TOTAL** | | | | 0.075A | 3.463A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 1.800AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.866AH |
| SUBTOTAL ---------- | 2.686AH |
| 20% SAFETY FACTOR ---------- | 0.537AH |
| TOTAL AMPS-HRS REQUIRED | 3.223AH |

PROVIDE BATTERY WITH (2) 6AH BATTERY

## BATTERY POWER CALCULATIONS
NEW NAC SIGNAL & AUDIO BOOSTER PANEL F

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.075A | 0.175A | 0.075A | 0.175A |
| OUTDOOR SPEAKER | 2 | --- | 0.050A | --- | 0.100A |
| VISUAL 15cd | 0 | --- | 0.025A | --- | 0.000A |
| AUDIO/VISUAL 15cd | 2 | --- | 0.066A | --- | 0.132A |
| AUDIO/VISUAL 30cd | 2 | --- | 0.094A | --- | 0.188A |
| AUDIO/VISUAL 75cd | 14 | --- | 0.158A | --- | 2.212A |
| AUDIO/VISUAL 110cd | 0 | --- | 0.202A | --- | 0.000A |
| SYNC MODULES | 2 | --- | 0.035A | --- | 0.070A |
| 1/4 W SPEAKER | 20 | --- | 0.010A | --- | 0.200A |
| **SUB-TOTAL** | | | | 0.075A | 3.077A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 1.800AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.769AH |
| SUBTOTAL ---------- | 2.569AH |
| 20% SAFETY FACTOR ---------- | 0.514AH |
| TOTAL AMPS-HRS REQUIRED | 3.083AH |

PROVIDE BATTERY WITH (2) 6AH BATTERY

## BATTERY POWER CALCULATIONS
AUDIO AMPLIFIER DVC NOTIFIER DVC
IN ADMIN BUILDING (INCREMENT NO.2)

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.130A | 1.000A | 0.130A | 1.000A |
| **SUB-TOTAL** | | | | 0.130A | 1.000A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 3.120AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 0.250AH |
| SUBTOTAL ---------- | 3.370AH |
| 20% SAFETY FACTOR ---------- | 0.674AH |
| TOTAL NEW AMPS-HRS REQUIRED | 4.044AH |

PROVIDE BATTERY WITH (2) 12AH BATTERIES

## BATTERY POWER CALCULATIONS
SLAVE FIRE ALARM CONTROL PANEL FACP
IN BUILDING C

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.120A | 9A | 0.1200A | 9.000A |
| INCREMENT NO.3 SMOKE DETECTOR | 118 | 0.0003A | 0.0065A | 0.0354A | 0.767A |
| INCREMENT NO.3 HEAT DETECTOR | 112 | 0.0003A | 0.0065A | 0.0336A | 0.728A |
| INCREMENT NO.3 MODULE | 4 | 0.0003A | 0.0065A | 0.0012A | 0.026A |
| **SUB-TOTAL** | | | | 0.1902A | 10.521A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 4.565AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 2.630AH |
| SUBTOTAL ---------- | 7.195AH |
| 20% SAFETY FACTOR ---------- | 1.439AH |
| TOTAL NEW AMPS-HRS REQUIRED | 8.634AH |

PROVIDE BATTERY WITH (2) 12AH BATTERIES

## FIRE ALARM SYMBOLS AND SCHEDULE

| ITEM | DESCRIPTION | MODEL NUMBER | CSFM NUMBER | MOUNT | BACK BOX |
|---|---|---|---|---|---|
| FACP | MASTER AND SLAVE FIRE ALARM CONTORL PANEL ADDRESSABLE NETWORK SYSTEM | NOTIFIER #NFS-640 | 7165-0028:0243 | +60" | EQUIPMENT CABINET |
| DVC | (INCREMENT NO.2) DIGITAL VOICE COMMAND CENTER INTERCONNECT WITH FACP FOR REFERENCE ONLY | NOTIFIER #DVC SBB-C4 ADDR-C4 (NFS2-640) | 7165-0028:0243 | +60" | EQUIPMENT CABINET |
| NAC | NAC POWER SUPPLIES & AMPLIFIER BOOSTER PADNL | WHEELOCK #SPB-80/4 | 6911-0785:0157 | +60" | EQUIPMENT CABINET |
| DM | ADDRESSABLE DUAL MONITOR MODULE FOR TAMPER/FLOW SWITCH | NOTIFIER #FMM-2 | 7300-0028:0219 | +60" | 4"SQ X 2 1/2"D |
| S | ADDRESSABLE CEILING SMOKE DETECTOR WITH BASE | NOTIFIER #FSP-851/B710P | 7272-0028:0206 | CEILING | 4"SQ X 2 1/2"D |
| A | ADDRESSABLE ATTIC HEAT DETECTOR 190°F TEMP WITH BASE | NOTIFIER #FST-851H/B710P | 7270-0028:0196 | CEILING | 4"SQ X 2 1/2"D |
| | CEILING MOUNT SPEAKER STROBE WITH EVACUATION SPEAKER 15cd 30cd 75cd 110cd 15/75cd TEMPORAL CODE 3 | NOTIFIER #SPSV WR | 7320-1653:0201 | +80" | 4"SQ X 2 1/2"D |
| WP | OUTDOOR EVACUATION SPEAKER WITH WEATHERPROOF BOX TEMPORAL CODE 3 | NOTIFIER #SPRK WMBB | 7320-1653:0201 | +90" | 4"SQ X 2 1/2"D |
| SM | SYNC MODULE | WHEELOCK #DSM | 7300-0785:0132 | +60" | 4"SQ X 2 1/2"D |
| | POWER LIMITED CABLE | WEST PENN AQ SERIES | 7161-0859:0101 | | IN CONDUITS |
| EOL | END OF LINE RESISTOR | N/A | N/A | LAST DEVICE | 4"SQ X 2 1/2"D |

## FIRE ALARM SEQUENCE OF OPERATIONS

| | ACTIVATE ALARM FACP | ACTIVATE TROUBLE FACP | ACTIVATE TROUBLE SIGNAL AT FACP | ACTIVATE TROUBLE SIGNAL AT REMOTE ANNUNCIATOR | ACTIVATE SUPERVISORY SIGNAL AT FACP | ACTIVATE SUPERVISORY SIGNAL AT REMOTE ANNUNCIATOR | SEND ALARM OFF SITE VIA CHANNEL NO. COMMUNICATOR | SEND SUPERVISORY SIGNAL OFF-SITE VIA COMMUNICATOR | ACTIVATE TROUBLE SIGNAL OFF-SITE VIA COMMUNICATOR | ACTIVATE HORN / STROBES | ACTIVATE SPEAKER / STROBES | SHUTDOWN HVAC UNITS / AHUs (INCREMENT NO.2) | RESET LOCAL RELATING DEVICES | RESET ALL RELATING DEVICES | DEACTIVATE HORNS / STROBES | DEACTIVATE SPEAKERS / STROBES | DEACTIVATE AUDIO DEVICES | SYSTEM NORMAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MANUAL PULL STATION | X | X | | | | | X | | | X | | X | | | | | | |
| SMOKE DETECTORS: | X | X | | | | | X | | | X | | | | | | | | |
| SMOKE/CO DETECTORS (INCREMENT NO.2) | X | X | | | | | X | | | X | | | | | | | | |
| HEAT DETECTORS: | X | X | | | | | X | | | X | | | | | | | | |
| DUCT DETECTOR (INCREMENT NO.2) | | | | | X | X | | | | | X | | X | | | | | |
| FIRE SPRINKLER WATERFLOW SWITCH | X | X | | | | | X | | | X | X | | | | | | | |
| FIRE SPRINKLER TAMPER SWITCH | | | | | X | X | | | | X | | | | | | | | |
| POST INDICATOR VALVE (INCREMENT NO.2) | | | | | X | X | | | | X | | | | | | | | |
| WIRING CONDITIONS: | | | | | | | | | | | | | | | | | | |
| SIGNALING LINE CIRCUIT (SLC)- | | | | | | | | | | | | | | | | | | |
| WIRE-TO-WIRE SHORT | | | X | X | | | | X | | | | | | | | | | |
| SINGLE OPEN | | | X | X | | | | X | | | | | | | | | | |
| SINGLE GROUND | | | X | X | | | | X | | | | | | | | | | |
| INITIATING DEVICE CIRCUIT (IDC)- | | | | | | | | | | | | | | | | | | |
| WIRE-TO-WIRE SHORT | X | X | | | X | | X | | | | | | | | | | | |
| SINGLE OPEN | | | X | X | | | | X | | | | | | | | | | |
| SINGLE GROUND | | | X | X | | | | X | | | | | | | | | | |
| NOTIFICATION APPLIANCE CIRCUIT (NAC)- | | | | | | | | | | | | | | | | | | |
| WIRE-TO-WIRE SHORT | | | X | X | | | | | | | | | | | | | | |
| SINGLE OPEN | | | X | X | | | | | | | | | | | | | | |
| SINGLE GROUND | | | X | X | | | | | | | | | | | | | | |
| LOSS OF 120VAC POWER | | | X | X | | | X | | | | | | X | | | | | |
| SIGNAL SILENCE | | | | | | | | | | | | | | X | X | | | |
| RESET FACP | | | | | | | | | | | | | X | X | X | X | | |

NOTE: SOME SEQUENCE OF OPERATIONS SHOWN MAY NOT APPLY

## VOLTAGE DROP CALCULATION
WORST CASE VOLTAGE DROP AT THE LAST DEVICE

VD = VOLTAGE DROP
I = TOTAL LOAD
K = 11
L = DISTANCE TO THE LOAD
CM = CIRCULAR MILLS (CROSS SECTION OF 12 AWG = 6530) (16 AWG = 5283)
V = VOLTAGE (24vdc)
VD = K * I * 2L / CM

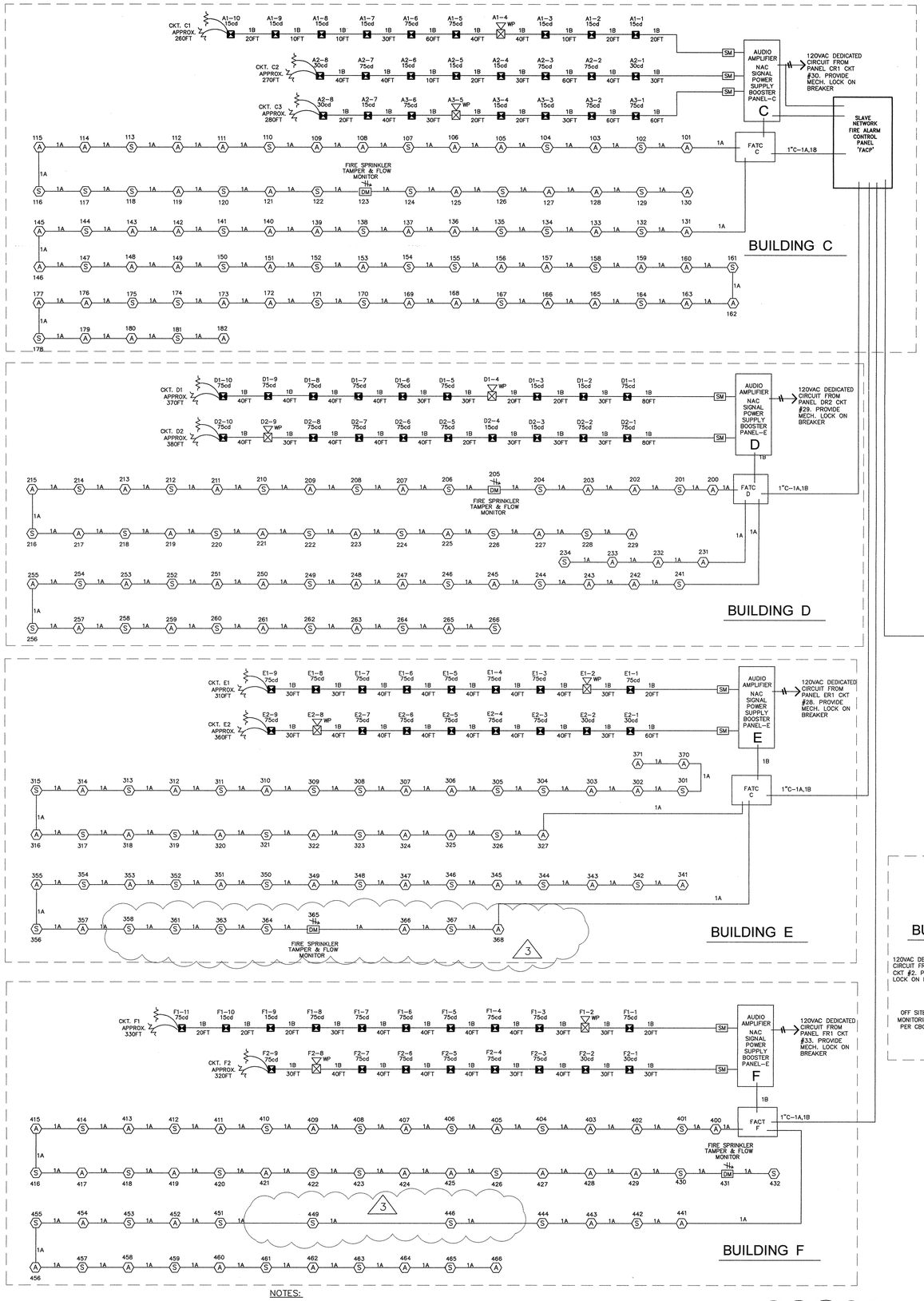
| CIRCUIT NUMBER | AMPERES | APPROX LENGTH | RESISTIVITY OHM | WIRE AWG | AREA CM | VOLTS DROPPED | % VOLTS DROP |
|---|---|---|---|---|---|---|---|
| OKT. C1 STROBE | 1.769A | 260' | 21.6 | 12 | 6530 | 0.7708V | 3.2% |
| OKT. C1 SPEAKER | 0.500A | 260' | 21.6 | 16 | 2583 | 0.7944V | 0.3% |
| OKT. C2 STROBE | 0.877A | 270' | 21.6 | 12 | 6530 | 0.7397V | 3.1% |
| OKT. C2 SPEAKER | 0.500A | 270' | 21.6 | 16 | 2583 | 1.066V | 4.4% |
| OKT. C3 STROBE | 0.475A | 280' | 21.6 | 12 | 6530 | 0.2828V | 1.2% |
| OKT. C3 SPEAKER | 1.769A | 280' | 21.6 | 12 | 6530 | 0.7708V | 3.2% |
| OKT. D1 STROBE | 0.500A | 370' | 21.6 | 16 | 2583 | 0.7944V | 0.3% |
| OKT. D1 SPEAKER | 0.877A | 370' | 21.6 | 12 | 6530 | 0.7397V | 3.1% |
| OKT. D2 STROBE | 0.500A | 380' | 21.6 | 16 | 2583 | 1.066V | 4.4% |
| OKT. D2 SPEAKER | 0.475A | 380' | 21.6 | 12 | 6530 | 0.2828V | 1.2% |
| OKT. E1 STROBE | 1.769A | 310' | 21.6 | 12 | 6530 | 0.7708V | 3.2% |
| OKT. E1 SPEAKER | 0.500A | 310' | 21.6 | 16 | 2583 | 0.7944V | 0.3% |
| OKT. E2 STROBE | 0.877A | 360' | 21.6 | 12 | 6530 | 0.7397V | 3.1% |
| OKT. E2 SPEAKER | 0.500A | 360' | 21.6 | 16 | 2583 | 1.066V | 4.4% |
| OKT. F1 STROBE | 0.475A | 330' | 21.6 | 12 | 6530 | 0.2828V | 1.2% |
| OKT. F1 SPEAKER | 1.769A | 330' | 21.6 | 12 | 6530 | 0.7708V | 3.2% |
| OKT. F2 STROBE | 0.500A | 320' | 21.6 | 16 | 2583 | 0.7944V | 0.3% |
| OKT. F2 SPEAKER | 0.877A | 320' | 21.6 | 12 | 6530 | 0.7397V | 3.1% |

## BATTERY POWER CALCULATIONS
MASTER FIRE ALARM CONTROL PANEL FACP
IN BUILDING A - DATA ROOM A18 (INCREMENT NO.2)

| DEVICE | NO. OF DEVICE | CURRENT PER DEVICE STANDBY | CURRENT PER DEVICE ALARM | STANDBY CURRENT | ALARM CURRENT |
|---|---|---|---|---|---|
| UNIT | 1 | 0.120A | 9A | 0.120A | 9A |
| INCREMENT NO.2 | | | | | |
| BUILDING A & B SMOKE DETECTOR | 78 | 0.0003A | 0.0065A | 0.0235A | 0.507A |
| BUILDING A & B SMOKE/CO DETECTOR | 20 | 0.0003A | 0.0065A | 0.0060A | 0.130A |
| BUILDING A & B HEAT DETECTOR | 9 | 0.0003A | 0.0065A | 0.0021A | 0.0455A |
| BUILDING A & B MODULE | 18 | 0.0003A | 0.0065A | 0.0045A | 0.0975A |
| **SUB-TOTAL** | | | | 0.1561A | 9.78A |

| | |
|---|---|
| 24 HOUR STANDBY CURRENT | 3.746AH |
| 15 MINUTE ALARM CURRENT (0.25 HR) | 2.445AH |
| SUBTOTAL ---------- | 6.191AH |
| 20% SAFETY FACTOR ---------- | 1.238AH |
| TOTAL NEW AMPS-HRS REQUIRED | 7.429AH |

PROVIDE BATTERY WITH (2) 12AH BATTERIES




## F.A SYSTEM SCOPE OF WORK

1. PROVIDE AUTOMATIC FIRE ALARM SYSTEM AND DEVICES FOR THE NEW BUILDINGS PER PLANS.
2. EXISTING FACP IS 24VDC ADDRESSABLE WITH EMERGENCY VOICE EVACUATION, AND CLASS B WIRING SYSTEM, AND WITH OFF SITE MONITORING SERVICE VIA AUTO DUAL LINE DIALER AND TELEPHONE LINES.
3. DURING THE FINAL TESTING, MEASURE ALL FIRE ALARM CURRENTS, VOLTAGE DROP FOR EACH SIGNAL CIRCUITS. SEND OWNER AND ENGINEER ONE COPY RECORD FOR REVIEW, AND PLASTIC LAMINATED ONE COPY INSIDE FACP CABINET DOOR.

