CONSTRUCTION

PRIME CONSULTANT

BAKERSFIELD CITY SCHOOL **DISTRICT**



NEW MARQUEE AT FREMONT ELEMENTARY SCHOOL

607 TEXAS ST, BAKERSFIELD, **CA 93307**

CONSTRUCTION DOCUMENTS

DSA APP NO.: 03-117649

DSA FILE NO.: 15-6

AGENCY TRACKING NO.: 63321-238

SHEET INDEX	PROJECT DIRECTORY			
A0.01 TITLE SHEET ARCHITECTURAL A1.11 SITE PLANS	OWNER: BAKERSFIELD CITY SCHOOL DISTRICT 1501 FELIZ DRIVE BAKERSFIELD, CA 93307 PHONE: (661) 636-4000 FAX: (661) 636-4130 STRUCTURAL ENGINEER: SMITH STRUCTURAL GROUP, LLP 811 EL CAPITAN WAY, SUITE 240 SAN LUIS OBISPO, CA. 93401 PHONE: (805) 439-2110 FAX: (805) 439-2125			
STRUCTURAL	CONTACT: RANDY ROWLES ROBERT VANTASSEL CONTACT: MICHAEL PAROLINI			
S1.11 STRUCTURAL NOTES S1.12 STRUCTURAL NOTES S2.11 STRUCTURAL DETAILS ELECTRICAL E1.0 SYMBOLS & GENERAL NOTES E1.1 GENERAL ELECTRICAL SPECIFICATIONS E2.0 SITE ELECTRICAL PLAN	ARCHITECT: IBI GROUP ARCHITECTURE PLANNING 4119 BROAD STREET, SUITE 210 SAN LUIS OBISPO, CA 93401 PHONE: (805) 546-0433 FAX: (805) 546-0504 CONTACT: RICK MELLO PRINCIPAL ARCHITECT ELECTRICAL: FERRANTI ENGINEERING CONSULTING ELECTRICAL ENGINEERS 1211 MARICOPA HWY, SUITE #250 OJAI, CA 93023 PHONE: (805) 705-4772 FAX:			
E2.1 ENLARGED MARQUEE SIGN ELECTICAL PLAN PETAILS APPLICABLE CODES	VICINITY MAP			

CALIFORNIA CODE OF REGULATIONS, TITLE 24 - BUILDING STANDARDS 2013 CALIFORNIA ADMINISTRATIVE CODE (CAC) (Title 24, Part 1, CCR) - At Chaper 10, 2010 California Building Standards Administrative 2013 CALIFORNIA BUILDING CODE (CBC), Volumes 1 & 2 (Title 24, Part 2, CR) (2012 International Building Code with 2013 California CALIFORNIA ELECTRICAL CODE, Title 24, Part 3, CCR) (2011 National Electrical Code with 2013 California amendments) CALIFORNIA MECHANICAL CODE (CMC), Title 24, Part 4, CCR)

(2012 Uniform Mechanical Code with 2013 California amendments)

CALIFORNIA HISTORICAL BUILDING CODE, (Title 24, Part 8, CCR)

CALIFORNIA EXISTING BUILDING CODE, (Title 24, Part 10, CCR)

CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN),

CALIFORNIA PLUMBING CODE (CPC), Title 24, Part 5, CCR)

(2012 Uniform Plumbing Code with California amendments)

CALIFORNIA ENERGY CODE, (Title 24, Part 6, CCR)

CALIFORNIA FIRE CODE (CFC), Title 24, Part 9, CCR) (2012 International Fire Code with California amendments)

designated by California Building Standards Commision

2013 CALIFORNIA REFERENCE STANDARDS CODE, (Title 24, Part 12,

2010 ADA STANDARDS FOR ACCESSIBILITY DESIGN, U.S. Department of Justice

2013 NFPA 72, NATIONAL FIRE ALARM CODE AND SIGNALING CODE, 2013 Edition

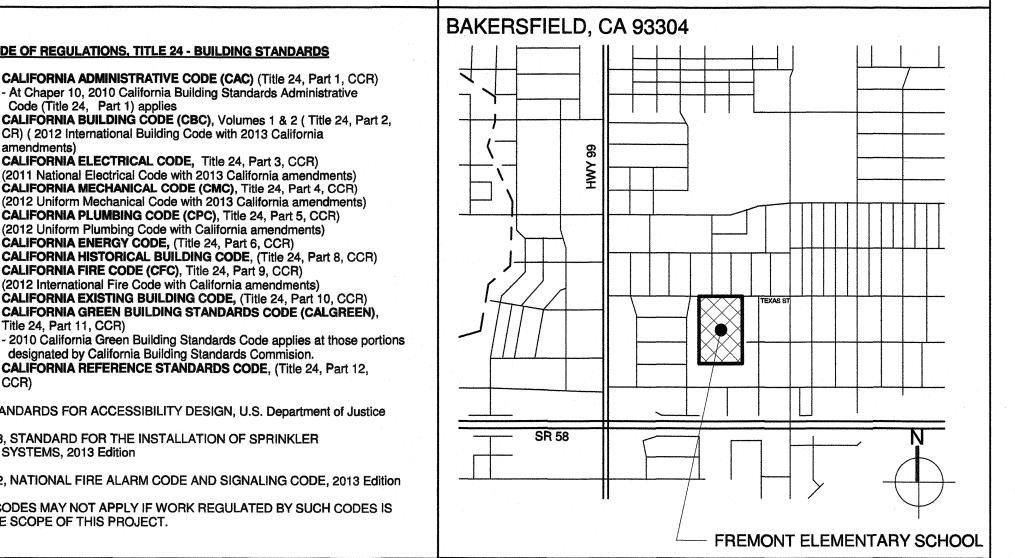
NOTE: SOME CODES MAY NOT APPLY IF WORK REGULATED BY SUCH CODES IS

2013 NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER

Title 24, Part 11, CCR)

SYSTEMS, 2013 Edition

NOT WITHIN THE SCOPE OF THIS PROJECT.



BAKERSFIELD CITY SCHOOL

NEW MARQUEE AT FREMONT

SHEET NUMBER

DSA ADMIN. REQUIREMENTS

A COPY OF PARTS 1 TO 5, TITLE 24, C.C.R. SHALL BE KEPT ON THE JOB CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA. AS

ABBREVIATIONS

MATL

MECH

MISC MTL

PLWD

PNL POC PTDF

RD REF

REFR REQ'D

RDWD

SCH SD

SEC SF

SIM SPEC

SQ SS STN

STD

STL TEMP

TJ TOC

TYP UON

VWC

SYMBOL LEGEND

SCHEDULE INDICATES DEMOLITION

REQUIREMENTS. REFER TO DEMOLITION

SCHEDULE AND BUILDING DEMOLITION PLANS

DEMOLITION SCHEDULE TAG

EXTERIOR ELEVATION REFERENCE

- LAMINATE (D)