HVAC NOTES:
1. REFER TO MECHANICAL PLANS, ALL HVAC UNITS IN BUILDING C D E F ARE HEAT PUMP, NO GAS FIRED UNIT.
2. NO DUCT SMOKE DETECTORS ARE SPECIFIED IN BUILDING C D E F.

NOTES:
1. RISER DIAGRAM IS DIAGRAMMATIC. SEE FIRE ALARM FLOOR PLAN AND FIELD VERIFY EXACT ROUTING AS REQUIRED.
2. ALL INTERIOR FIRE ALARM CONDUCTORS ARE INSTALLED IN EMT CONDUIT AND CONCEAL ABOVE CEILING OR INSIDE WALL WITH 3/4"C.
3. FIRE ALARM CONDUCTOR CANNOT SPLICE INSIDE PULL BOX. CONDUCTOR MUST BE CONTINUE RUN BETWEEN FIRE ALARM DEVICES BACK BOX OR TERMINAL CABINET.

1 FIRE ALARM RISER DIAGRAM
N.T.S.

3 ADDENDUM NO.3
1. DELETED ATTIC HEAT DETECTORS IN CLASSROOM NO.13 & NO.15
2. RELOCATED FIRE SPRINKLER RISER MONITOR MODULAR IN BLDG E.


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| | Rev. Date: | Revision: | Rev. Date: | Revision: |
|---|---|---|---|---|
| Revision Description: | | Revision Description: | | Revision Description: |

Sheet Title: FIRE ALARM RISER DIAGRAM BATTERY CALCULATION

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
Dr: J CHONG
Pc: ---

Agency Approval Stamp:
FILE #: 15-6
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
03-118394
AC SC-FLS SH-SSTN
DATE 5/8/18
TRACKING # ADDENDUM # 3

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REGISTERED PROFESSIONAL ENGINEER JOHN S. CHONG E 14419 Exp.6/30/2020 ELECTRICAL STATE OF CALIFORNIA

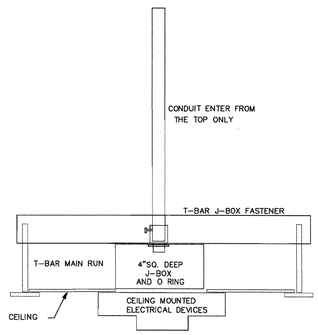
ADDENDUM NO.3

Job No.: 5262

Sheet No.: E4.01

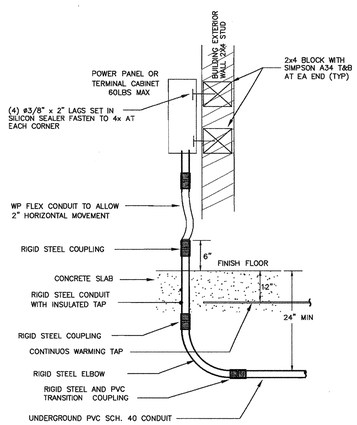
Release:


CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1343 N HELM AVE #103 FRESNO CA 93727
(559) 325-9388 • FAX 251-9403
jcengineer@aol.com



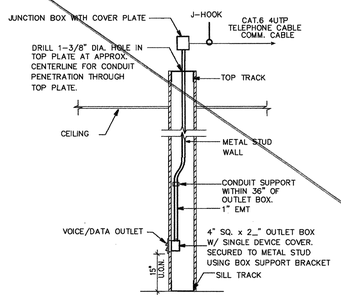

4 CEILING MOUNT DEVICES DETAIL

NTS



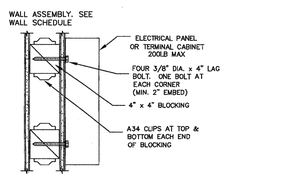

3 UNDERGROUND CONDUIT RISER DETAIL

N.T.S.




6 DATA AND VOICE OUTLET DETAIL

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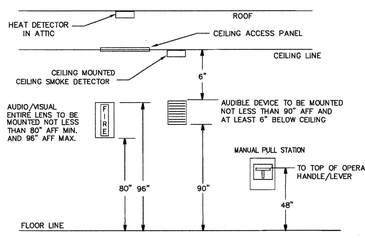



NOTES:

1. PROVIDE ENCLOSURE TO MATCH WALL RATING IF PANEL OCCURS IN FIRE RATED WALL.
2. PANELS INSTALLED IN 1-HOUR RATED WALLS SHALL BE LINED WITH 2 LAYERS OF 5/8" TYPE-X GYPSUM BOARD AROUND 4 SIDE AND BEHIND PANEL TO FORM A 1-HOUR RATED ENVELOPE.
3. PROVIDE FIRE CAULK FOR CONDUITS PENETRATE FIRE RATE ENVELOP PER U.L. ASSEMBLY.

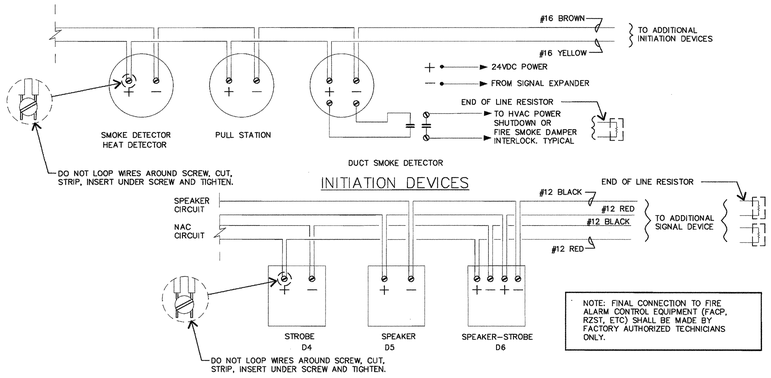
5 IDF CABINET MOUNTING DETAIL

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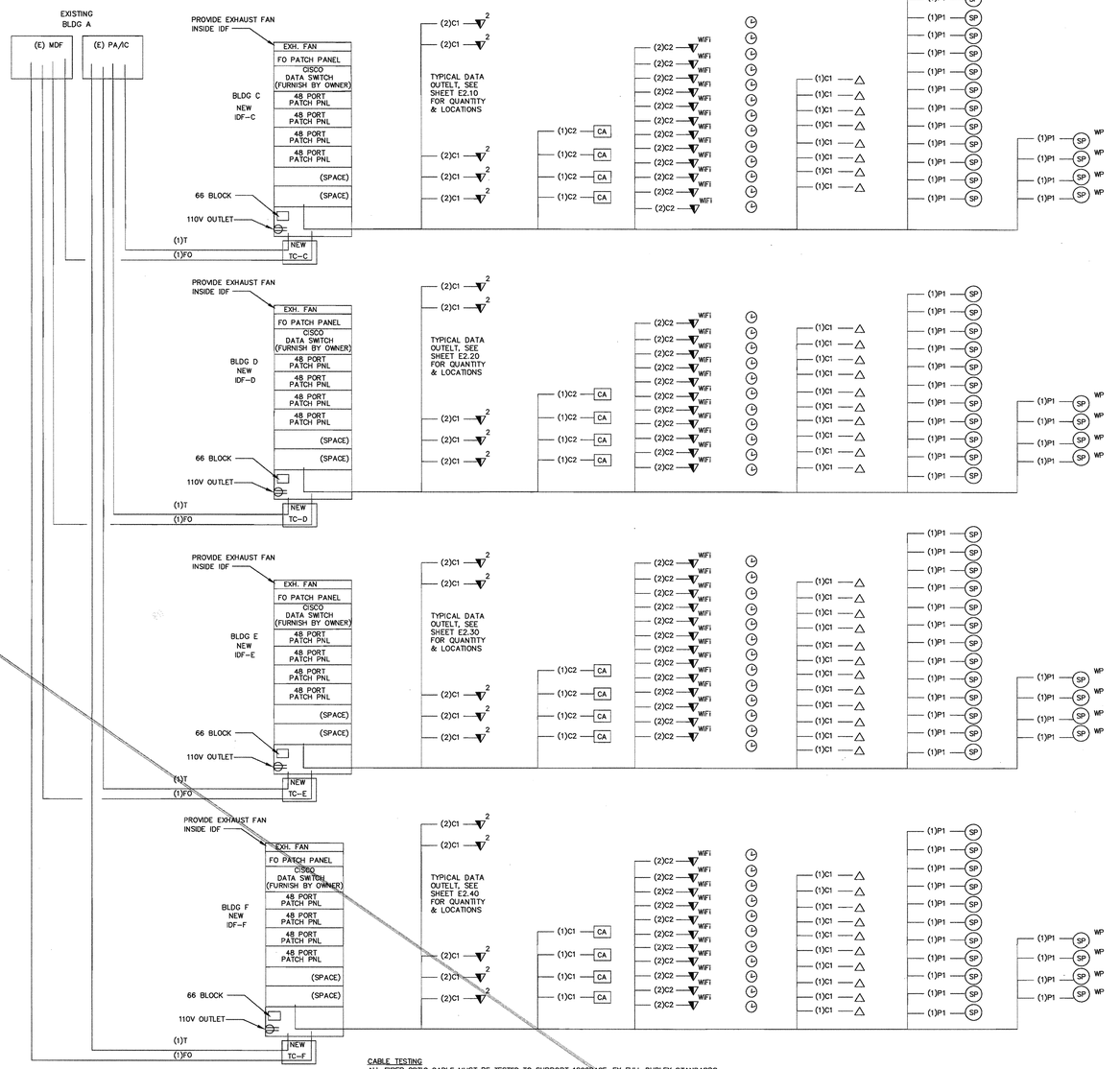

2 FIRE ALARM DEVICES MT'D DETAIL

NTS




1 TYPICAL FIRE ALARM DEVICES WIRING DIAGRAM

N.T.S.




CABLE TESTING

ALL FIBER OPTIC CABLE MUST BE TESTED TO SUPPORT 1000BASE-FX FULL DUPLEX STANDARDS.
ALL CAT 6A CABLE MUST BE TESTED TO SUPPORT 10GBASE-TX.
TEST RESULTS ARE TO BE PROVIDED TO OWNER I.T MANAGER FOR REVIEW AND APPROVAL.

LABELING IDENTICATION

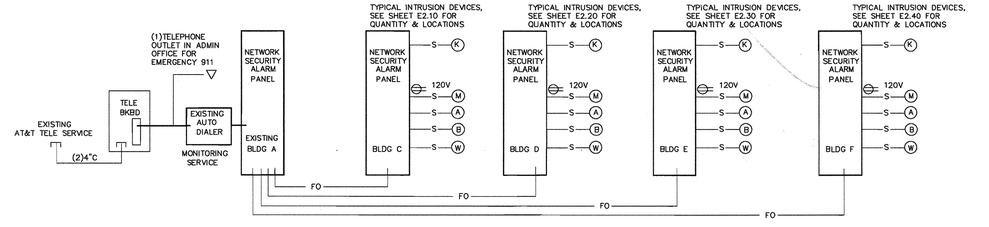
ALL INSTALLED EQUIPMENT, CABLES, TERMINATIONS, ETC. WILL BE PERMANENTLY AND UNIQUELY MARKED. CABLES WILL BE MARKED USING A CONVENTION THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION. LAN TERMINATIONS WILL SIMILARLY BE MARKED TO UNIQUELY IDENTIFY THEM WHILE PROVIDING THE SOURCE AND DESTINATION OF CABLE. IDENTIFICATIONS MUST BE SUCH THAT THEY WILL NOT RUB OFF, FALL OFF, OR EASILY BREAK AWAY.

DATA COMMUNICATION SYSTEM NOTES

1. CONTRACTOR TO PROVIDE ALL EQUIPMENT, DATA SWITCH, PATCH PANELS, PATCH CABLE AND ACCESSORY FOR A FULLY FUNCTIONAL SYSTEM. VERIFY EQUIPMENT MODEL NUMBER WITH OWNER IT MANAGER.
2. NEW DATA JACK WIRING CONFIGURATION MUST BE MATCHED EXISTING SYSTEM. FIELD VERIFY PRIOR TO INSTALLATION.
3. ADMINISTRATIVE NODE TO BE RED IN COLOR WITH THE INSTRUCTIONAL NODE TO BE BLUE IN COLOR. NODE LOCATION MUST BE 12" WITHIN POWER RECEPTACLE AND FIELD VERIFY EXACT LOCATION WITH OWNER PROJECT COORDINATOR OR TECHNOLOGICAL SERVICES PERSONNEL PRIOR TO INSTALLATION.
4. ALL EQUIPMENT DOCUMENTATION AND WARRANTY CARDS WILL BE PROVIDED TO OWNER FOR FILING WITH MANUFACTURERS UPON COMPLETION OF INSTALLATION.

2 DATA PA/IC/PHONE SYSTEM RISER DIAGRAM

N.T.S




1 SECURITY ALARM RISER DIAGRAM

NTS


CONSULTING ENGINEERS

JOHN CHONG ENGINEERING

1543 N HELM AVE #103 FRESNO CA 93727

(559) 325-2200 • FAX 237-3403

jcengineer@aol.com



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Phone (559) 436-0801 Fax (559) 436-0807 E-Mail: bob@rabotman.com

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|---|---|---|
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| | | |

Sheet Title: LOW VOLTAGE RISER DIAGRAMS AND DETAILS

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3, BAKERSFIELD CITY SCHOOL DISTRICT, @ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designer: | DR: | PIC: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | -- |
| Date: 12/06/16 | | | |

Agency Approval Stamp:

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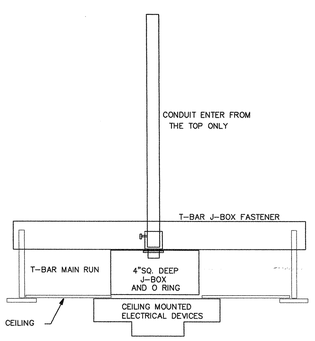
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REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

Job No.: 5262

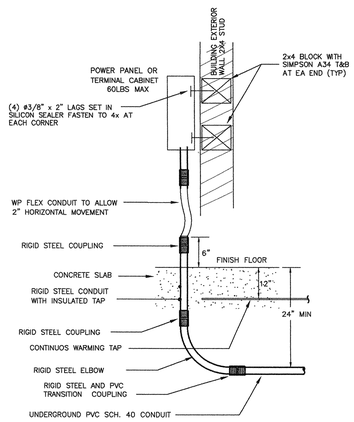
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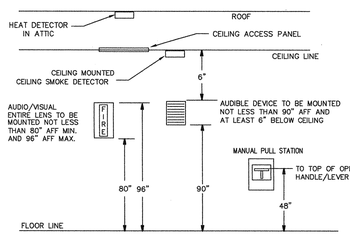

4 CEILING MOUNT DEVICES DETAIL

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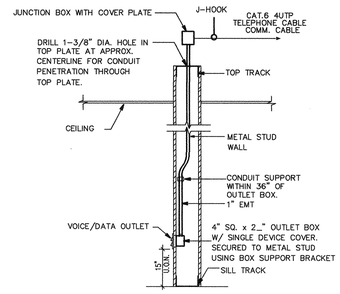

3 UNDERGROUND CONDUIT RISER DETAIL

N.T.S.



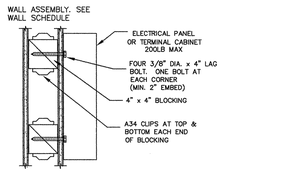

2 FIRE ALARM DEVICES MT'D DETAIL

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6 DATA AND VOICE OUTLET DETAIL

NTS

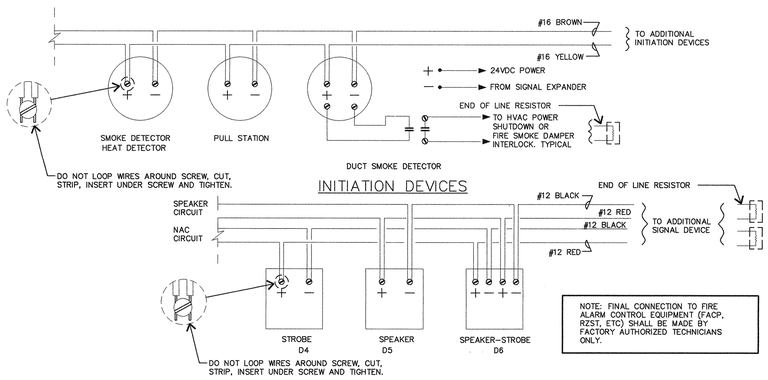



NOTES:

1. PROVIDE ENCLOSURE TO MATCH WALL RATING IF PANEL OCCURS IN FIRE RATED WALL.
2. PANELS INSTALLED IN 1-HOUR RATED WALLS SHALL BE LINED WITH 2 LAYERS OF 5/8" TYPE-X GYPSUM BOARD AROUND 4 SIDE AND BEHIND PANEL TO FORM A 1-HOUR RATED ENVELOPE.
3. PROVIDE FIRE CAULK FOR CONDUITS PENETRATE FIRE RATE ENVELOP PER U.L. ASSEMBLY.

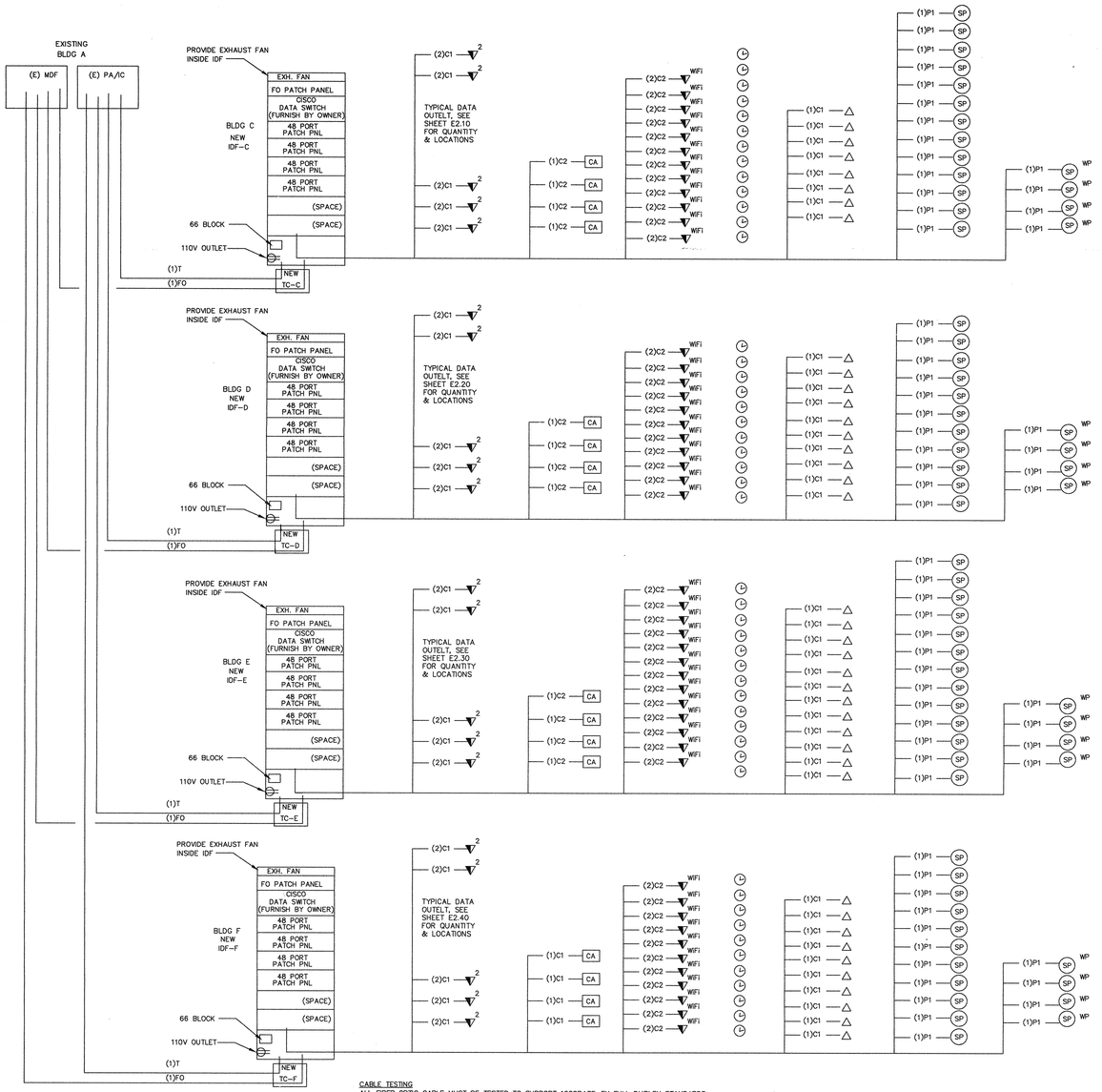
5 IDF CABINET MOUNTING DETAIL

NTS




1 TYPICAL FIRE ALARM DEVICES WIRING DIAGRAM

N.T.S.




CABLE TESTING

ALL FIBER OPTIC CABLE MUST BE TESTED TO SUPPORT 1000BASE-FX FULL DUPLEX STANDARDS.
ALL CAT 6A CABLE MUST BE TESTED TO SUPPORT 100BASE-TX.
TEST RESULTS ARE TO BE PROVIDED TO OWNER I.T MANAGER FOR REVIEW AND APPROVAL.

LABELING IDENTICATION

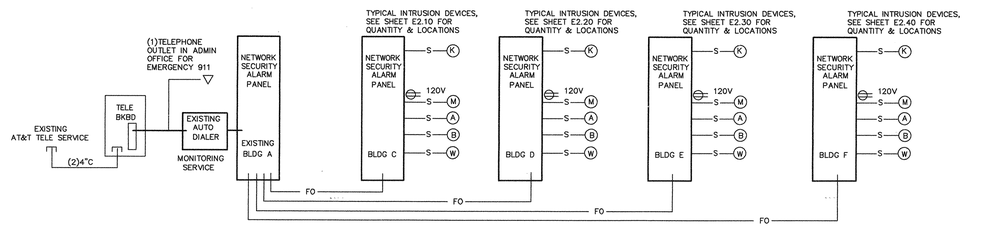
ALL INSTALLED EQUIPMENT, CABLES, TERMINATIONS, ETC. WILL BE PERMANENTLY AND UNIQUELY MARKED. CABLES WILL BE MARKED USING A CONVENTION THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION. LAN TERMINATIONS WILL SIMILARLY BE MARKED TO UNIQUELY IDENTIFY THEM WHILE PROVIDING THE SOURCE AND DESTINATION OF CABLE. IDENTIFICATIONS MUST BE SUCH THAT THEY WILL NOT RUB OFF, FALL OFF, OR EASILY BREAK AWAY.

DATA COMMUNICATION SYSTEM NOTES

1. CONTRACTOR TO PROVIDE ALL EQUIPMENT, DATA SWITCH, PATCH PANELS, PATCH CABLE AND ACCESSORY FOR A FULLY FUNCTIONAL SYSTEM. VERIFY EQUIPMENT MODEL NUMBER WITH OWNER IT MANAGER.
2. NEW DATA JACK WIRING CONFIGURATION MUST BE MATCHED EXISTING SYSTEM. FIELD VERIFY PRIOR TO INSTALLATION.
3. ADMINISTRATIVE NODE TO BE RED IN COLOR WITH THE INSTRUCTIONAL NODE TO BE BLUE IN COLOR. NODE LOCATION MUST BE 12" WITHIN POWER RECEPTACLE AND FIELD VERIFY EXACT LOCATION WITH OWNER PROJECT COORDINATOR OR TECHNOLOGICAL SERVICES PERSONNEL PRIOR TO INSTALLATION.
4. ALL EQUIPMENT DOCUMENTATION AND WARRANTY CARDS WILL BE PROVIDED TO OWNER FOR FILING WITH MANUFACTURERS UPON COMPLETION OF INSTALLATION.

2 DATA PA/IC/PHONE SYSTEM RISER DIAGRAM

N.T.S




1 SECURITY ALARM RISER DIAGRAM

NTS


CONSULTING ENGINEERS

JOHN CHONG ENGINEERING

1849 N HELM AVE #103 FRESNO CA 93727

(559) 705-2286 • FAX 237-3401

jcengineer@aol.com



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Phone (559) 432-0501 Fax (559) 432-0507 E-Mail: design@somah.com

www.integrateddesign.com


| Revision: | Rev. Date: | Revision Description: |
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| | | |

Sheet Title: LOW VOLTAGE RISER DIAGRAMS AND DETAILS

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3 BAKERSFIELD CITY SCHOOL DISTRICT @CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designed: | Job: | PC: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | — |
| Date: 12/06/16 | | | |

Agency Approval Stamp:

FILE #: 15-6

IDENTIFICATION STAMP
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03-118394

AC SC-FLS SH-SS-N

DATE 5/6/19

TRACKING #: —

Addendum #3

Stamp(s):

REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

ADDENDUM NO.3

Job No.: 5262

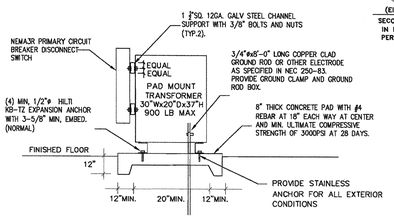
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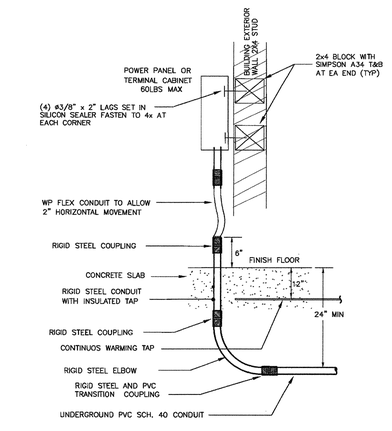
## DRY TYPE TRANSFORMER SCHEDULE

| ITEM | KVA | PRIMARY | SECONDARY | WIDTH | DEPTH | HEIGHT | WEIGHT | MOUNTING | REMARKS/LOCATION |
|---|---|---|---|---|---|---|---|---|---|
| TA | 112.5KVA | 480V DELTA | 208Y/120V 3PH | 30" | 24" | 37" | 750 LB | GROUND | GENERAL PURPOSE BUILDING A |
| TB | 225KVA | 480V DELTA | 208Y/120V 3PH | 48" | 35" | 59" | 2500 LB | GROUND | GENERAL PURPOSE BUILDING B |
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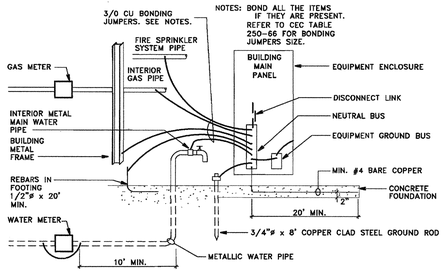

4 PAD MOUNT XFMR MT'D DETAIL

NTS



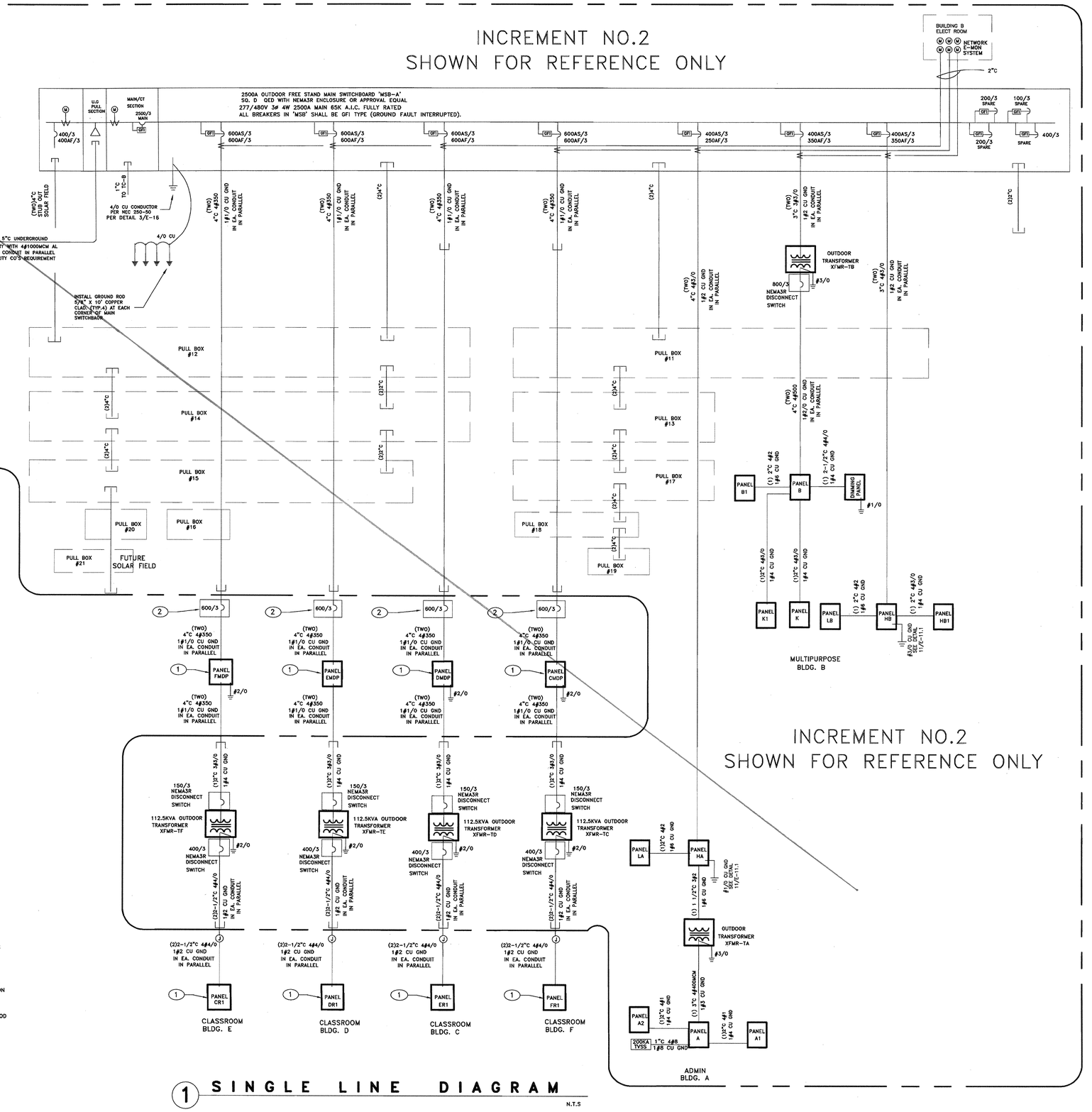

3 UNDERGROUND CONDUIT RISER DETAIL

N.T.S.




2 BUILDING MAIN SWBD GROUNDING DETAIL

N.T.S.




1 SINGLE LINE DIAGRAM

N.T.S

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## KEY NOTES

1. PROVIDE POWER CONNECTION FOR BUILDING PANEL. SEE PC ELECTRICAL PLANS.
2. PROVIDE NEMA3R DISCONNECT SWITCH FOR BUILDING MAIN PURPOSE.