MECHANICAL

MISCELLANEOUS

NOT IN CONTRACT

OUTSIDE DIAMETER

PROPERTY LINE

PRESERVATIVE

PARTITION

ROOF DRAIN

REFERENCE

REQUIRED

REDWOOD

SCHEDULE

SECTION

SHEET

STORM DRAIN

SQUARE FEET

SHEATHING

SPECIFICATIONS

STAINLESS STEEL

TONGUE-AND-GROOVE

TOP OF CURB, CRICKET,

SHEATHING, or STEEL TOP OF SHEATHING

UNLESS OTHERWISE

VINYL COMPOSITION

- VINYL WALL COVERING

VINYL COVERED

VERIFY IN FIELD

TACKBOARD

- WIDE FLANGE

WOOD SCREW

- WAINSCOT

SIMILAR

SQUARE

STAIN

- STEEL

- STANDARD

TEMPERED

THROUGH

TOOL JOINT

or CONCRETE

TOP OF SLAB,

TELEVISION

TYPICAL

NOTED

- WOOD

TOP OF PARAPET

REFRIGERATOR

PLASTIC LAMINATE

- POINT OF CONNECTION

TREATED DOUGLAS FIR

- POLYVINYL CHLORIDE

RAIN WATER LEADER

MATERIAL

MAXIMUM

MINIMI IM

MIRROR

METAL

NUMBER NOT TO SCALE

ON CENTER

OPPOSITE

PLASTER

PLATE PLYWOOD

NEW

ASPHALT CONCRETE

AIR CONDITIONING

ARCHITECT (URAL)

BUILT UP ROOFING

CERAMIC MOSAIC (TILE)

CONCRETE MASONRY

DRINKING FOUNTAIN

ACOUSTICAL

ADJUSTABLE or

ADDENDUM

ADJACENT

ALUMINUM

BOARD

BUILDING

BLOCKING

BOTTOM

CARPET

CATCH BASIN

CLEAN OUT

CONCRETE

COUNTERSINK

COLD WATER

COLUMN

DETAIL

DIAMETER

DIAGONAL

DIMENSION

DOWNSPOUT

EXPANSION JOIN

DIVISION

DRAWING

EXISTING

ELEVATION

ELECTRICAL

FABRICATION

FLOOR DRAIN

FOUNDATION

FINISHED FLOOR

FACE OF FINISH

FACE OF STUD

GYPSUM BOARD

GALVANIZED

GYPSUM

HOSE BIBB

HARDWOOD

HORIZONTAL

HOT WATER

ROOM NAME____ ROOM NUMBER

--- S.F. ROOM AREA

- CEILING

FLOOR/BASE

SHEET NUMBER

SHEET NUMBER

SHEET NUMBER

- DOOR NUMBER

WALL TYPE

8'-0" CEILING HEIGHT TAG

WINDOW NUMBER

ACCESSORY TAG

KEYNOTE REFERENCE OR COLOR DESIGNATION

AUXILIARY INTERIOR

ELEVATION NUMBER

INTERIOR ELEVATION NUMBER

CLOCKWISE SEQUENCE

101 ROOM NAME

HOLLOW METAL

INSIDE DIAMETER

GLASS or GLAZING

GALVANIZED SHEET

FIBERGLASS

FOOTING

GAUGE

FACE OF CONCRETE

- FACE OF PLYWOOD

REINFORCED PLASTIC

ENAMEL

- EACH

EQUAL

- EXTERIOR

- FACTORY

FUTURE

CONTROL JOINT

ALUM ARCH

REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR. NO CHANGES OR REVISIONS SHALL BE MADE FOLLOWING WRITTEN APPROVAL WHICH AFFECTS ACCESS COMPLIANCE ITEMS UNLESS SUCH CHANGES OR REVISIONS

CONSTRUCTION CHANGE DOCUMENT OR ADDENDA, AND SHALL BE APPROVED BY

CONSTRUCTION CHANGE DOCUMENTS MUST BE SIGNED BY THE FOLLOWINGS: ARCHITECT OR ENGINEER OF RECORD.

STRUCTURAL ENGINEER (WHEN APPLICABLE) · DELEGATED PROFESSIONAL ENGINEER. MATERIALS AND THEIR INSTALLATION SHALL COMPLY WITH APPLICABLE CODES

TOLERANCES EXCEPT WHERE THE REQUIREMENT IS STATED AS A RANGE WITH SPECIFIC MINIMUM AND MAXIMUM END POINTS."

ALL TESTS TO CONFORM TO THE REQUIREMENTS OF SECTION 4-335, PART 1, TITLE

(OWNER) SHALL CONDUCT ALTHE REQUIRED TESTS AND INSPOECTIONS FOR THE PROJECT: AND SHALL BE IN ACCORDANCE WITH SECTION 4-335, PART 1, TITLE 24.

DSA SHALL BE NOTIFIED AT THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE PER SECTION 4-331, PART 1.TITLE 24.

A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1. TITLE 24.

CONTRACTOR, INSPECTOR, ARCHITECT, AND ENGINEERS SHALL SUBMIT VERIFIED REPORTS (Form SSS-6) IN ACCORDANCE WITH SECTIONS 4-336 AND 4-343, PART 1,

THE ARCHITECT AND THE STRUCTURAL ENGINEER SHALL PERFORM THEIR DUTIES ACCORDANCE WITH SECTIONS 4-333(a) AND 4-341, PART 1, TITLE 24.

THE CONTRACTOR SHALL PERFORM HIS DUTIES IN ACCORDANCE WITH

THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR)

GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL

. A 'DSA CERTIFIED' INSPECTOR WITH CLASS (3) CERTIFICATION IS REQUIRED FOR

GENERAL NOTES

REGULATIONS (TITLE DOCUMENTS) AND ALL OTHER LOCAL CODES AND ORDINANCES OF THE GOVERNING AUTHORITY HAVING JURISDICTION AND AS IDENTIFIED UNDER APPLICABLE CODES ON THIS SHEET. IT IS THE INTENT OF THESE DOCUMENTS TO COMPLY HERETO.

ALL DRAWINGS SHALL BE USED IN CONCERT WITH EACH OTHER, IF THE CONTRACTOR DISCOVERS ANY DISCREPANCY BETWEEN THE DOCUMENTS, THE CONTRACTOR SHALL REQUEST IN WRITING A CLARIFICATION FROM THE ARCHITECT REFER TO THE ARCHITECTURAL AND ENGINEERING DRAWINGS FOR PLACEMENT. ORIENTATION AND COORDINATION OF WORK. INFORMATION SHOWN IN LARGER SCALE IS INTENDED TO SUPPLEMENT INFORMATION OF SMALLER, PRECEDING REFERENCE DRAWINGS. LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.

NOTATIONS MARKED "TYPICAL" (TYP.) SHALL BE CONSISTENT THROUGHOUT ALL

DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY CONSTRUCTION CONDITIONS AND DIMENSIONS PRIOR TO ORDERING. FABRICATING OR INSTALLING ANY ASSOCIATED WORK. IF DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL REQUEST IN WRITING A CLARIFICATION FROM THE ARCHITECT PRIOR TO

CONTRACTOR SHALL VERIFY, AT THE SITE, ALL EXISTING CONDITIONS PRIOR TO SUBMITTAL OF BIDS. SITE VISITS DURING BIDDING SHALL BE COORDINATED WITH THE OWNER IN ACCORDANCE WITH THE PROVISIONS OF THE SPECIFICATIONS.