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Revision Description: Rev. Date:
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Revision: Revision:

Sheet Title: SINGLE LINE DIAGRAM

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PIC: --

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DATE JUN 27 2018
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Stamp(s):

REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA


CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1543 N HELM AVE #103 FRESNO CA 93727
(559) 325-2206 • FAX 237-3401
jcengineer@aol.com


Job No.: 5262

Sheet No.: E4.03

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## DRY TYPE TRANSFORMER SCHEDULE

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4 PAD MOUNT XFMR MT'D DETAIL

NTS



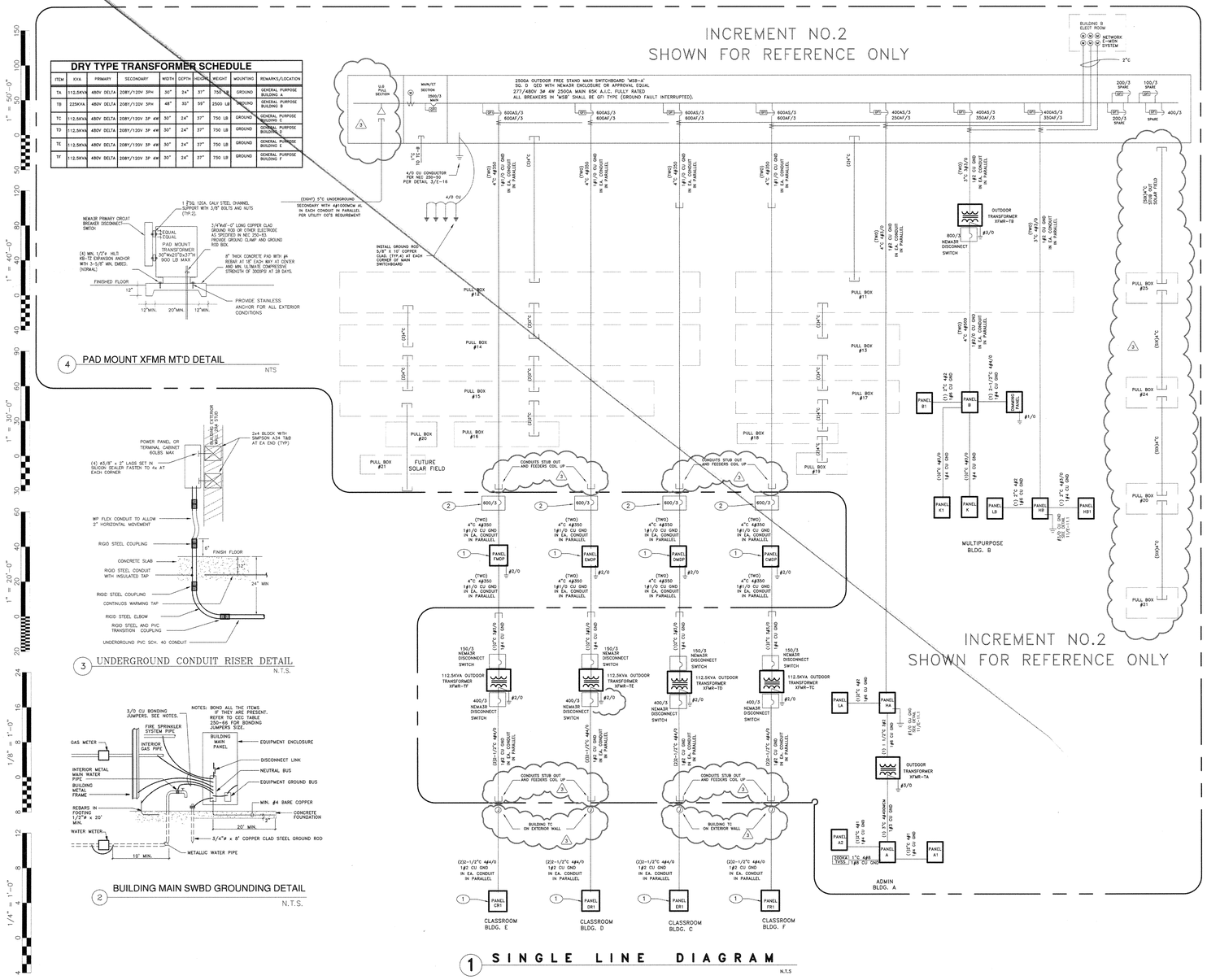

3 UNDERGROUND CONDUIT RISER DETAIL

N.T.S.




2 BUILDING MAIN SWBD GROUNDING DETAIL

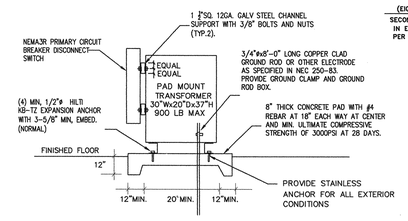
N.T.S.


INCREMENT NO.2
SHOWN FOR REFERENCE ONLY
U.G. PULL SECTION
MAIN/CT SECTION
2500/3 MAIN
2500a OUTDOOR FREE STAND MAIN SWITCHBOARD 'MSB-4'
SQ. D QED WITH NEMA3R ENCLOSURE OR APPROVAL EQUAL
277/480V 3ø 4W 2500A MAIN BSK A.I.C. FULLY RATED
ALL BREAKERS IN 'MSB' SHALL BE GFI TYPE (GROUND FAULT INTERRUPTED).
BUILDING B ELECT ROOM
NETWORK 3-WIRE SYSTEM
2"C
600AS/3 600AF/3
400AS/3 350AF/3
400AS/3 250AF/3
200/3 SPARE
100/3 SPARE
400/3
SPARE
(EIGHT) 3"C UNDERGROUND SECONDARY WITH 4#1500MCM AL IN EACH CONDUIT IN PARALLEL PER UTILITY CO'S REQUIREMENT
4/0 CU CONDUCTOR PER SEC. 250.24 PER DETAIL 3/E-16
4/0 CU
INSTALL GROUND ROD 5/8" X 10' COPPER CLAD. (TYP.4) AT EACH CORNER OF MAIN SWITCHBOARD
(TWO) 4"C 4#350 1#1/0 CU GND IN EA. CONDUIT IN PARALLEL
(TWO) 3"C 4#4/0 1#2 CU GND IN EA. CONDUIT IN PARALLEL
OUTDOOR TRANSFORMER XFMR-TB
800/3 NEMA3R DISCONNECT SWITCH
#3/0
(TWO) 3"C 4#4/0 1#2 CU GND IN PARALLEL
(TWO) 4"C 4#350 1#1/0 CU GND IN PARALLEL
(TWO) 2"C 4#2/0 1#4 CU GND IN PARALLEL
(TWO) 2"C 4#3/0 1#4 CU GND IN PARALLEL
(TWO) 2"C 4#1/0 1#6 CU GND IN PARALLEL
(TWO) 2"C 4#2 1#6 CU GND IN PARALLEL
(TWO) 2"C 4#4 1#8 CU GND IN PARALLEL
(TWO) 2"C 4#6 1#8 CU GND IN PARALLEL
(TWO) 2"C 4#8 1#10 CU GND IN PARALLEL
(TWO) 1"C 2#10 1#10 CU GND IN PARALLEL
(TWO) 1"C 2#12 1#12 CU GND IN PARALLEL
(TWO) 1"C 2#14 1#12 CU GND IN PARALLEL
(TWO) 1"C 2#14 1#14 CU GND IN PARALLEL
(TWO) 1"C 2#12

## DRY TYPE TRANSFORMER SCHEDULE

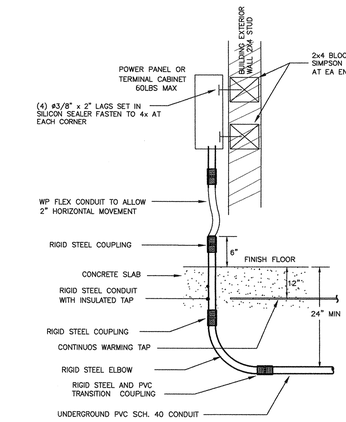
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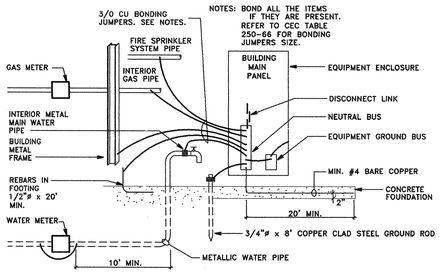

4 PAD MOUNT XFMR MT'D DETAIL

NTS



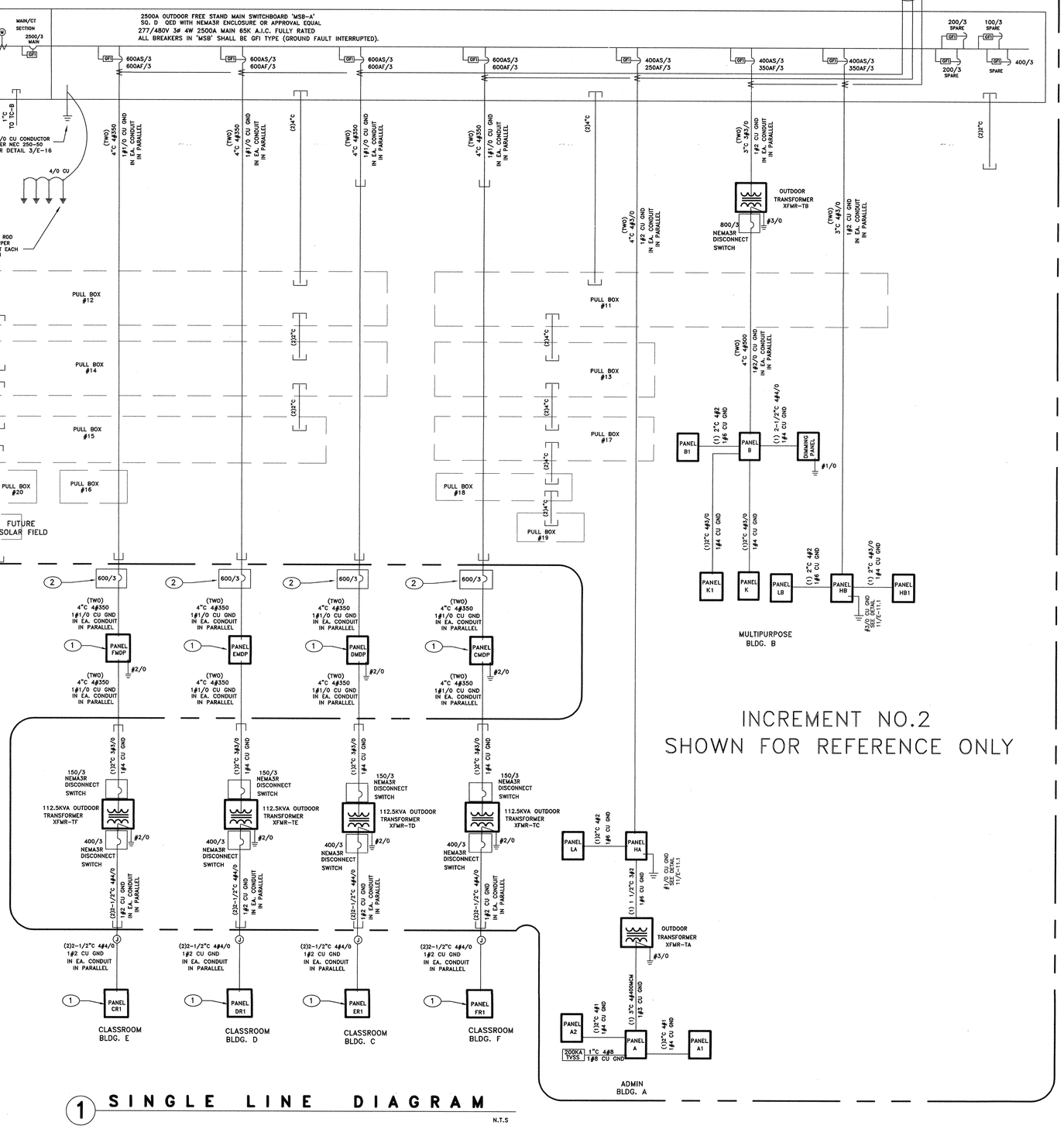

3 UNDERGROUND CONDUIT RISER DETAIL

N.T.S.




2 BUILDING MAIN SWBD GROUNDING DETAIL

N.T.S.




INCREMENT NO.2
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1 SINGLE LINE DIAGRAM

N.T.S

## KEY NOTES

1. PROVIDE POWER CONNECTION FOR BUILDING PANEL. SEE PC ELECTRICAL PLANS.
2. PROVIDE NEMA3R DISCONNECT SWITCH FOR BUILDING MAIN PURPOSE.


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Sheet Title: SINGLE LINE DIAGRAM

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

Issue Date: 01/31/18
Date: 12/06/16
Designer: J CHONG
DR: J CHONG
PC: --

Agency Approval Stamp:

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ADDENDUM #3

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REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
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CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1849 N HELM AVE #103 FRESNO CA 93727
(559) 325-9288 • FAX 297-9401
jcengineer@aol.com

SECTION 28 31 00

FIRE ALARM SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. EXPANDABLE EMERGENCY EVACUATION FIRE ALARM SYSTEM.

1.2 REFERENCES

1.3 SYSTEM DESCRIPTION

A. A NEW INTELLIGENT REPORTING, STYLE 7 NETWORKED, FULLY PEER-TO-PEER, MICROPROCESSOR-CONTROLLED FIRE DETECTION AND EMERGENCY VOICE ALARM COMMUNICATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS INDICATED ON THE DRAWINGS.

B. EACH SIGNALING LINE CIRCUIT (SLC) AND NOTIFICATION APPLIANCE CIRCUIT (NAC): LIMITED TO ONLY 80 PERCENT OF ITS TOTAL CAPACITY DURING INITIAL INSTALLATION.

C. BASIC PERFORMANCE:
1. NETWORK COMMUNICATIONS CIRCUIT (NETSOLO) SERVING NETWORK NODES: WIRED USING SINGLE TWISTED NON-SHIELDED 2-CONDUCTOR CABLE OR CONNECTED USING APPROVED FIBER OPTIC CABLE BETWEEN NODES IN CLASS A CONFIGURATION.
2. SIGNALING LINE CIRCUITS (SLC) SERVING ADDRESSABLE DEVICES: WIRED CLASS A.
3. INITIATION DEVICE CIRCUITS (IDC) SERVING NON-ADDRESSABLE DEVICES CONNECTED TO ADDRESSABLE MONITOR MODULES: WIRED CLASS A.
4. NOTIFICATION APPLIANCE CIRCUITS (NAC) SERVING STROBES, HORNS AND SPEAKERS: WIRED CLASS A.
5. ON CLASS A CONFIGURATIONS: SINGLE GROUND FAULT OR OPEN CIRCUIT ON SIGNALING LINE CIRCUIT SHALL NOT CAUSE SYSTEM MALFUNCTION, LOSS OF OPERATING POWER, OR ABILITY TO REPORT ALARM.
6. ALARM SIGNALS ARRIVING AT INCC COMMAND CENTER: NOT BE LOST FOLLOWING PRIMARY POWER FAILURE UNTIL ALARM SIGNAL IS PROCESSED AND RECORDED.
7. TRANSPONDERS:
a. OPERATE IN PEER-TO-PEER FASHION WITH OTHER PANELS AND TRANSPONDERS IN SYSTEM.
b. EACH TRANSPONDER SHALL STORE COPY OF AUDIO EVACUATION MESSAGES AND TONES.
c. SYSTEMS THAT USE CENTRALIZED MESSAGE STORAGE AND CONTROL AT MAIN FIRE ALARM CONTROL PANEL SHALL NOT BE ACCEPTABLE.
8. NETWORK NODE COMMUNICATIONS, AUDIO EVACUATION CHANNELS AND FIRE PHONE COMMUNICATIONS:
a. COMMUNICATED BETWEEN PANELS AND TRANSPONDERS ON SINGLE TWISTED PAIR OF COPPER WIRES OR FIBER OPTIC CABLES.
b. TO ENHANCE SYSTEM SURVIVABILITY, ABILITY TO OPERATE ON LOSS OF INCC COMMAND CENTER, SHORT OR OPEN OF ENTIRE RISER AT INCC COMMAND CENTER SHALL BE DEMONSTRATED AT TIME OF SYSTEM ACCEPTANCE TESTING.
c. SYSTEMS THAT ARE NOT CAPABLE OF PROVIDING TRUE CLASS A PERFORMANCE FOR FIRE FIGHTER'S PHONE COMMUNICATIONS SHALL NOT BE ACCEPTABLE.
9. SIGNALING LINE CIRCUITS (SLC):
a. RESIDE IN REMOTE TRANSPONDERS WITH ASSOCIATED AUDIO ZONES.
b. SLC MODULES SHALL OPERATE IN PEER-TO-PEER FASHION WITH ALL OTHER PANELS AND TRANSPONDERS IN SYSTEM.
c. ON LOSS OF INCC COMMAND CENTER, EACH TRANSPONDER SHALL CONTINUE TO COMMUNICATE WITH REMAINDER OF SYSTEM, INCLUDING ALL SLC FUNCTIONS AND AUDIO MESSAGES LOCATED IN ALL TRANSPONDERS.
d. SYSTEMS THAT PROVIDE A "DEGRADED" MODE OF OPERATION UPON LOSS OF INCC COMMAND CENTER OR SHORT IN RISER SHALL NOT BE ACCEPTABLE.
10. AUDIO AMPLIFIERS AND TONE-GENERATING EQUIPMENT: ELECTRICALLY SUPERVISED FOR NORMAL AND ABNORMAL CONDITIONS:
11. AMPLIFIERS: LOCATED IN TRANSPONDER CABINETS SERVING NO MORE THAT 3 FLOORS PER TRANSPONDER TO ENHANCE SYSTEM SURVIVABILITY, REDUCE REQUIRED RISER WIRING, SIMPLIFY INSTALLATION, AND REDUCE POWER LOSSES IN LENGTH OF SPEAKER CIRCUITS.
12. SPEAKER NAC CIRCUITS: ARRANGED SUCH THAT THERE IS A MINIMUM OF 1 SPEAKER CIRCUIT PER FIRE ALARM ZONE.
13. NOTIFICATION APPLIANCE CIRCUITS (NAC), SPEAKER CIRCUITS, AND CONTROL EQUIPMENT: ARRANGED SUCH THAT LOSS OF ANY 1 SPEAKER CIRCUIT WILL NOT CAUSE LOSS OF ANY OTHER SPEAKER CIRCUIT IN SYSTEM.
14. SPEAKER CIRCUITS:
a. ELECTRICALLY SUPERVISED FOR OPEN AND SHORT CIRCUIT CONDITIONS.
b. IF SHORT CIRCUIT EXISTS ON SPEAKER CIRCUIT, IT SHALL NOT BE POSSIBLE TO ACTIVATE THAT CIRCUIT.
c. ARRANGED FOR 25 OR 70 VRMS AND SHALL BE POWER LIMITED IN ACCORDANCE WITH NEC
d. 20 PERCENT SPARE CAPACITY FOR FUTURE EXPANSION OR INCREASED POWER OUTPUT REQUIREMENTS.
15. SPEAKER CIRCUITS AND CONTROL EQUIPMENT:
a. ARRANGED SUCH THAT LOSS OF ANY 1 SPEAKER CIRCUIT WILL NOT CAUSE LOSS OF ANY OTHER SPEAKER CIRCUIT IN SYSTEM.
b. SYSTEMS UTILIZING "BULK" AUDIO CONFIGURATIONS SHALL NOT BE ACCEPTABLE.
16. 2-WAY TELEPHONE COMMUNICATION CIRCUITS:
a. SHALL COMMUNICATE DIGITALLY OVER THE NETWORK BETWEEN TRANSPONDERS.
b. SUPERVISED FOR OPEN AND SHORT CIRCUIT CONDITIONS.
c. SHORT CIRCUIT CONDITION ON 2-WAY TELEPHONE COMMUNICATIONS CIRCUIT SHALL RESULT IN TROUBLE CONDITION AND NOT RESULT IN CALL-IN CONDITION.
17. VOICE COMMUNICATION:
a. CONNECT TELEPHONE CIRCUITS TO SPEAKER CIRCUITS TO ALLOW VOICE COMMUNICATION OVER SPEAKER CIRCUIT FROM TELEPHONE HANDSET.
b. CAPABLE OF REMOTE PHONE-TO-PHONE CONVERSATIONS AND PARTY-LINE COMMUNICATIONS AS REQUIRED.

D. BASIC SYSTEM FUNCTIONAL OPERATION: WHEN FIRE ALARM CONDITION IS DETECTED AND REPORTED BY 1 OF THE SYSTEM ALARM INITIATING DEVICES, THE FOLLOWING FUNCTIONS SHALL IMMEDIATELY OCCUR:
1. SYSTEM ALARM LEDS: FLASH.
2. LOCAL PIEZO-ELECTRIC SIGNAL IN CONTROL PANEL: SOUND AT A PULSE RATE.
3. 80-CHARACTER LCD DISPLAY: INDICATE ALL INFORMATION ASSOCIATED WITH FIRE ALARM CONDITION, INCLUDING TYPE OF ALARM POINT AND ITS LOCATION WITHIN PROTECTED PREMISES.
4. HISTORICAL LOG: RECORD INFORMATION ASSOCIATED WITH FIRE ALARM CONTROL PANEL CONDITION, ALONG WITH TIME AND DATE OF OCCURRENCE. HISTORY LOG SHALL HAVE CAPACITY FOR RECORDING UP TO 4,100 EVENTS.
5. SYSTEM OUTPUT PROGRAMS ASSIGNED VIA CONTROL-BY-EVENT EQUATIONS TO BE ACTIVATED BY PARTICULAR POINT IN ALARM SHALL BE EXECUTED, AND THE ASSOCIATED SYSTEM OUTPUTS (ALARM NOTIFICATION APPLIANCES AND/OR RELAYS) SHALL BE ACTIVATED.
A. CLOSE FIRE DOORS
B. SHOT DOWN AIR HANDLERS AS REQUIRED BY CODE
C. NOTIFY THE CENTRAL STATION OR MUNICIPAL TIE.
6. STROBES FLASH SYNCHRONIZED CONTINUOUSLY.
7. AUDIO PORTION OF SYSTEM: SOUND ALERT TONE FOLLOWED BY PRE-RECORDED MESSAGE DETERMINED BY EVENT AND THIS SCENARIO REPEATING OR OTHER MESSAGE AS APPROVED BY LOCAL AUTHORITY UNTIL SYSTEM IS RESET.

E. FIRE ALARM SYSTEM FUNCTIONALITY;
1. PROVIDE COMPLETE, ELECTRICALLY SUPERVISED DISTRIBUTED, CLASS A NETWORKED ANALOG/ADDRESSABLE FIRE ALARM AND CONTROL SYSTEM, WITH ANALOG INITIATING DEVICES, INTEGRAL MULTIPLE-CHANNEL VOICE EVACUATION, AND FIRE FIGHTER'S PHONE SYSTEM.
2. FIRE ALARM SYSTEM:
a. CONSIST OF MULTIPLE-VOICE CHANNELS WITH NO ADDITIONAL HARDWARE REQUIRED FOR TOTAL OF 4 CHANNELS.
b. INCORPORATE MULTIPROCESSOR-BASED CONTROL PANELS, INCLUDING MODEL E3 SERIES MODULES INCLUDES INTELLIGENT NETWORK INCC COMMAND CENTER(S) (INCC), INTELLIGENT LOOP INTERFACE (ILI-MB-E3 OR IL195-MB-E3), INTELLIGENT NETWORK TRANSPONDERS (INX), COMMUNICATING OVER PEER-TO-PEER TOKEN RING NETWORK WITH STANDARD CAPACITY OF UP TO 64 NODES EXPANDABLE TO 122.
3. EACH ILI-MB-E3 OR IL195-MB-E3 NODE: INCORPORATE 2 SIGNALING LINE CIRCUITS (SLC), WITH CAPACITY TO SUPPORT IN VELOCITI ®MODE UP TO 159 ANALOG ADDRESSABLE DETECTORS AND 159 ADDRESSABLE MODULES PER ILI-MB-E3 SLC OR SUPPORT IN APOLLO MODE UP TO 126 DETECTORS AND MODULES PER IL195-MB-E3 SLC.
4. VOICE, DATA, AND FIRE FIGHTER'S PHONE RISER: TRANSMIT OVER SINGLE PAIR OF WIRES OR FIBER OPTIC CABLE.
5. EACH INTELLIGENT NETWORK TRANSPONDER: CAPABLE OF PROVIDING 16 DISTRIBUTED VOICE MESSAGES, FIRE FIGHTER PHONES CONNECTIONS, SLC LOOP FOR AUDIO CONTROL DEVICES, AND INTEGRAL NETWORK INTERFACE.
6. EACH NETWORK NODE: INCORPORATE BOOLEAN CONTROL-BY-EVENT PROGRAMMING, INCLUDING AS A MINIMUM AND, OR, NOT, AND TIMER FUNCTIONS.
7. CONTROL PANELS: CAPABILITY TO ACCEPT FIRMWARE UPGRADES VIA CONNECTION WITH LAPTOP COMPUTER, WITHOUT REQUIREMENT OF REPLACING MICROCHIPS.
8. NETWORK:
a. BASED ON PEER-TO-PEER TOKEN RING TECHNOLOGY OPERATING AT 625 K BAUD, USING CLASS A CONFIGURATION.
b. CAPABILITY OF USING TWISTED-PAIR WIRING, PAIR OF FIBER OPTIC MULTI-MODE CABLE STRANDS UP TO 200 MICRONS OR SINGLE-MODE OPTIMIZED FOR 9/125 MICRONS, OR ANY COMBINATION, TO MAXIMIZE FLEXIBILITY IN SYSTEM CONFIGURATION.
9. EACH NETWORK NODE:
a. CAPABILITY OF BEING PROGRAMMED OFF-LINE USING WINDOWS-BASED SOFTWARE SUPPLIED BY FIRE ALARM SYSTEM MANUFACTURER. CAPABILITY OF BEING DOWNLOADED BY CONNECTING LAPTOP COMPUTER INTO ANY OTHER NODE IN SYSTEM. SYSTEMS THAT REQUIRE SYSTEM SOFTWARE TO BE DOWNLOADED TO EACH TRANSPONDER AT EACH TRANSPONDER LOCATION SHALL NOT BE ACCEPTABLE.
b. CAPABILITY OF BEING GROUPED WITH ANY NUMBER OF ADDITIONAL NODES TO PRODUCE A "REGION", ALLOWING THAT GROUP OF NODES TO ACT AS 1, WHILE RETAINING PEER-TO-PEER FUNCTIONALITY. SYSTEMS UTILIZING "MASTER/SLAVE" CONFIGURATIONS SHALL NOT BE ACCEPTABLE.
c. CAPABILITY OF ANNUNCIATING ALL EVENTS WITHIN ITS "REGION" OR ANNUNCIATING ALL EVENTS FROM ENTIRE NETWORK, ON FRONT PANEL LCD OR TOUCHSCREEN DISPLAY WITHOUT ADDITIONAL EQUIPMENT.
10. EACH SLC NETWORK NODE: CAPABILITY OF HAVING INTEGRAL DACT (DIGITAL ALARM COMMUNICATOR TRANSMITTER) THAT CAN REPORT EVENTS IN EITHER ITS REGION, OR ENTIRE NETWORK TO SINGLE CENTRAL STATION MONITORING ACCOUNT.
11. EACH CONTROL PANEL: CAPABILITY OF STORING ITS ENTIRE PROGRAM, AND ALLOW INSTALLER TO ACTIVATE ONLY DEVICES THAT ARE INSTALLED DURING CONSTRUCTION, WITHOUT FURTHER DOWNLOADING OF SYSTEM.
12. PASSWORD PROTECTION: EACH SYSTEM SHALL BE PROVIDED WITH 4 LEVELS OF PASSWORD PROTECTION WITH UP TO 16 PASSWORDS.
13. HAVE THE CAPACITY FOR MULTIPLE PRE-RECORDED MESSAGES (AT LEAST SIXTEEN (16), BUT MORE IF REQUIRED BY LOCAL AHJ) AND ADDRESS A LIST OF SUBJECTS.
a. FIRE EVACUATION AND RELOCATION
b. INTRUDER OR HOSTILE PERSON SIGHTED WITHIN OR AROUND THE BUILDING GROUNDS
c. DIRECTIONS TO OCCUPANTS TO TAKE COVER WITHIN BUILDING
d. EMERGENCY WEATHER CONDITIONS APPROPRIATE FOR LOCAL AREA
ALL CLEAR

1.4 SUBMITTALS

A. COMPLY WITH SECTION 01330 (01 33 00) – SUBMITTAL PROCEDURES.

B. INCLUDE SUFFICIENT INFORMATION, CLEARLY PRESENTED, TO DETERMINE COMPLIANCE WITH THE SPECIFICATIONS AND THE DRAWINGS.

C. EQUIPMENT SUBMITTALS:
1. COVER PAGE: INDICATE THE FOLLOWING:
a. PROJECT NAME AND ADDRESS.
b. ENGINEERED SYSTEMS DISTRIBUTOR'S NAME AND OTHER CONTACT INFORMATION.
c. INSTALLING CONTRACTOR'S NAME AND OTHER CONTACT INFORMATION.
d. DATE OF EQUIPMENT SUBMITTALS, INDICATE ON REVISED SUBMITTALS THE ORIGINAL SUBMITTAL DATE AND REVISED SUBMITTAL DATE.
2. TABLE OF CONTENTS: LISTS EACH SECTION OF EQUIPMENT SUBMITTAL.
3. SCOPE OF WORK NARRATIVE: DETAIL INDENTED SCOPE OF WORK.
4. SEQUENCE OF OPERATIONS: USE MATRIX OR WRITTEN TEXT FORMAT, DETAILING ACTIVATION OF EACH TYPE OF DEVICE AND ASSOCIATED RESULTING ACTIVATION OF THE FOLLOWING:
a. CONTROL PANEL.
b. ANNUNCIATOR PANELS.
c. NOTIFICATION APPLIANCES.
d. BUILDING FIRE SAFETY FUNCTIONS, INCLUDING ELEVATOR RECALL, ELEVATOR POWER SHUTDOWN, DOOR LOCK RELEASE, DOOR HOLDER RELEASE, HVAC UNIT SHUTDOWN, SMOKE EVACUATION SYSTEM ACTIVATION, AND STAIR PRESSURIZATION FAN ACTIVATION.
5. BILL OF MATERIALS: INDICATE FOR EACH COMPONENT OF SYSTEM THE FOLLOWING:
a. QUANTITY.
b. MODEL NUMBER.
c. DESCRIPTION.
6. SLC CIRCUIT SCHEDULE: DETAIL ADDRESS AND ASSOCIATED DESCRIPTION OF EACH ADDRESSABLE DEVICE. CLEARLY PROVIDE INFORMATION THAT INDICATES NUMBER OF BOTH ACTIVE AND SPARE ADDRESSES.
7. BATTERY CALCULATIONS: SHOW LOAD OF EACH OF, AND TOTAL OF, COMPONENTS OF SYSTEM ALONG WITH STANDBY AND ALARM TIMES THAT CALCULATIONS ARE BASED ON. SHOW CALCULATED SPARE CAPACITY AND SIZE OF INTENDED BATTERY.

D. SHOP DRAWINGS:
1. COVER PAGE: INDICATE THE FOLLOWING:
a. PROJECT NAME AND ADDRESS.
b. ENGINEERED SYSTEMS DISTRIBUTOR'S NAME AND OTHER CONTACT INFORMATION.
c. INSTALLING CONTRACTOR'S NAME AND OTHER CONTACT INFORMATION.
d. DATE OF EQUIPMENT SUBMITTALS, INDICATE ON REVISED SUBMITTALS THE ORIGINAL SUBMITTAL DATE AND REVISED SUBMITTAL DATE.
2. FLOOR PLANS:
a. PROVIDE SEPARATE FLOOR PLAN FOR EACH FLOOR:
b. IF A FLOOR PLAN MUST BE SPLIT USING MATCH LINES TO FIT ON THE PAGE, PROVIDE MATCH LINES AND MATCH LINE REFERENCES THAT REFER TO SHEET NUMBER THAT SHOWS AREA ON OPPOSITE SIDE OF MATCH LINE.
c. PREPARE USING AUTOCAD.
d. PREPARE TO SCALE 1/8 INCH = 1'-0", UNLESS OTHERWISE REQUIRED BY THE ARCHITECT OR ENGINEER.
e. SHOW EQUIPMENT AND DEVICE LOCATIONS.
f. SHOW WIRING INFORMATION IN POINT-TO-POINT FORMAT.
g. SHOW CONDUIT ROUTING, IF REQUIRED BY THE AHJ.
3. TITLE BLOCK: PROVIDE ON EACH SHEET AND INCLUDE, AT A MINIMUM, THE FOLLOWING:
a. PROJECT NAME.
b. PROJECT ADDRESS.
c. SHEET NAME.
d. SHEET NUMBER.
e. SCALE OF DRAWING.
f. DATE OF DRAWING.
g. REVISION DATES, IF APPLICABLE.
4. CONTROL PANEL: PROVIDE SHEET THAT DETAILS EXTERIOR AND INTERIOR VIEWS OF CONTROL PANEL AND CLEARLY SHOWS ASSOCIATED WIRING INFORMATION.
5. ANNUNCIATOR PANELS: PROVIDE SHEET THAT DETAILS EXTERIOR AND INTERIOR VIEWS OF ANNUNCIATOR PANELS AND CLEARLY SHOWS ASSOCIATED WIRING INFORMATION.