BE REPLACED WITH THE SAME MATERIALS, INCLUDING MATCHING THE EXISTING COLORS AND TEXTURES.

ARCHITECT DO NOT GUARANTEE EXISTING CONDITIONS AS SHOWN ON THESE.

MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS THAT ARE DISCOVERED DURING THE PROGRESS OF THE WORK SHALL BE REPORTED TO THE OWNER IN WRITING. WORK IN THAT PARTICULAR AREA SHALL BE SUSPENDED UNTIL THE OWNER TESTS THE SUSPECT MATERIAL AND IT IS FOUND TO BE SAFE, OR THE MATERIAL HAS BEEN PROPERLY ABATED.

THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN.

STORAGE OF CONSTRUCTION MATERIAL AND EFFECT OF WORK ON EXISTING

DURING CONSTRUCTION AND DEMOLITION WILL BE ENFORCED.

SECTIONS 3304.3.1 THROUGH 3304.2.4.

ALL WORK SHALL BE IN ACCORDANCE WITH THE CALIFORNIA CODE OF

CONTRACTOR SHALL PROTECT ALL EXISTING WORK. ANY DAMAGED WORK SHALL

EXISTING WORK IS SHOWN FOR REFERENCE ONLY. THE OWNER AND/OR

CONTRACTOR(S) SHALL BE RESPONSIBLE FOR THEIR OWN CLEANUP AS WORK

ON THE CONSTRUCTION DOCUMENTS, THEN THEIR CONSTRUCTION SHALL BE OF

OCCUPIED AREAS SHALL BE APPROVED BY THE LOCAL FIRE AUTHORITY.

CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL WORK

MATERIAL REFERENCES AND NOTES. REFER TO THE KEYNOTE LIST ON THE RESPECTIVE DRAWINGFOR THE INFORMATION WHICH RELATES TO EACH KEYNOTE

16. DURING CONSTRUCTION, COMPLIANCE WITH CVC CHAPTER 33, SAFETY WILL BE

3304.2.1 COMBUSTIBLE WASTER MATERIAL ACCUMULATION. COMBUSTIBLE DEBRIS RUBBISH AND WASTE MATERIAL SHALL NOT BE ACCUMULATED WITHIN BUILDINGS.

SUCH REFERENCE NOMENCLATURE, SYMBOLS AND DRAWING INDICATIONS OF LIKE

COMMENCEMENT OF ANY ASSOCIATED WORK.

10. ALL WORK IS NEW UNLESS OTHERWISE NOTED. IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN

PROVIDED BY OTHERS UNDER SEPARATE CONTRACT. KEYNOTES USED ON THE ARCHITECTURAL DRAWINGS ARE FOR ASSEMBLIES,

15. DURING CONSTRUCTION, COMPLIANCE WITH CFC CHAPTER 14. FIRE SAFETY

3304 PRECAUTIONS AGAINST FIRE: 3304.2 COMBUSTABLE DEBRIS, RUBBISH AND WASTE. COMBUSTIBLE DEBRIS, RUBBISH AND WASTE MATERIAL SHALL COMPLY WITH THE REQUIREMENTS OF

SECTION 3309 FIRE REPORTING

3309.1 EMERGENCY TELEPHONE. READILY ACCESSIBLE EMERGENCY TELEPHONE FACILITIES SHALL BE PROVIDED IN AN APPROVED LOCATION AT THE CONSTRUCTION SITE. THE STREET ADDRESS OF THE CONSTRUCTION SITE AND THE EMERGENCY TELEPHONE NUMBER OF THE FIRE DEPARTMENT SHALL BE POSTED ADJACENT TO THE TELEPHONE.

SECTION 3310 ACCESS FOR FIRE FIGHTING

3311 MEANS OF EGRESS

AREA IN WHICH THE DEVICES ARE INSTALLED.

3310.1 REQUIRED ACCESS. APPROVED VEHICLE ACCESS OF FIRE FIGHTING SHALL BE PROVIDED TO ALL CONSTRUCTION OR DEMOLITION SITES. VEHICLE ACCESS SHALL BE PROVIDED TO WITHIN 100 FEET (30480MM) OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICLE ACCESS SHALL BE

GENERAL NOTES contd.

RUBBISH AND WASTE MATERIAL SHALL BE REMOVED FROM BUILDINGS AT THE END

3304.2.2 COMBUSTIBLE WASTER MATERIAL REMOVAL. COMBUSTIBLE DEBRIS.

STORAGE OF COMBUSITIBLE DEBRIS. RUBBISH AND WASTER MATERIAL. THEY

SHALL HAVE TIGHT-FITTING OR SELF CLOSING LIDS. SUCH RUBBISH CONTAINER:

SHALL BE CONSTRUCTED ENTIRELY OF MATERIAL THAT COMPLY WITH EITHER C

2 MATERIALS THAT MEET A PEAK RATE OF HEAT RELEASE NO EXCEPDING

300 kW/m^2 WHEN TESTED IN ACCORDANCE WITH ASTM E1354 AT AN

3304.2.4 SPONTANEOUS IGNITION. MATERIALS SUSCEPTIBLE TO SPONTANEOUS

DEBRIS, RUBBISH AND WASTE MATERIAL SHALL NOT BE DISPOSED OF BY BURNING

LESS THAT ONE APPROVED MEANS FOR NOTIFICATION OF THE FIRE DEPARTMENT

3304.6 CUTTING AND WELDING. OPERATIONS INVOLVING THE USE OF CUTTING AND

INSTALLATIONS USED IN CONNECTION WITH THE CONSTRUCTION, ALTERATION OR

DEMOLITION OF BUILDINGS, STURCTURES, EQUIPMENT OR SIMILAR ACTIVITIES

PROVISIONS AS NECESSARY TO SECURE THE INTENT OF THIS CHAPTER.

WITH THE FIRE CHIEF. THE FIRE CHIEF AND THE FIRE CODE OFFICIAL SHALL BE

3308.3 TRAINING. TRAINING OF RESPONSIBLE PERSONNEL IN THE USE OF FIRE

SUPERINTENDENT SHALL DETERMINE THAT ALL FIRE PROTECTION EQUIPMENT IS

SUPERINTEDENT SHALL BE RESPONSIBLE FOR SUPERVISING THE PERMIT SYSTEM

3308.6 IMPAIRMENT OF FIRE PROTECTION SYSTEMS. IMPAIRMENTS TO ANY FIRE

TEMPORARY COVERING OF FIRE PROTECTION DEVICES. COVERING

UPON THE COMPLETION OF THE CONSTRUCTION PROCESSES IN THE ROOM OR

DAMAGE DURING CONSTRUCTION PROCESSES SHALL BE IMMEDIATELY REMOVED.