E. CERTIFICATION: SUBMIT WITH EQUIPMENT SUBMITTALS AND SHOP DRAWINGS, LETTER OF CERTIFICATION FROM MAJOR EQUIPMENT MANUFACTURER, INDICATING PROPOSED ENGINEERED SYSTEM DISTRIBUTOR IS AN AUTHORIZED REPRESENTATIVE OF MAJOR EQUIPMENT MANUFACTURER.

F. PROJECT RECORD DRAWINGS:
1. SUBMIT COMPLETE PROJECT RECORD DRAWINGS WITHIN 14 CALENDAR DAYS AFTER ACCEPTANCE TEST.
2. PROJECT RECORD DRAWINGS SHALL BE SIMILAR TO SHOP DRAWINGS, BUT REVISED TO REFLECT CHANGES MADE DURING CONSTRUCTION.

G. OPERATION AND MAINTENANCE MANUALS:
1. SUBMIT COMPLETE OPERATION AND MAINTENANCE MANUALS WITHIN 14 CALENDAR DAYS AFTER ACCEPTANCE TEST.
2. OPERATION AND MAINTENANCE MANUALS SHALL BE SIMILAR TO EQUIPMENT SUBMITTALS, BUT REVISED TO REFLECT CHANGES MADE DURING CONSTRUCTION.
3. INCLUDE FACTORY'S STANDARD INSTALLATION AND OPERATING INSTRUCTIONS.

1.5 QUALITY ASSURANCE

A. CODES AND STANDARDS:

B. EQUIPMENT, PROGRAMMING, AND INSTALLATION SUPERVISION:
1. PROVIDE SERVICES OF APPROVED PLATINUM LEVEL ENGINEERED SYSTEMS DISTRIBUTOR OF GAMEWELL-FCI FOR EQUIPMENT, PROGRAMMING, AND INSTALLATION SUPERVISION.
2. PROVIDE PROOF OF FACTORY TRAINING WITHIN 14 CALENDAR DAYS OF AWARD OF THE CONTRACT.

C. SOFTWARE MODIFICATIONS:
1. PROVIDE SERVICES OF PLATINUM LEVEL GAMEWELL-FCI FACTORY-TRAINED AND AUTHORIZED TECHNICIAN TO PERFORM SYSTEM SOFTWARE MODIFICATIONS, UPGRADES, OR CHANGES.
2. PROVIDE USE OF ALL HARDWARE, SOFTWARE, PROGRAMMING TOOLS, AND DOCUMENTATION NECESSARY TO MODIFY FIRE ALARM SYSTEM SOFTWARE ON-SITE.
3. MODIFICATION INCLUDES ADDITION AND DELETION OF DEVICES, CIRCUITS, ZONES, AND CHANGES TO SYSTEM OPERATION AND CUSTOM LABEL CHANGES FOR DEVICES OR ZONES.
4. SYSTEM STRUCTURE AND SOFTWARE SHALL PLACE NO LIMIT ON TYPE OR EXTENT OF SOFTWARE MODIFICATIONS ON-SITE.
5. MODIFICATION OF SOFTWARE SHALL NOT REQUIRE POWER-DOWN OF SYSTEM OR LOSS OF SYSTEM FIRE PROTECTION WHILE MODIFICATIONS ARE BEING MADE.

1.6 DELIVERY, STORAGE, AND HANDLING

A. DELIVERY: DELIVER MATERIALS TO SITE IN MANUFACTURER'S ORIGINAL, UNOPENED CONTAINERS AND PACKAGING, WITH LABELS CLEARLY IDENTIFYING PRODUCT NAME AND MANUFACTURER.

B. STORAGE: STORE MATERIALS IN CLEAN, DRY AREA INDOORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

C. HANDLING: PROTECT MATERIALS FROM DAMAGE DURING HANDLING AND INSTALLATION.

1.7 COORDINATION

A. COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER SECTIONS, INCLUDING SPRINKLER SYSTEMS AS SPECIFIED IN SECTION _____, ELEVATORS AS SPECIFIED IN SECTION _____, HVAC SYSTEMS AS SPECIFIED IN SECTION _____, AND SECURITY/DOOR LOCKING SYSTEMS AS SPECIFIED IN SECTION _____ .

1.8 WARRANTY

A. WARRANTY PERIOD FOR SYSTEM EQUIPMENT: 1 YEAR FROM DATE OF FINAL ACCEPTANCE.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. MANUFACTURER AND SYSTEM DEVICES MODEL NUMBER ARE LISTED PER PLANS.

B. REFERENCES TO MANUFACTURER'S MODEL NUMBERS AND OTHER INFORMATION IS INTENDED TO ESTABLISH MINIMUM STANDARDS OF PERFORMANCE, FUNCTION, AND QUALITY

PART 3 EXECUTION

3.1 EXAMINATION

A. EXAMINE AREAS AND SURFACES TO RECEIVE FIRE ALARM SYSTEM.
1. NOTIFY ARCHITECT OF CONDITIONS THAT WOULD ADVERSELY AFFECT INSTALLATION OR SUBSEQUENT USE.
2. DO NOT BEGIN INSTALLATION UNTIL UNACCEPTABLE CONDITIONS ARE CORRECTED.

3.2 INSTALLATION

A. INSTALL FIRE ALARM SYSTEM IN ACCORDANCE WITH NFPA 72, NFPA 70, STATE AND LOCAL CODES, MANUFACTURER'S INSTRUCTIONS, AND AS INDICATED ON THE DRAWINGS.

B. CONCEAL CONDUIT, JUNCTION BOXES, AND CONDUIT SUPPORTS AND HANGERS IN FINISHED AREAS. CONCEAL OR EXPOSE CONDUIT, JUNCTION BOXES, AND CONDUIT SUPPORTS AND HANGERS IN UNFINISHED AREAS.

C. DO NOT INSTALL SMOKE DETECTORS BEFORE SYSTEM PROGRAMMING AND TEST PERIOD. IF CONSTRUCTION IS ONGOING DURING THIS PERIOD, TAKE MEASURES TO PROTECT SMOKE DETECTORS FROM CONTAMINATION AND PHYSICAL DAMAGE.

D. FLUSH-MOUNT FIRE DETECTION AND ALARM SYSTEM DEVICES, CONTROL PANELS, AND REMOTE ANNUNCIATORS IN FINISHED AREAS. FLUSH-MOUNT OR SURFACE-MOUNT FIRE DETECTION AND ALARM SYSTEM DEVICES, CONTROL PANELS, AND REMOTE ANNUNCIATORS IN UNFINISHED AREAS.

E. ENSURE MANUAL STATIONS ARE SUITABLE FOR SURFACE MOUNTING OR SEMI-FLUSH MOUNTING AS INDICATED ON THE DRAWINGS. INSTALL NOT LESS THAN 42 INCHES, NOR MORE THAN 48 INCHES, ABOVE FINISHED FLOOR MEASURED TO OPERATING HANDLE.

3.3 FIELD QUALITY CONTROL

A. MANUFACTURER'S FIELD SERVICES: PROVIDE SERVICE OF COMPETENT, FACTORY-TRAINED TECHNICIAN AUTHORIZED BY MANUFACTURER TO TECHNICALLY SUPERVISE AND PARTICIPATE DURING PRE-TESTING AND ACCEPTANCE TESTING OF SYSTEM.

B. TESTING:
1. CONDUCT COMPLETE VISUAL INSPECTION OF CONTROL PANEL CONNECTIONS AND TEST WIRING FOR SHORT CIRCUITS, GROUND FAULTS, CONTINUITY, AND INSULATION BEFORE ENERGIZING CABLES AND WIRES.
2. CLOSE EACH SPRINKLER SYSTEM CONTROL VALVE AND VERIFY PROPER SUPERVISORY ALARM AT INCC COMMAND CENTER.
3. VERIFY ACTIVATION OF FLOW SWITCHES.
4. OPEN INITIATING DEVICE CIRCUITS AND VERIFY THAT TROUBLE SIGNAL ACTUATES.
5. OPEN SIGNALING LINE CIRCUITS AND VERIFY THAT TROUBLE SIGNAL ACTUATES.
6. OPEN AND SHORT NOTIFICATION APPLIANCE CIRCUITS AND VERIFY THAT TROUBLE SIGNAL ACTUATES.
7. GROUND INITIATING DEVICE CIRCUITS AND VERIFY RESPONSE OF TROUBLE SIGNALS.
8. GROUND SIGNALING LINE CIRCUITS AND VERIFY RESPONSE OF TROUBLE SIGNALS.
9. GROUND NOTIFICATION APPLIANCE CIRCUITS AND VERIFY RESPONSE OF TROUBLE SIGNALS.
10. CHECK ALERT TONE AND PRERECORDED VOICE MESSAGE TO ALARM NOTIFICATION DEVICES.
11. CHECK INSTALLATION, SUPERVISION, AND OPERATION OF INTELLIGENT SMOKE DETECTORS.
12. INTRODUCE ON SYSTEM EACH OF THE ALARM CONDITIONS THAT SYSTEM IS REQUIRED TO DETECT. VERIFY PROPER RECEIPT AND PROPER PROCESSING OF SIGNAL AT INCC COMMAND CENTER AND CORRECT ACTIVATION OF CONTROL POINTS.
13. CONSULT MANUFACTURER'S MANUAL TO DETERMINE PROPER TESTING PROCEDURES WHEN SYSTEM IS EQUIPPED WITH OPTIONAL FEATURES. THIS IS INTENDED TO ADDRESS SUCH ITEMS AS VERIFYING CONTROLS PERFORMED BY INDIVIDUALLY ADDRESSED OR GROUPED DEVICES, SENSITIVITY MONITORING, VERIFICATION FUNCTIONALITY, AND SIMILAR.

C. ACCEPTANCE TESTING:
1. BEFORE INSTALLATION SHALL BE CONSIDERED COMPLETED AND ACCEPTABLE BY AHJ, A COMPLETE TEST USING AS A MINIMUM, THE FOLLOWING SCENARIOS SHALL BE PERFORMED AND WITNESSED BY REPRESENTATIVE APPROVED BY ENGINEER. MONITORING COMPANY AND/OR FIRE DEPARTMENT SHALL BE NOTIFIED BEFORE FINAL TEST IN ACCORDANCE WITH LOCAL REQUIREMENTS.
2. CONTRACTOR'S JOB FOREMAN, IN PRESENCE OF REPRESENTATIVE OF MANUFACTURER, REPRESENTATIVE OF OWNER, AND FIRE DEPARTMENT SHALL OPERATE EVERY INSTALLED DEVICE TO VERIFY PROPER OPERATION AND CORRECT ANNUNCIATION AT CONTROL PANEL.
3. OPEN SIGNALING LINE CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS IN AT LEAST 2 LOCATIONS TO VERIFY PRESENCE OF SUPERVISION.
4. COMPLETELY DISCONNECT INCC COMMAND CENTER FROM REST OF NETWORK, INCLUDING VOICE INCC COMMAND CENTER. ACTIVATE INITIATING DEVICE FROM TRANSPONDER. ALL SPEAKER CIRCUITS ACTIVATED FROM EACH TRANSPONDER SHALL TRANSMIT THE CORRECT EVACUATION OR ALERT MESSAGE. THESE MESSAGES SHALL BE SAME MESSAGES TRANSMITTED WITH INCC COMMAND CENTER ACTIVATED. DEFAULT TONES OR MESSAGES SHALL NOT BE ACCEPTABLE.
5. COMPLETELY DISCONNECT INCC COMMAND CENTER FROM REST OF NETWORK. ACTIVATE INITIATING DEVICE. ALL CONTROL OUTPUTS SUPPORTED BY TRANSPONDER SLC CIRCUITS SHALL OPERATE UNDER PROJECT PROGRAMMING MODE. DEFAULT OR DEGRADE MODE PROGRAMMING SHALL NOT BE ACCEPTABLE.
6. FIRE FIGHTER PHONE RISER SHALL BE DIRECTLY SHORTED BETWEEN INCC COMMAND CENTER AND FIRST TRANSPONDER, FOLLOWED BY TEST OF FIRE PHONES BETWEEN INCC COMMAND CENTER AND FARTHEST TRANSPONDER. PHONES SHALL OPERATE IN NORMAL FASHION.
7. ALL AUDIO RISERS SHALL BE DIRECTLY SHORTED BETWEEN INCC COMMAND CENTER AND FIRST AUDIO TRANSPONDER, FOLLOWED BY ACTIVATION OF ALARM INITIATING DEVICE. CORRECT PRE-RECORDED MESSAGES SHALL TRANSMIT FROM ALL SPEAKERS, INCLUDING EVACUATION AND ALERT CHANNELS. DEFAULT OR DEGRADE MESSAGES SHALL NOT BE ACCEPTABLE.
8. WHEN TESTING HAS BEEN COMPLETED TO SATISFACTION OF BOTH CONTRACTOR'S JOB FOREMAN AND REPRESENTATIVES OF MANUFACTURER AND OWNER, A NOTARIZED LETTER CO-SIGNED BY EACH ATTESTING TO SATISFACTORY COMPLETION OF SAID TESTING SHALL BE FORWARDED TO OWNER AND FIRE DEPARTMENT.
9. LEAVE FIRE ALARM SYSTEM IN PROPER WORKING ORDER AND, WITHOUT ADDITIONAL EXPENSE TO OWNER, REPLACE DEFECTIVE MATERIALS AND EQUIPMENT PROVIDED WITHIN 1 YEAR (365 DAYS) FROM DATE OF FINAL ACCEPTANCE BY THE OWNER.

3.4 DEMONSTRATION

A. PROVIDE INSTRUCTION AS REQUIRED FOR OPERATING FIRE ALARM SYSTEM.

B. PROVIDE HANDS-ON DEMONSTRATIONS OF OPERATION OF FIRE ALARM SYSTEM COMPONENTS AND FUNCTIONS.

END OF SECTION

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ARCHITECTURE · ENGINEERING · INTERIOR DESIGN · CONSTRUCTION MANAGEMENT
Phone (559) 431-0601 Fx (559) 431-0602 2424 W. Alluvial Ave., Fresno, California 93711
www.integrateddesigns.com

| Revision: | Revision Description: | Rev. Date: |
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Sheet Title: FIRE ALARM SPECIFICATION

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Drawn: | Designer: | Dr: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | -- |
| Date: 12/06/16 | | | |

Agency Approval Stamp:

FILE #: 15-6
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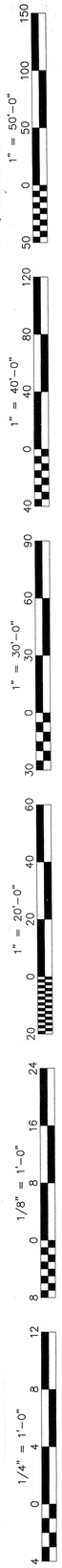
REGISTERED PROFESSIONAL ENGINEER
JOHN S. CHONG
E 14419
Exp.8/30/2020
ELECTRICAL
STATE OF CALIFORNIA

CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1249 N HELM AVE. ●● FRESNO CA 93727
(559) 325-2286 • FAX 237-9401
jcengineer@aol.com

Job No.: 5262

Sheet No.: E5.01

Release:




SECTION 28 31 00

FIRE ALARM SYSTEM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. EXPANDABLE EMERGENCY EVACUATION FIRE ALARM SYSTEM.

1.2 REFERENCES

1.3 SYSTEM DESCRIPTION

A. A NEW INTELLIGENT REPORTING, STYLE 7 NETWORKED, FULLY PEER-TO-PEER, MICROPROCESSOR-CONTROLLED FIRE DETECTION AND EMERGENCY VOICE ALARM COMMUNICATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS INDICATED ON THE DRAWINGS.

B. EACH SIGNALING LINE CIRCUIT (SLC) AND NOTIFICATION APPLIANCE CIRCUIT (NAC): LIMITED TO ONLY 80 PERCENT OF ITS TOTAL CAPACITY DURING INITIAL INSTALLATION.