PLACED ON OR OVER FIRE PROTECTION DEVICES TO PROTECT THEM FROM

MAINTAINED AND SERVICED IN ACCORDANCE WITH THIS CODE. THE QUANTITY AND

PORTECTION EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE FIRE

3308.4 FIRE PROTECTION DEVICES. THE FIRE PREVENTION PROGRAM

PROTECTION SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 901

NOTIFIED OF CHANGED AFFECTION THE UTILIZATION OF INFORMATION CONTAINED

WHERE GUARD SERVICE IS PROVIDED, THE SUPERINTENDENT SHALL BI

WELDING SHALL BE DONE IN ACCORDANCE WITH CHAPTER 35.

SHALL COMPLY WITH THE CALIFORNIA ELECTRICAL CODE.

AND THEIR SOLE DUTY SHALL BE TO PERFORM CONSTANT PATROLS AND WATCH

IGNITION, SUCH AS OILY RAGS, SHALL BE STORED IN A LISTED DIPOSAL

INCIDENT HEAT FLUX OF 50 kW/m^2 IN THE HORIZONTAL ORIENTATION.

MAINTAINED UNTIL PERMANENT FIRE APPARATUS ACCESS ROADS ARE AVAILABLE 3310.2 KEY BOXES. KEY BOXES SHALL BE PROVIDED AS REQUIRED BY CHAPTER 5.

3311.2 MAINTENANCE. REQUIRED MEANS OF EGRESS SHALL BE MAINTAINED DURING CONSTRUCTION AND DEMOLITION, REMODELING OR ALTERATIONS AND

ADDITIONS TO ANY BUILDING. EXCEPTION: APPROVED TEMPORARY MEANS OF EGRESS SYSTEMS AND FACILITIES.

3315 PORTABLE FIRE EXTINGUISHERS 3315.1 WHERE REQUIRED. STRUCTURES UNDER CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE PROVIDED WITH NOT LESS THAN ONE APPROVED PORATABLE FIRE EXTINGUISHER IN ACCORDANCE WITH SECTION 906 AND SIZED

FOR NOT LESS THAN ORDINARY HAZARD AS FOLLOWS: AT EACH STAIRWAY ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED.

2. IN EVERY STORAGE AND CONSTRUCTION SHED.

3. ADDITIONAL PORTABLE FIRE EXINGUISHERS SHALL BE PROVIDED WHERE SPECIAL HAZARDS EXIST INCLUDING, BUT NOT LIMITED TO, TO THE

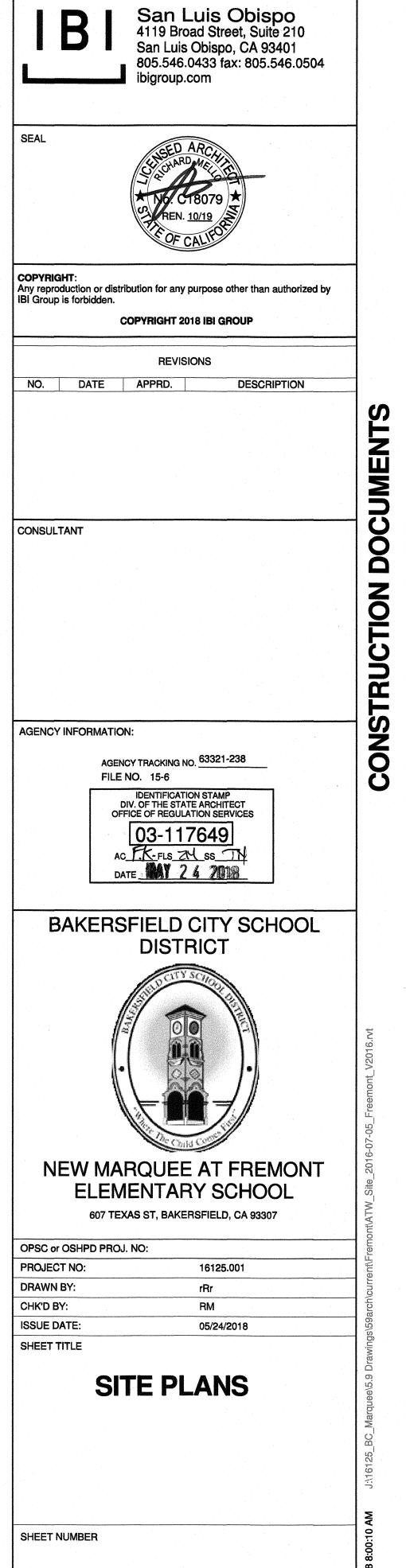
STORAGE AND USED OF FLAMMABLE AND COMBUSTIBLE LIQUIDS NO CHANGES OR REVISIONS SHALL BE MADE FOLLOWING WRITTEN APPROVAL WHICH AFFECTS ACCESS COMPLIANCE ITEMS UNLESS SUCH CHANGES OR REVISIONS ARE SUBMITTED TO DSA FOR APPROVAL

SUBSTITUTIONS AFFECTING DSA REGULATIONS SHALL BE SUBMITTED AS A CONSTRUCTION CHANGE DOCUMENT OR ADDENDA AND APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION

SCOPE OF WORK

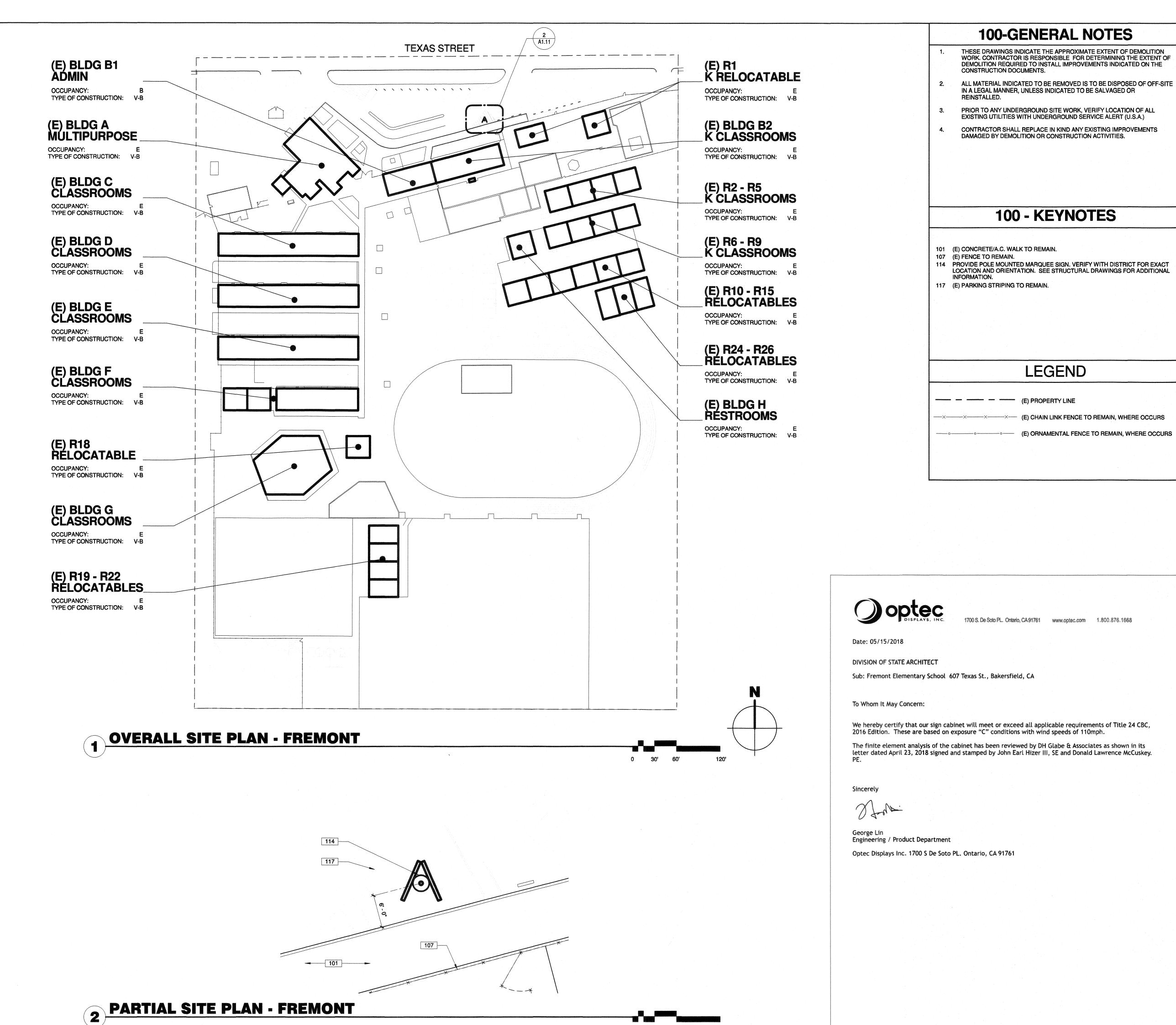
THE FOLLOWING IS A BRIEF DESCRIPTION OF THE SCOPE OF WORK AS REQUIRED BY DSA. CONTRACTOR SHALL DETERMINE/VERIFY THE ENTIRE SCOPE AS SHOWN ON THE DRAWINGS AND SPECIFICATIONS PRIOR TO SUBMITTING BIDS.