C. BASIC PERFORMANCE:
1. NETWORK COMMUNICATIONS CIRCUIT (NETSOLO) SERVING NETWORK NODES: WIRED USING SINGLE TWISTED NON-SHIELDED 2-CONDUCTOR CABLE OR CONNECTED USING APPROVED FIBER OPTIC CABLE BETWEEN NODES IN CLASS A CONFIGURATION.
2. SIGNALING LINE CIRCUITS (SLC) SERVING ADDRESSABLE DEVICES: WIRED CLASS A.
3. INITIATION DEVICE CIRCUITS (IDC) SERVING NON-ADDRESSABLE DEVICES CONNECTED TO ADDRESSABLE MONITOR MODULES: WIRED CLASS A.
4. NOTIFICATION APPLIANCE CIRCUITS (NAC) SERVING STROBES, HORNS AND SPEAKERS: WIRED CLASS A.
5. ON CLASS A CONFIGURATIONS: SINGLE GROUND FAULT OR OPEN CIRCUIT ON SIGNALING LINE CIRCUIT SHALL NOT CAUSE SYSTEM MALFUNCTION, LOSS OF OPERATING POWER, OR ABILITY TO REPORT ALARM.
6. ALARM SIGNALS ARRIVING AT INCC COMMAND CENTER: NOT BE LOST FOLLOWING PRIMARY POWER FAILURE UNTIL ALARM SIGNAL IS PROCESSED AND RECORDED.
7. TRANSPONDERS:
a. OPERATE IN PEER-TO-PEER FASHION WITH OTHER PANELS AND TRANSPONDERS IN SYSTEM.
b. EACH TRANSPONDER SHALL STORE COPY OF AUDIO EVACUATION MESSAGES AND TONES.
c. SYSTEMS THAT USE CENTRALIZED MESSAGE STORAGE AND CONTROL AT MAIN FIRE ALARM CONTROL PANEL SHALL NOT BE ACCEPTABLE.
8. NETWORK NODE COMMUNICATIONS, AUDIO EVACUATION CHANNELS AND FIRE PHONE COMMUNICATIONS:
a. COMMUNICATED BETWEEN PANELS AND TRANSPONDERS ON SINGLE TWISTED PAIR OF COPPER WIRES OR FIBER OPTIC CABLES.
b. TO ENHANCE SYSTEM SURVIVABILITY, ABILITY TO OPERATE ON LOSS OF INCC COMMAND CENTER, SHORT OR OPEN OF ENTIRE RISER AT INCC COMMAND CENTER SHALL BE DEMONSTRATED AT TIME OF SYSTEM ACCEPTANCE TESTING.
c. SYSTEMS THAT ARE NOT CAPABLE OF PROVIDING TRUE CLASS A PERFORMANCE FOR FIRE FIGHTER'S PHONE COMMUNICATIONS SHALL NOT BE ACCEPTABLE.
9. SIGNALING LINE CIRCUITS (SLC):
a. RESIDE IN REMOTE TRANSPONDERS WITH ASSOCIATED AUDIO ZONES.
b. SLC MODULES SHALL OPERATE IN PEER-TO-PEER FASHION WITH ALL OTHER PANELS AND TRANSPONDERS IN SYSTEM.
c. ON LOSS OF INCC COMMAND CENTER, EACH TRANSPONDER SHALL CONTINUE TO COMMUNICATE WITH REMAINDER OF SYSTEM, INCLUDING ALL SLC FUNCTIONS AND AUDIO MESSAGES LOCATED IN ALL TRANSPONDERS.
d. SYSTEMS THAT PROVIDE A "DEGRADED" MODE OF OPERATION UPON LOSS OF INCC COMMAND CENTER OR SHORT IN RISER SHALL NOT BE ACCEPTABLE.
10. AUDIO AMPLIFIERS AND TONE-GENERATING EQUIPMENT: ELECTRICALLY SUPERVISED FOR NORMAL AND ABNORMAL CONDITIONS.
11. AMPLIFIERS: LOCATED IN TRANSPONDER CABINETS SERVING NO MORE THAT 3 FLOORS PER TRANSPONDER TO ENHANCE SYSTEM SURVIVABILITY, REDUCE REQUIRED RISER WIRING, SIMPLIFY INSTALLATION, AND REDUCE POWER LOSSES IN LENGTH OF SPEAKER CIRCUITS.
12. SPEAKER NAC CIRCUITS: ARRANGED SUCH THAT THERE IS A MINIMUM OF 1 SPEAKER CIRCUIT PER FIRE ALARM ZONE.
13. NOTIFICATION APPLIANCE CIRCUITS (NAC), SPEAKER CIRCUITS, AND CONTROL EQUIPMENT:
a. ARRANGED SUCH THAT LOSS OF ANY 1 SPEAKER CIRCUIT WILL NOT CAUSE LOSS OF ANY OTHER SPEAKER CIRCUIT IN SYSTEM.
b. SYSTEMS UTILIZING "BULK" AUDIO CONFIGURATIONS SHALL NOT BE ACCEPTABLE.
16. 2-WAY TELEPHONE COMMUNICATION CIRCUITS:
a. SHALL COMMUNICATE DIGITALLY OVER THE NETWORK BETWEEN TRANSPONDERS.
b. SUPERVISED FOR OPEN AND SHORT CIRCUIT CONDITIONS.
c. SHORT CIRCUIT CONDITION ON 2-WAY TELEPHONE COMMUNICATIONS CIRCUIT SHALL RESULT IN TROUBLE CONDITION AND NOT RESULT IN CALL-IN CONDITION.
17. VOICE COMMUNICATION:
a. CONNECT TELEPHONE CIRCUITS TO SPEAKER CIRCUITS TO ALLOW VOICE COMMUNICATION OVER SPEAKER CIRCUIT FROM TELEPHONE HANDSET.
b. CAPABLE OF REMOTE PHONE-TO-PHONE CONVERSATIONS AND PARTY-LINE COMMUNICATIONS AS REQUIRED.

D. BASIC SYSTEM FUNCTIONAL OPERATION: WHEN FIRE ALARM CONDITION IS DETECTED AND REPORTED BY 1 OF THE SYSTEM ALARM INITIATING DEVICES, THE FOLLOWING FUNCTIONS SHALL IMMEDIATELY OCCUR:
1. SYSTEM ALARM LEDS: FLASH.
2. LOCAL PIEZO-ELECTRIC SIGNAL IN CONTROL PANEL: SOUND AT A PULSE RATE.
3. 80-CHARACTER LCD DISPLAY: INDICATE ALL INFORMATION ASSOCIATED WITH FIRE ALARM CONDITION, INCLUDING TYPE OF ALARM POINT AND ITS LOCATION WITHIN PROTECTED PREMISES.
4. HISTORICAL LOG: RECORD INFORMATION ASSOCIATED WITH FIRE ALARM CONTROL PANEL CONDITION, ALONG WITH TIME AND DATE OF OCCURRENCE. HISTORY LOG SHALL HAVE CAPACITY FOR RECORDING UP TO 4,100 EVENTS.
5. SYSTEM OUTPUT PROGRAMS ASSIGNED VIA CONTROL-BY-EVENT EQUATIONS TO BE ACTIVATED BY PARTICULAR POINT IN ALARM SHALL BE EXECUTED, AND THE ASSOCIATED SYSTEM OUTPUTS (ALARM NOTIFICATION APPLIANCES AND/OR RELAYS) SHALL BE ACTIVATED.
A. CLOSE FIRE DOORS.
B. SHOT DOWN AIR HANDLERS AS REQUIRED BY CODE
C. NOTIFY THE CENTRAL STATION OR MUNICIPAL TIE.
6. STROBES FLASH SYNCHRONIZED CONTINUOUSLY.
7. AUDIO PORTION OF SYSTEM: SOUND ALERT TONE FOLLOWED BY PRE-RECORDED MESSAGE DETERMINED BY EVENT AND THIS SCENARIO REPEATING OR OTHER MESSAGE AS APPROVED BY LOCAL AUTHORITY UNTIL SYSTEM IS RESET.

E. FIRE ALARM SYSTEM FUNCTIONALITY:
1. PROVIDE COMPLETE, ELECTRICALLY SUPERVISED DISTRIBUTED, CLASS A NETWORKED ANALOG/ADDRESSABLE FIRE ALARM AND CONTROL SYSTEM, WITH ANALOG INITIATING DEVICES, INTEGRAL MULTIPLE-CHANNEL VOICE EVACUATION, AND FIRE FIGHTER'S PHONE SYSTEM.
2. FIRE ALARM SYSTEM:
a. CONSIST OF MULTIPLE-VOICE CHANNELS WITH NO ADDITIONAL HARDWARE REQUIRED FOR TOTAL OF 4 CHANNELS.
b. INCORPORATE MULTIPROCESSOR-BASED CONTROL PANELS, INCLUDING MODEL E3 SERIES MODULES INCLUDES INTELLIGENT NETWORK INCC COMMAND CENTER(S) (INCC), INTELLIGENT LOOP INTERFACE (ILI-MB-E3 OR IL195-MB-E3), INTELLIGENT NETWORK TRANSPONDERS (INX), COMMUNICATING OVER PEER-TO-PEER TOKEN RING NETWORK WITH STANDARD CAPACITY OF UP TO 64 NODES EXPANDABLE TO 122.
3. EACH ILI-MB-E3 OR IL195-MB-E3 NODE: INCORPORATE 2 SIGNALING LINE CIRCUITS (SLC), WITH CAPACITY TO SUPPORT IN VELOCITI @MODE UP TO 159 ANALOG ADDRESSABLE DETECTORS AND 159 ADDRESSABLE MODULES PER ILI-MB-E3 SLC OR SUPPORT IN APOLLO MODE UP TO 126 DETECTORS AND MODULES PER IL195-MB-E3 SLC.
4. VOICE, DATA, AND FIRE FIGHTER'S PHONE RISER: TRANSMIT OVER SINGLE PAIR OF WIRES OR FIBER OPTIC CABLE.
5. EACH INTELLIGENT NETWORK TRANSPONDER: CAPABLE OF PROVIDING 16 DISTRIBUTED VOICE MESSAGES, FIRE FIGHTER PHONES CONNECTIONS, SLC LOOP FOR AUDIO CONTROL DEVICES, AND INTEGRAL NETWORK INTERFACE.
6. EACH NETWORK NODE: INCORPORATE BOOLEAN CONTROL-BY-EVENT PROGRAMMING, INCLUDING AS A MINIMUM AND, OR, NOT, AND TIMER FUNCTIONS.
7. CONTROL PANELS: CAPABILITY TO ACCEPT FIRMWARE UPGRADES VIA CONNECTION WITH LAPTOP COMPUTER, WITHOUT REQUIREMENT OF REPLACING MICROCHIPS.
8. NETWORK:
a. BASED ON PEER-TO-PEER TOKEN RING TECHNOLOGY OPERATING AT 625 K BAUD, USING CLASS A CONFIGURATION.
b. CAPABILITY OF USING TWISTED-PAIR WIRING, PAIR OF FIBER OPTIC MULTI-MODE CABLE STRANDS UP TO 200 MICRONS OR SINGLE-MODE OPTIMIZED FOR 9/125 MICRONS, OR ANY COMBINATION, TO MAXIMIZE FLEXIBILITY IN SYSTEM CONFIGURATION.
9. EACH NETWORK NODE:
a. CAPABILITY OF BEING PROGRAMMED OFF-LINE USING WINDOWS-BASED SOFTWARE SUPPLIED BY FIRE ALARM SYSTEM MANUFACTURER. CAPABILITY OF BEING DOWNLOADED BY CONNECTING LAPTOP COMPUTER INTO ANY OTHER NODE IN SYSTEM. SYSTEMS THAT REQUIRE SYSTEM SOFTWARE TO BE DOWNLOADED TO EACH TRANSPONDER AT EACH TRANSPONDER LOCATION SHALL NOT BE ACCEPTABLE.
b. CAPABILITY OF BEING GROUPED WITH ANY NUMBER OF ADDITIONAL NODES TO PRODUCE A "REGION", ALLOWING THAT GROUP OF NODES TO ACT AS 1, WHILE RETAINING PEER-TO-PEER FUNCTIONALITY. SYSTEMS UTILIZING "MASTER/SLAVE" CONFIGURATIONS SHALL NOT BE ACCEPTABLE.
c. CAPABILITY OF ANNUNCIATING ALL EVENTS WITHIN ITS "REGION" OR ANNUNCIATING ALL EVENTS FROM ENTIRE NETWORK, ON FRONT PANEL LCD OR TOUCHSCREEN DISPLAY WITHOUT ADDITIONAL EQUIPMENT.
10. EACH SLC NETWORK NODE: CAPABILITY OF HAVING INTEGRAL DACT (DIGITAL ALARM COMMUNICATOR TRANSMITTER) THAT CAN REPORT EVENTS IN EITHER ITS REGION, OR ENTIRE NETWORK TO SINGLE CENTRAL STATION MONITORING ACCOUNT.
11. EACH CONTROL PANEL: CAPABILITY OF STORING ITS ENTIRE PROGRAM, AND ALLOW INSTALLER TO ACTIVATE ONLY DEVICES THAT ARE INSTALLED DURING CONSTRUCTION, WITHOUT FURTHER DOWNLOADING OF SYSTEM.
12. PASSWORD PROTECTION: EACH SYSTEM SHALL BE PROVIDED WITH 4 LEVELS OF PASSWORD PROTECTION WITH UP TO 16 PASSWORDS.
13. HAVE THE CAPACITY FOR MULTIPLE PRE-RECORDED MESSAGES (AT LEAST SIXTEEN (16), BUT MORE IF REQUIRED BY LOCAL AHJ) AND ADDRESS A LIST OF SUBJECTS.
a. FIRE EVACUATION AND RELOCATION
b. INTRUDER OR HOSTILE PERSON SIGHTED WITHIN OR AROUND THE BUILDING GROUNDS
c. DIRECTIONS TO OCCUPANTS TO TAKE COVER WITHIN BUILDING
d. EMERGENCY WEATHER CONDITIONS APPROPRIATE FOR LOCAL AREA
ALL CLEAR

1.4 SUBMITTALS

A. COMPLY WITH SECTION 01330 (01 33 00) – SUBMITTAL PROCEDURES.

B. INCLUDE SUFFICIENT INFORMATION, CLEARLY PRESENTED, TO DETERMINE COMPLIANCE WITH THE SPECIFICATIONS AND THE DRAWINGS.

C. EQUIPMENT SUBMITTALS:
1. COVER PAGE: INDICATE THE FOLLOWING:
a. PROJECT NAME AND ADDRESS.
b. ENGINEERED SYSTEMS DISTRIBUTOR'S NAME AND OTHER CONTACT INFORMATION.
c. INSTALLING CONTRACTOR'S NAME AND OTHER CONTACT INFORMATION.
d. DATE OF EQUIPMENT SUBMITTALS. INDICATE ON REVISED SUBMITTALS THE ORIGINAL SUBMITTAL DATE AND REVISED SUBMITTAL DATE.
2. TABLE OF CONTENTS: LISTS EACH SECTION OF EQUIPMENT SUBMITTAL.
3. SCOPE OF WORK NARRATIVE: DETAIL INDENTED SCOPE OF WORK.
4. SEQUENCE OF OPERATIONS: USE MATRIX OR WRITTEN TEXT FORMAT, DETAILING ACTIVATION OF EACH TYPE OF DEVICE AND ASSOCIATED RESULTING ACTIVATION OF THE FOLLOWING:
a. CONTROL PANEL.
b. ANNUNCIATOR PANELS.
c. NOTIFICATION APPLIANCES.
d. BUILDING FIRE SAFETY FUNCTIONS, INCLUDING ELEVATOR RECALL, ELEVATOR POWER SHUTDOWN, DOOR LOCK RELEASE, DOOR HOLDER RELEASE, HVAC UNIT SHUTDOWN, SMOKE EVACUATION SYSTEM ACTIVATION, AND STAIR PRESSURIZATION FAN ACTIVATION.
5. BILL OF MATERIAL: INDICATE FOR EACH COMPONENT OF SYSTEM THE FOLLOWING:
a. QUANTITY.
b. MODEL NUMBER.
c. DESCRIPTION.
6. SLC CIRCUIT SCHEDULE: DETAIL ADDRESS AND ASSOCIATED DESCRIPTION OF EACH ADDRESSABLE DEVICE. CLEARLY PROVIDE INFORMATION THAT INDICATES NUMBER OF BOTH ACTIVE AND SPARE ADDRESSES.
7. BATTERY CALCULATIONS: SHOW LOAD OF EACH OF, AND TOTAL OF, COMPONENTS OF SYSTEM ALONG WITH STANDBY AND ALARM TIMES THAT CALCULATIONS ARE BASED ON. SHOW CALCULATED SPARE CAPACITY AND SIZE OF INTENDED BATTERY.