INSTALLATION OF POLE MOUNTED MARQUEE SIGN ONTO AN EXISTING SITE



PRIME CONSULTANT

ARCHITECTURE PLANNING



GENERAL NOTES

- THE FOLLOWING NOTES, TYPICAL DETAILS AND SCHEDULES SHALL APPLY TO ALL 1. PHASES OF THIS PROJECT UNLESS OTHERWISE SHOWN OR NOTED.
- 2. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- 3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE MINIMUM STANDARDS 3. EXCAVATE TO REQUIRED DEPTHS AND DIMENSIONS (AS INDICATED IN OF THE 2013 EDITION OF THE CALIFORNIA BUILDING CODE (CBC) AND SUCH OTHER REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK. THE CONTRACTOR SHALL HAVE A COPY OF THE CBC ON THE JOB SITE.
- 4. THE "CONTRACT OR CONSTRUCTION DOCUMENTS" SHALL CONSIST OF THESE NOTES, DETAILS, SCHEDULES, PLANS, AND DRAWINGS, AS WELL AS ATTACHED SPECIFICATIONS.
- 5. ALL SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO MATERIALS AND PRODUCTS, SHALL BE THOSE PUT FORTH IN THE "CONTRACT OR CONSTRUCTION DOCUMENTS" NO SUBSTITUTIONS SHALL BE PERMITTED TO BE USED OR ASSUMED TO BE USED IN THE BIDDING OR CONSTRUCTION PROCESS WITHOUT WRITTEN APPROVAL BY THE
- THE CONTRACTOR SHALL EXAMINE THE "CONTRACT OR CONSTRUCTION DOCUMENTS" AND SHALL NOTIFY THE ARCHITECT OR ENGINEER OF ANY DISCREPANCIES HE MAY FIND BEFORE PROCEEDING WITH THE WORK.
- 7. ALL INFORMATION ON EXISTING CONDITIONS SHOWN ON DRAWINGS ARE BASED ON BEST PRESENT KNOWLEDGE AVAILABLE, BUT WITHOUT GUARANTEE OF ACCURACY. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ARCHITECT OR ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL SITE CONDITIONS AND INFORMATION SHOWN ON OR IN THE "CONTRACT OR CONSTRUCTION DOCUMENTS" BEFORE PROCEEDING WITH
- 8. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER OF ANY CONDITION WHICH IN HIS OPINION MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS OF THE STRUCTURE.
- 9. ALL WORK SHALL CONFORM TO THE BEST PRACTICE PREVAILING IN THE VARIOUS TRADES COMPRISING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES.
- IO. THESE "CONTRACT OR CONSTRUCTION DOCUMENTS" REPRESENT THE FINISHED STRUCTURE, AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
- INSPECTION AND APPROVAL FOR FABRICATOR'S SHOPS USED FOR FABRICATION OF STRUCTURAL LOAD BEARING MEMBERS, COMPONENTS, MATERIALS OR ASSEMBLIES SHALL CONFORM TO CBC SECTION 1704A.2.
- A. LABELING (AS REQUIRED OR SPECIFIED) SHALL BE PROVIDED IN ACCORDANCE WITH CBC SECTION 1703A.5.
- B. EVALUATION AND FOLLOW-UP INSPECTION SERVICES (AS REQUIRED OR SPECIFIED), SHALL CONFORM TO CBC SECTION 1703A.6.
- 12. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR INFORMATION NOT
- COVERED BY THESE DRAWINGS AND GENERAL NOTES. 13. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND SHORING FOR ALL
- STRUCTURAL MEMBERS AS REQUIRED FOR STRUCTURAL STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.
- 14. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE PROPER ALIGNMENT OF THE STRUCTURE AFTER THE INSTALLATION OF ALL STRUCTURAL AND FINISH MATERIALS. THIS SHALL INCLUDE ANY NECESSARY PRELOADING OF THE STRUCTURE TO DETERMINE FINAL POSITION OF THE COMPLETED WORK.
- 15. OBSERVATION VISITS TO THE PROJECT SITE BY FIELD REPRESENTATIVES OF ARCHITECT AND/OR ENGINEER (SUPPORT SERVICES) SHALL NOT INCLUDE INSPECTIONS OF SAFETY OR PROTECTIVE MEASURES, NOR CONSTRUCTION PROCEDURES, TECHNIQUES OR METHODS. ANY SUPPORT SERVICES PERFORMED BY ARCHITECT OR ENGINEER DURING ANY PHASE OF CONSTRUCTION, SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES (AS REQUIRED BY ANY REGULATING GOVERNMENTAL AGENCY, e.g. LOCAL BUILDING DEPARTMENT) PROVIDED BY OTHERS. THESE SUPPORT SERVICES, WHETHER OF MATERIAL OR WORK, ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DOCUMENTS. BUT DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
- 16. PROVIDE OPENINGS AND SUPPORTS AS REQUIRED PER TYPICAL DETAILS AND NOTES FOR MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT, VENTS, DUCTS, PIPING ETC. ALL MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT SHALL BE PROPERLY "SWAY BRACED" AGAINST LATERAL FORCES.
- 17. THESE NOTES, DETAILS, DRAWINGS AND SPECIFICATIONS (CONTRACT OR CONSTRUCTION DOCUMENTS) DO NOT CARRY NECESSARY PROVISIONS FOR CONSTRUCTION SAFETY. THESE DOCUMENTS AND ALL PHASES OF CONSTRUCTION HEREBY CONTEMPLATED ARE TO BE GOVERNED, AT ALL TIMES, BY APPLICABLE PROVISIONS OF THE CURRENT CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH
- AND LOCAL LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN.
- 19. REFER TO ARCHITECTURAL DRAWINGS TO COORDINATE WITH STRUCTURAL DRAWINGS. ANY DISCREPANCY BETWEEN THESE DRAWINGS SHALL BE REFERRED TO THE ARCHITECT OR ENGINEER FOR CLARIFICATION BEFORE START OF CONSTRUCTION.
- 20. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
- 21. DRAWINGS (NOTES, SCHEDULES, DETAILS AND PLANS) SHALL HAVE PRECEDENCE OVER STRUCTURAL CALCULATIONS.
- 22. IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE GENERAL NOTES OR SPECIFICATIONS, THEN THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR CALLED FOR.
- 23. ASTM DESIGNATION AND ALL STANDARDS REFER TO THE LATEST AMENDMENTS.
- 24. THESE STRUCTURAL "CONTRACT OR CONSTRUCTION DOCUMENTS" SHALL NOT BE MODIFIED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- 25, ONLY "APPROVED" STRUCTURAL WORKING DRAWINGS AND "CONTRACT OR CONSTRUCTION DOCUMENTS" ARE PERMITTED TO BE USED FOR CONSTRUCTION ON THIS PROJECT. ALL OTHER DRAWINGS OR DOCUMENTS ARE OBSOLETE AND ARE NOT PERMITTED ON THE JOB SITE, NOR SHALL THEY BE USED FOR ANY CONSTRUCTION PURPOSES. CONTRACTORS USING UNAPPROVED DRAWINGS OR DOCUMENTS ARE SOLELY RESPONSIBLE FOR ALL WORK NOT PERFORMED IN ACCORDANCE WITH THE "APPROVED" DRAWINGS.
- 26. SEE ARCHITECTURAL DRAWINGS FOR ALL FIRE PROTECTION REQUIREMENTS.

FOUNDATION NOTES

- BASIS: SEE STRUCTURAL DESIGN VALUES CHART
- UNEXPECTED SOIL CONDITIONS: ALLOWABLE VALUES AND FOUNDATION DESIGN ARE BASED UPON THE MINIMUM VALUES PROVIDED IN TABLE 1806A.2 OF THE 2013 CALIFORNIA BUILDING CODE.
- DRAWINGS), CUT SQUARE AND SMOOTH WITH FIRM LEVEL BOTTOMS. CARE SHALL BE TAKEN NOT TO OVER-EXCAVATE FOUNDATION AT LOWER ELEVATION AND
- 4. FOOTINGS SHALL BE POURED IN NEAT EXCAYATIONS, WITHOUT SIDE FORMS WHENEVER POSSIBLE
- CARRY ALL FOUNDATIONS TO REQUIRED DEPTHS INTO COMPACTED FILL OR NATURAL SOIL (AS PER STRUCTURAL PLANS AND DETAILS).
- FOUNDATIONS SHALL NOT BE POURED UNTIL ALL REQUIRED REINFORCING STEEL, SLEEVES, INSERTS, CONDUITS, PIPES, ETC. AND FORMWORK IS PROPERLY PLACED AND INSPECTED BY THE PROJECT INSPECTOR.
- THE SIDES AND BOTTOMS OF EXCAVATIONS WHICH ARE TO HAVE CONCRETE CONTACT MUST BE MOISTENED SEVERAL TIMES JUST PRIOR TO
- DE-WATER FOOTINGS, AS REQUIRED, TO MAINTAIN DRY WORKING

PREVENT DISTURBING OF SOILS AROUND HIGHER ELEVATION.

. ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY PROJECT INSPECTOR PRIOR TO FORMING AND PLACEMENT OF REINFORCING OR

- ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH (F'C) OF 3,000 P.S.I. AT 28 DAYS. ALL CONCRETE SHALL BE REGULAR WEIGHT (UNLESS SPECIFICALLY NOTED OTHERWISE).
- 2. ALL CONCRETE WORK SHALL COMPLY WITH CBC CHAPTER 19A AND ACI 318-11 AND LATEST EDITION OF ACI MANUAL OF CONCRETE PRACTICE.
- SPECIAL INSPECTION (AS REQUIRED OR SPECIFIED) SHALL CONFORM TO CBC CHAPTER ITA.
- CEMENT SHALL BE PORTLAND CEMENT TYPE II/V AND SHALL CONFORM TO ASTM
- AGGREGATES SHALL CONFORM TO ASTM C33.
- WATER SHALL CONFORM TO ASTM C1602.
- WHERE NOT SPECIFICALLY DETAILED, THE MINIMUM CONCRETE COVER ON REINFORCING STEEL SHALL BE:
 - A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH OR WEATHER: 3" 3. CONCRETE PLACED AGAINST FORMS, BUT EXPOSED TO EARTH OR
 - WEATHER: 2" C. SLABS, WALL & JOISTS, NOT EXPOSED TO EARTH OR WEATHER: 34" D. BEAMS, GIRDERS & COLUMNS, NOT EXPOSED TO EARTH OR WEATHER: 比"
- REINFORCING BARS LARGER THAN #8 ARE NOT PERMITTED UNLESS SPECIFICALLY DETAILED OR NOTED OTHERWISE.
- MINIMUM LAP FOR ALL REINFORCING BARS IN FOUNDATION, CONCRETE RETAINING WALLS, SITE WALLS, SEAT WALLS. ETC., AT SPLICES: (SPLICES TO BE STAGGERED, AND ALL CONCRETE TO BE NORMAL WEIGHT) REFER TO DETAIL 11/52.11.
- IO. LOCATION OF ALL CONSTRUCTION JOINTS, OTHER THAN SPECIFIED, SHALL BE APPROVED BY ARCHITECT/ENGINEER PRIOR TO POURING, CONSTRUCTION JOINTS SHALL BE THOROUGHLY AIR AND WATER CLEANED AND HEAVILY ROUGHENED SO AS TO EXPOSE COARSE AGGREGATES. ALL SURFACES TO RECEIVE CONCRETE SHALL BE MAINTAINED CONTINUOUSLY WET AT LEAST THREE HOURS IN ADVANCE OF
- ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, INSERTS AND ANY OTHER HARDWARE TO BE SET IN CONCRETE SHALL BE WELL SECURED IN POSITION PRIOR TO POURING OF CONCRETE.
- 12. ARCHITECT OR ENGINEER AND INSPECTOR SHALL BE NOTIFIED FOR REINFORCING INSPECTION 24 HOURS, MINIMUM, PRIOR TO PLACING ANY CONCRETE.
- CONTRACTOR SHALL OBTAIN APPROVAL FROM ARCHITECT/ENGINEER PRIOR TO PLACING SLEEVES, PIPES, DUCTS, CHASES, CORING AND OPENINGS ON OR THROUGH STRUCTURAL CONCRETE BEAMS, WALLS, FLOORS AND ROOF SLABS, UNLESS SPECIFICALLY DETAILED OR NOTED. ALL PIPES OR CONDUITS PASSING THROUGH CONCRETE MEMBERS SHALL BE SLEEVED WITH STANDARD STEEL PIPES. SEE DETAIL FOR SLEEVE AT FOUNDATION.
- 14. FORMWORK DESIGN AND REMOVAL SHALL CONFORM TO CBC SECTION 1906A.
- 18. WHERE ANY CONFLICT OCCURS BETWEEN THE REQUIREMENTS OF FEDERAL, STATE 15. VIBRATE ALL CONCRETE (INCLUDING SLABS ON GRADE) AS IT IS PLACED, WITH A MECHANICAL VIBRATOR OPERATED BY EXPERIENCED PERSONNEL. THE VIBRATOR SHALL BE USED TO CONSOLIDATE THE CONCRETE, NOT TRANSPORT IT. REINFORCING AND FORMS SHALL NOT BE VIBRATED.
 - 16. FORM REMOVAL: REMOVE FORMS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
 - SIDE FORMS OF FOOTINGS: MINIMUM 48 HOURS EDGE FORMS OF SLAB ON GRADE, STRIP I: MINIMUM 24 HOURS WALL/RETAINING WALL FORMS: 72 HOURS \$ 70% OF DESIGN STRENGTH COLUMN FORMS: 72 HOURS \$ 70% OF DESIGN STRENGTH
 - 17. CONCRETE SHALL NOT FREE FALL MORE THAN SIX FEET. USE TREMIE, PUMP OR OTHER APPROVED METHODS.
 - 18. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF 5 DAYS AFTER PLACEMENT.
 - 19. CONTRACTOR MAY USE CONCRETE ADMIXTURES AS A CONSTRUCTION MEANS AND METHODS TO EXECUTE "CONTRACT OR CONSTRUCTION DOCUMENTS". USE OF ADMIXTURE IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
 - 20. MIX DESIGNS SHALL BE PREPARED BY AN APPROVED TESTING LABORATORY, SIGNED BY A LICENSED ENGINEER AND SHALL BE SUBMITTED TO THE PROJECT STRUCTURAL ENGINEER OF RECORD FOR APPROVAL.
 - 23. ONLY ONE GRADE OF CONCRETE SHALL BE ALLOWED ON PROJECT SITE AT ANY