D. SHOP DRAWINGS:
1. COVER PAGE: INDICATE THE FOLLOWING:
a. PROJECT NAME AND ADDRESS.
b. ENGINEERED SYSTEMS DISTRIBUTOR'S NAME AND OTHER CONTACT INFORMATION.
c. INSTALLING CONTRACTOR'S NAME AND OTHER CONTACT INFORMATION.
d. DATE OF EQUIPMENT SUBMITTALS. INDICATE ON REVISED SUBMITTALS THE ORIGINAL SUBMITTAL DATE AND REVISED SUBMITTAL DATE.
2. FLOOR PLANS:
a. PROVIDE SEPARATE FLOOR PLAN FOR EACH FLOOR.
b. IF A FLOOR PLAN MUST BE SPLIT USING MATCH LINES TO FIT ON THE PAGE, PROVIDE MATCH LINES AND MATCH LINE REFERENCES THAT REFER TO SHEET NUMBER THAT SHOWS AREA ON OPPOSITE SIDE OF MATCH LINE.
c. PREPARE USING AUTOCAD.
d. PREPARE TO SCALE 1/8 INCH = 1'-0", UNLESS OTHERWISE REQUIRED BY THE ARCHITECT OR ENGINEER.
e. SHOW EQUIPMENT AND DEVICE LOCATIONS.
f. SHOW WIRING INFORMATION IN POINT-TO-POINT FORMAT.
g. SHOW CONDUIT ROUTING, IF REQUIRED BY THE AHJ.
3. TITLE BLOCK: PROVIDE ON EACH SHEET AND INCLUDE, AT A MINIMUM, THE FOLLOWING:
a. PROJECT NAME.
b. PROJECT ADDRESS.
c. SHEET NAME.
d. SHEET NUMBER.
e. SCALE OF DRAWING.
f. DATE OF DRAWING.
g. REVISION DATES, IF APPLICABLE.
4. CONTROL PANEL: PROVIDE SHEET THAT DETAILS EXTERIOR AND INTERIOR VIEWS OF CONTROL PANEL AND CLEARLY SHOWS ASSOCIATED WIRING INFORMATION.
5. ANNUNCIATOR PANELS: PROVIDE SHEET THAT DETAILS EXTERIOR AND INTERIOR VIEWS OF ANNUNCIATOR PANELS AND CLEARLY SHOWS ASSOCIATED WIRING INFORMATION.

E. CERTIFICATION: SUBMIT WITH EQUIPMENT SUBMITTALS AND SHOP DRAWINGS, LETTER OF CERTIFICATION FROM MAJOR EQUIPMENT MANUFACTURER, INDICATING PROPOSED ENGINEERED SYSTEM DISTRIBUTOR IS AN AUTHORIZED REPRESENTATIVE OF MAJOR EQUIPMENT MANUFACTURER.

F. PROJECT RECORD DRAWINGS:
1. SUBMIT COMPLETE PROJECT RECORD DRAWINGS WITHIN 14 CALENDAR DAYS AFTER ACCEPTANCE TEST.
2. PROJECT RECORD DRAWINGS SHALL BE SIMILAR TO SHOP DRAWINGS, BUT REVISED TO REFLECT CHANGES MADE DURING CONSTRUCTION.

G. OPERATION AND MAINTENANCE MANUALS:
1. SUBMIT COMPLETE OPERATION AND MAINTENANCE MANUALS WITHIN 14 CALENDAR DAYS AFTER ACCEPTANCE TEST.
2. OPERATION AND MAINTENANCE MANUALS SHALL BE SIMILAR TO EQUIPMENT SUBMITTALS, BUT REVISED TO REFLECT CHANGES MADE DURING CONSTRUCTION.
3. INCLUDE FACTORY'S STANDARD INSTALLATION AND OPERATING INSTRUCTIONS.

1.5 QUALITY ASSURANCE

A. CODES AND STANDARDS:

B. EQUIPMENT, PROGRAMMING, AND INSTALLATION SUPERVISION:
1. PROVIDE SERVICES OF APPROVED PLATINUM LEVEL ENGINEERED SYSTEMS DISTRIBUTOR OF GAMEWELL-FCI FOR EQUIPMENT, PROGRAMMING, AND INSTALLATION SUPERVISION.
2. PROVIDE PROOF OF FACTORY TRAINING WITHIN 14 CALENDAR DAYS OF AWARD OF THE CONTRACT.

C. SOFTWARE MODIFICATIONS:
1. PROVIDE SERVICES OF PLATINUM LEVEL GAMEWELL-FCI FACTORY-TRAINED AND AUTHORIZED TECHNICIAN TO PERFORM SYSTEM SOFTWARE MODIFICATIONS, UPGRADES, OR CHANGES.
2. PROVIDE USE OF ALL HARDWARE, SOFTWARE, PROGRAMMING TOOLS, AND DOCUMENTATION NECESSARY TO MODIFY FIRE ALARM SYSTEM SOFTWARE ON-SITE.
3. MODIFICATION INCLUDES ADDITION AND DELETION OF DEVICES, CIRCUITS, ZONES, AND CHANGES TO SYSTEM OPERATION AND CUSTOM LABEL CHANGES FOR DEVICES OR ZONES.
4. SYSTEM STRUCTURE AND SOFTWARE SHALL PLACE NO LIMIT ON TYPE OR EXTENT OF SOFTWARE MODIFICATIONS ON-SITE.
5. MODIFICATION OF SOFTWARE SHALL NOT REQUIRE POWER-DOWN OF SYSTEM OR LOSS OF SYSTEM FIRE PROTECTION WHILE MODIFICATIONS ARE BEING MADE.

1.6 DELIVERY, STORAGE, AND HANDLING

A. DELIVERY: DELIVER MATERIALS TO SITE IN MANUFACTURER'S ORIGINAL, UNOPENED CONTAINERS AND PACKAGING, WITH LABELS CLEARLY IDENTIFYING PRODUCT NAME AND MANUFACTURER.

B. STORAGE: STORE MATERIALS IN CLEAN, DRY AREA INDOORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

C. HANDLING: PROTECT MATERIALS FROM DAMAGE DURING HANDLING AND INSTALLATION.

1.7 COORDINATION

A. COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER SECTIONS, INCLUDING SPRINKLER SYSTEMS AS SPECIFIED IN SECTION _____ ELEVATORS AS SPECIFIED IN SECTION _____ HVAC SYSTEMS AS SPECIFIED IN SECTION _____ AND SECURITY/DOOR LOCKING SYSTEMS AS SPECIFIED IN SECTION _____ .

1.8 WARRANTY

A. WARRANTY PERIOD FOR SYSTEM EQUIPMENT: 1 YEAR FROM DATE OF FINAL ACCEPTANCE.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. MANUFACTURER AND SYSTEM DEVICES MODEL NUMBER ARE LISTED PER PLANS.

B. REFERENCES TO MANUFACTURER'S MODEL NUMBERS AND OTHER INFORMATION IS INTENDED TO ESTABLISH MINIMUM STANDARDS OF PERFORMANCE, FUNCTION, AND QUALITY

PART 3 EXECUTION

3.1 EXAMINATION

A. EXAMINE AREAS AND SURFACES TO RECEIVE FIRE ALARM SYSTEM.
1. NOTIFY ARCHITECT OF CONDITIONS THAT WOULD ADVERSELY AFFECT INSTALLATION OR SUBSEQUENT USE.
2. DO NOT BEGIN INSTALLATION UNTIL UNACCEPTABLE CONDITIONS ARE CORRECTED.

3.2 INSTALLATION

A. INSTALL FIRE ALARM SYSTEM IN ACCORDANCE WITH NFPA 72, NFPA 70, STATE AND LOCAL CODES, MANUFACTURER'S INSTRUCTIONS, AND AS INDICATED ON THE DRAWINGS.

B. CONCEAL CONDUIT, JUNCTION BOXES, AND CONDUIT SUPPORTS AND HANGERS IN FINISHED AREAS. CONCEAL OR EXPOSE CONDUIT, JUNCTION BOXES, AND CONDUIT SUPPORTS AND HANGERS IN UNFINISHED AREAS.

C. DO NOT INSTALL SMOKE DETECTORS BEFORE SYSTEM PROGRAMMING AND TEST PERIOD. IF CONSTRUCTION IS ONGOING DURING THIS PERIOD, TAKE MEASURES TO PROTECT SMOKE DETECTORS FROM CONTAMINATION AND PHYSICAL DAMAGE.

D. FLUSH-MOUNT FIRE DETECTION AND ALARM SYSTEM DEVICES, CONTROL PANELS, AND REMOTE ANNUNCIATORS IN FINISHED AREAS. FLUSH-MOUNT OR SURFACE-MOUNT FIRE DETECTION AND ALARM SYSTEM DEVICES, CONTROL PANELS, AND REMOTE ANNUNCIATORS IN UNFINISHED AREAS.

E. ENSURE MANUAL STATIONS ARE SUITABLE FOR SURFACE MOUNTING OR SEMI-FLUSH MOUNTING AS INDICATED ON THE DRAWINGS. INSTALL NOT LESS THAN 42 INCHES, NOR MORE THAN 48 INCHES, ABOVE FINISHED FLOOR MEASURED TO OPERATING HANDLE.

3.3 FIELD QUALITY CONTROL

A. MANUFACTURER'S FIELD SERVICES: PROVIDE SERVICE OF COMPETENT, FACTORY-TRAINED TECHNICIAN AUTHORIZED BY MANUFACTURER TO TECHNICALLY SUPERVISE AND PARTICIPATE DURING PRE-TESTING AND ACCEPTANCE TESTING OF SYSTEM.

B. TESTING:
1. CONDUCT COMPLETE VISUAL INSPECTION OF CONTROL PANEL CONNECTIONS AND TEST WIRING FOR SHORT CIRCUITS, GROUND FAULTS, CONTINUITY, AND INSULATION BEFORE ENERGIZING CABLES AND WIRES.
2. CLOSE EACH SPRINKLER SYSTEM CONTROL VALVE AND VERIFY PROPER SUPERVISORY ALARM AT INCC COMMAND CENTER.
3. VERIFY ACTIVATION OF FLOW SWITCHES.
4. OPEN INITIATING DEVICE CIRCUITS AND VERIFY THAT TROUBLE SIGNAL ACTUATES.
5. OPEN SIGNALING LINE CIRCUITS AND VERIFY THAT TROUBLE SIGNAL ACTUATES.
6. OPEN AND SHORT NOTIFICATION APPLIANCE CIRCUITS AND VERIFY THAT TROUBLE SIGNAL ACTUATES.
7. GROUND INITIATING DEVICE CIRCUITS AND VERIFY RESPONSE OF TROUBLE SIGNALS.
8. GROUND SIGNALING LINE CIRCUITS AND VERIFY RESPONSE OF TROUBLE SIGNALS.
9. GROUND NOTIFICATION APPLIANCE CIRCUITS AND VERIFY RESPONSE OF TROUBLE SIGNALS.
10. CHECK ALERT TONE AND PRERECORDED VOICE MESSAGE TO ALARM NOTIFICATION DEVICES.
11. CHECK INSTALLATION, SUPERVISION, AND OPERATION OF INTELLIGENT SMOKE DETECTORS.
12. INTRODUCE ON SYSTEM EACH OF THE ALARM CONDITIONS THAT SYSTEM IS REQUIRED TO DETECT. VERIFY PROPER RECEIPT AND PROPER PROCESSING OF SIGNAL AT INCC COMMAND CENTER AND CORRECT ACTIVATION OF CONTROL POINTS.
13. CONSULT MANUFACTURER'S MANUAL TO DETERMINE PROPER TESTING PROCEDURES WHEN SYSTEM IS EQUIPPED WITH OPTIONAL FEATURES. THIS IS INTENDED TO ADDRESS SUCH ITEMS AS VERIFYING CONTROLS PERFORMED BY INDIVIDUALLY ADDRESSED OR GROUPED DEVICES, SENSITIVITY MONITORING, VERIFICATION FUNCTIONALITY, AND SIMILAR.

C. ACCEPTANCE TESTING:
1. BEFORE INSTALLATION SHALL BE CONSIDERED COMPLETED AND ACCEPTABLE BY AHJ, A COMPLETE TEST USING AS A MINIMUM, THE FOLLOWING SCENARIOS SHALL BE PERFORMED AND WITNESSED BY REPRESENTATIVE APPROVED BY ENGINEER. MONITORING COMPANY AND/OR FIRE DEPARTMENT SHALL BE NOTIFIED BEFORE FINAL TEST IN ACCORDANCE WITH LOCAL REQUIREMENTS.
2. CONTRACTOR'S JOB FOREMAN, IN PRESENCE OF REPRESENTATIVE OF MANUFACTURER, REPRESENTATIVE OF OWNER, AND FIRE DEPARTMENT SHALL OPERATE EVERY INSTALLED DEVICE TO VERIFY PROPER OPERATION AND CORRECT ANNUNCIATION AT CONTROL PANEL.
3. OPEN SIGNALING LINE CIRCUITS AND NOTIFICATION APPLIANCE CIRCUITS IN AT LEAST 2 LOCATIONS TO VERIFY PRESENCE OF SUPERVISION.
4. COMPLETELY DISCONNECT INCC COMMAND CENTER FROM REST OF NETWORK, INCLUDING VOICE INCC COMMAND CENTER. ACTIVATE INITIATING DEVICE FROM TRANSPONDER. ALL SPEAKER CIRCUITS ACTIVATED FROM EACH TRANSPONDER SHALL TRANSMIT THE CORRECT EVACUATION OR ALERT MESSAGE. THESE MESSAGES SHALL BE SAME MESSAGES TRANSMITTED WITH INCC COMMAND CENTER ACTIVATED. DEFAULT TONES OR MESSAGES SHALL NOT BE ACCEPTABLE.
5. COMPLETELY DISCONNECT INCC COMMAND CENTER FROM REST OF NETWORK. ACTIVATE INITIATING DEVICE. ALL CONTROL OUTPUTS SUPPORTED BY TRANSPONDER SLC CIRCUITS SHALL OPERATE UNDER PROJECT PROGRAMMING MODE. DEFAULT OR DEGRADE MODE PROGRAMMING SHALL NOT BE ACCEPTABLE.
6. FIRE FIGHTER PHONE RISER SHALL BE DIRECTLY SHORTED BETWEEN INCC COMMAND CENTER AND FIRST TRANSPONDER, FOLLOWED BY TEST OF FIRE PHONES BETWEEN INCC COMMAND CENTER AND FARTHEST TRANSPONDER. PHONES SHALL OPERATE IN NORMAL FASHION.
7. ALL AUDIO RISERS SHALL BE DIRECTLY SHORTED BETWEEN INCC COMMAND CENTER AND FIRST AUDIO TRANSPONDER, FOLLOWED BY ACTIVATION OF ALARM INITIATING DEVICE. CORRECT PRE-RECORDED MESSAGES SHALL TRANSMIT FROM ALL SPEAKERS, INCLUDING EVACUATION AND ALERT CHANNELS. DEFAULT OR DEGRADE MESSAGES SHALL NOT BE ACCEPTABLE.
8. WHEN TESTING HAS BEEN COMPLETED TO SATISFACTION OF BOTH CONTRACTOR'S JOB FOREMAN AND REPRESENTATIVES OF MANUFACTURER AND OWNER, A NOTARIZED LETTER CO-SIGNED BY EACH ATTESTING TO SATISFACTORY COMPLETION OF SAID TESTING SHALL BE FORWARDED TO OWNER AND FIRE DEPARTMENT.
9. LEAVE FIRE ALARM SYSTEM IN PROPER WORKING ORDER AND, WITHOUT ADDITIONAL EXPENSE TO OWNER, REPLACE DEFECTIVE MATERIALS AND EQUIPMENT PROVIDED WITHIN 1 YEAR (365 DAYS) FROM DATE OF FINAL ACCEPTANCE BY THE OWNER.

3.4 DEMONSTRATION

A. PROVIDE INSTRUCTION AS REQUIRED FOR OPERATING FIRE ALARM SYSTEM.

B. PROVIDE HANDS-ON DEMONSTRATIONS OF OPERATION OF FIRE ALARM SYSTEM COMPONENTS AND FUNCTIONS.

END OF SECTION


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ARCHITECTURE · ENGINEERING · INTERIOR DESIGN · CONSTRUCTION MANAGEMENT
6011 N. Fresno, Suite 130 - Fresno, California 93710
Phone (559) 436-0681 Fax (559) 436-0687 E-Mail: design@somam.com
www.integrateddesigns.com


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Sheet Title: FIRE ALARM SPECIFICATION

Project Name & Address: NEW ELEMENTARY SCHOOL INCREMENT 3
BAKERSFIELD CITY SCHOOL DISTRICT
@ CITADEL ROAD & MARDI GRAS COURT

| Issue Date: | Designer: | DR: | PIC: |
|---|---|---|---|
| 01/31/18 | J CHONG | J CHONG | -- |
| Date: 12/06/16 | | | |

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JOHN S. CHONG
E 14419
Exp.6/30/2020
ELECTRICAL
STATE OF CALIFORNIA

ADDENDUM NO.3

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Release:


CONSULTING ENGINEERS
JOHN CHONG ENGINEERING
1243 N HELM AVE #103 FRESNO CA 93727
(559) 325-9388 • FAX 251-3401
jcengineer@aol.com