CONCRETE (CONTINUED)

- CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE SLABS, AND SHALL BE LOCATED SUCH THAT THE AREA WITHIN JOINTS DOES NOT EXCEED 225 SQ. FT., AND
- A. FOR ALL STRUCTURAL SLABS (SUSPENDED OR ONGRADE) WHERE ARCHITECTURAL "EXPOSED" CONDITIONS ARE DESIRED, GENERAL CONTRACTOR SHALL PROVIDE CONTROL JOINT LAYOUT FOR REVIEW BY ARCHITECT OR ENGINEER.
- 25. CONCRETE STRENGTH SHALL BE VERIFIED BY STANDARD CYLINDER TESTS (IN ACCORDANCE WITH CBC SECTION 1905A) MADE BY AN APPROVED TESTING LABORATORY.
- 26. CONCRETE PLACED WHEN THE AIR TEMPERATURE HAS FALLEN TO, OR IS EXPECTED TO FALL BELOW 40° SHALL CONFORM TO ACI 318-11 SECTION 5.12, AND ACI
- 27. CONCRETE PLACED DURING HOT WEATHER SHALL CONFORM TO ACI 318-11 SECTION
- 28. CONDUITS AND SLEEVES PLACED WITHIN STRUCTURAL CONCRETE SHALL NOT BE TIED DIRECTLY TO STRUCTURAL REINFORCEMENT. A. I" CONCRETE COVER SHALL BE MAINTAINED AROUND ALL REINFORCEMENT

- ALL REINFORCING STEEL SHALL BE DEFORMED INTERMEDIATE GRADE BARS CONFORMING TO ASTM A615, GRADE 60 (Fy = 60 K.S.I.) UNLESS OTHERWISE NOTED. A. GRADE 40 MAY BE USED FOR #3 BARS.
- REINFORCING STEEL SHALL NOT BE WELDED, UNLESS SPECIFICALLY NOTED OTHERWISE.
- WELDING OF REINFORGING STEEL (WHERE SPECIFICALLY NOTED OR DETAILED) SHALL CONFORM TO ACI 318-11, SECTION 3.5.2 AND AWS DI.4. WELDED REBAR SHALL BE LOW-ALLOY STEEL CONFORMING TO ASTM A706.
- TO HOLD REINFORCING BARS IN THEIR TRUE POSITION AND PREVENT DISPLACEMENT, STANDARD TIE AND ANCHORAGE DEVICES MUST BE PROVIDED. PLACING OF REINFORCEMENT SHALL CONFORM TO CBC SECTION 1907A.5.
- SHOP DRAWINGS FOR FABRICATION OF ANY REINFORCING STEEL SHALL BE APPROVED BY CONTRACTOR AND SUBMITTED TO ARCHITECT OR ENGINEER, FOR HIS REVIEW, PRIOR TO FABRICATION.
- REFER TO TYPICAL DETAILS FOR MINIMUM SPLICE LENGTH AND MINIMUM RADIUS OF BEND, OF REINFORCING STEEL
- STAGGER SPLICES IN REINFORCING STEEL, UNLESS SPECIFICALLY NOTED
- 8. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- FABRICATION, ERECTION AND PLACEMENT OF REINFORCING STEEL SHALL CONFORM TO CONCRETE REINFORCING STEEL INSTITUTE OF STANDARD PRACTICE.
- 10. ALL WELDED WIRE MESH SHALL CONFORM TO ASTM A185. LAP ALL WIRE MESH
- REINFORCING STEEL SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIAL LIKELY TO IMPAIR BOND.

STRUCTURAL STEEL AND WELDING

- ALL STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM TO AISC 360-10 AND
- AISC 341-10. A, FABRICATION OF ALL STRUCTURAL STEEL SHALL BE DONE IN THE SHOP OF AN APPROVED FABRICATOR. INSPECTION AND APPROVAL FOR FABRICATOR'S SHOPS USED FOR FABRICATION OF STRUCTURAL LOAD BEARING MEMBERS, COMPONENTS, MATERIALS OR ASSEMBLIES SHALL CONFORM TO CBC SECTION 1704A.2.
- 2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS: A. ANGLES, CHANNELS, PLATES, BARS, ROUNDS, AND OTHER MISCELLANEOUS SHAPES SHALL CONFORM TO ASTM A-36 AND SHALL HAVE A MINIMUM YIELD
- STRESS (Fu) OF 36 K.S.I B. WIDE-FLANGE SHAPES SHALL CONFORM TO ASTM A992 AND SHALL HAVE A MINIMUM YIELD STRESS (Fu) OF 50 K.S.I.
- C. STEEL PIPE COLUMNS SHALL BE WELDED SEAMLESS PIPE CONFORMING TO ASTM, A-53, GRADE B, AND SHALL HAVE A MINIMUM YIELD STRESS (Fy) OF 35 D. STRUCTURAL TUBE COLUMNS SHALL BE ASTM A500 GRADE B, AND SHALL
- HAVE A MINIMUM YIELD STRESS (Fy) OF 46 K.S.I. SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL STRUCTURAL STEEL AND WELDING, IN ACCORDANCE WITH CBC CHAPTER ITA.
- 4. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED AND WELDING IN ACCORDANCE WITH AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS (AISC 360-10) AND CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGE
- 5. ALL WELDING SHALL BE DONE BY QUALIFIED AND CERTIFIED WELDERS.
- 6. NO FIELD WELDING PERMITTED, UNLESS SPECIFICALLY NOTED OTHERWISE.
- SHOP DRAWINGS FOR THE FABRICATION OF ANY STRUCTURAL STEEL SHALL BE APPROVED BY CONTRACTOR AND SUBMITTED TO ARCHITECT OR ENGINEER FOR HIS REVIEW, PRIOR TO FABRICATION.
- NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. BURNING OF HOLES IS NOT PERMITTED.
- ALL STRUCTURAL STEEL SHALL BE PAINTED ONE SHOP COAT AND FIELD TOUCHED-UP, AS NECESSARY, WITH APPROVED "ZINC RICH" OR OTHER HIGH QUALITY EXTERIOR PRIMER.
- 10. ALL BOLTS SHALL CONFORM TO ASTM, A-307 (U.N.O.)
- II. ALL WELDING SHALL CONFORM TO 'AWS DI.I AND DI.8' SPECIFICATIONS FOR WELDING. (E-70XX ELECTRODES).
- 12. ALL HEADED STUDS (FOR CONCRETE ANCHORAGE) SHALL BE MANUFACTURED BY 'NELSON' OR APPROVED EQUAL.

ADJ.

BM.

BOT.

BRG.

CAC

CBC

CMU

COL

CONC

CONN.

CONT.

DSA

EOR

EQ.

(E)

FDN.

F.O.

FTG.

HDR.

HD.

HSS

FRMG.

- 24. UNLESS SPECIFICALLY DETAILED OR NOTED OTHERWISE, CONSTRUCTION AND 13. WHERE FILLET WELD SIZE IS NOT INDICATED, USE 'AWS' MINIMUM SIZE BASED ON THE THICKNESS OF THE THINNER PART BEING WELDED, AS SPECIFIED IN AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS (AISC 360-10), SECTION J2.2.
 - 14. ALL BUTT WELDS TO BE FULL PENETRATION, UNLESS SPECIFICALLY NOTED OTHERWISE.
 - WELDER QUALIFICATION REQUIREMENTS, WELDING PROCEDURE AND WELDING ELECTRODES FOR ALL STRUCTURAL STEEL (EXCEPT STRUCTURAL SHEET STEEL, SEE STEEL DECKING) SHALL CONFORM TO CBC SECTIONS 1704A.3.1 AND 2204A.1.
 - PROVIDE HOT DIP GALVANIZING OR 3" MINIMUM CONCRETE COVER AROUND ALL STRUCTURAL STEEL BELOW GRADE.
 - STRUCTURAL STEEL EMBEDDED INTO CONCRETE OR MASONRY SHALL BE

CAISSON/CONCRETE PIER & GRADE BEAM NOTES

STRUCTURAL STEEL AND WELDING (CONTINUED)

- EXCAVATIONS FOR DRILLED CAISSONS/PIER SHALL BE PERFORMED IN COMPLIANCE WITH LOCAL GRADING CODES AND ORDINANCES AS WELL AS CBC CHAPTERS IBA AND 33A.
- PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH CBC SECTION 1705A.7 AND TABLE 1705A.8.
- EXCAVATIONS FOR ALL DRILLED CAISSONS/PIERS SHALL BE APPROVED BY THE
- REINFORCEMENT FOR DRILLED CAISSONS/PIER SHALL BE APPROVED BY THE PROJECT INSPECTOR PRIOR TO PLACING IN CAISSON/PIER EXCAVATION.
- DE-WATER CAISSON/PIER FOOTINGS AND BUILDING EXCAVATION AS REQUIRED TO MAINTAIN DRY WORKING CONDITIONS.

PROJECT INSPECTOR PRIOR TO PLACEMENT OF CONCRETE.

- CAISSON/PIERS ARE TO BE POURED BY END OF DAY AFTER COMPLETION OF DRILLING OPERATION. ALL CONCRETE FOR A PARTICULAR CAISSON/PIER SHALL BE ON THE JOB SITE PRIOR TO DRILLING THE PILE HOLE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING, BRACING, ETC. NECESSARY TO SUPPORT CUT AND/OR FILL BANKS, AND EXISTING STRUCTURES DURING EXCAVATION, AND THE FORMING AND PLACEMENT OF CONCRETE.
- BOTTOM OF CAISSONS/PIERS SHALL BE THOROUGHLY CLEANED PRIOR TO

ABBREVIATIONS

Above

Adjacent

American Concrete Institute

, w	7 10130100110		
LHA	Authority Having Jurisdiction	JST.	Joist
AISC	American Institute of Steel		
	Construction	LL	Live Load
AITC	American Institute of Timber	LW	Lightweight
	Construction	LSL	Laminated Strand Lumber
AOR	Architect of Record	LVL	Laminated Veneer Lumber
APA	American Plywood		
	Association	MAX.	Maximum
APPROX.	Approximate(ly)	MB	Machine Bolt
ASCE	American Society of Civil	MBM	Metal Building Manufacture
7.002	Engineers	MECH.	Mechanical
ARCH.	Architect, Architecture	MSE	Mechanically Stabilized
ASTM		1101	Earth
ASIM	American Society of Testing	MFR.	
	and Materials		Manufactured, Manufacture
ATR	All Thread Rod	MIN.	Minimum
AWS	American Welding Society	MPH	Miles per Hour
		MTL.	Metal
BLDG.	Building		
BLK.	Block	(N)	New
BLKD.	Blocked	N.T.S.	Not to Scale
BLK'6	Blocking		
BM.	Beam	0.6	On Center

Inside Diameter

Inch, Inches

Interior

On Center Bottom of Over Outside Diameter Bottom OD Bearing OSB Oriented Strand Board Between OSHPD Office of State Health Planning and Development California Administrative OWSJ Open Web Steel Joist PEN. Cantilever Penetration

California Building Code Plate Cast-in-place PLYWD. Plywood Control Joint P.P Partial Joint Penetration Complete Joint Penetration PSI Pounds per Square Inch Pounds per Square Foot Centerline Cellina Parallel Strand Lumber (Paralam) Concrete Masonry Unit Pre-Engineered Metal Column Buildina Concrete Perforated Pressure Treated Douglas Connection PTDF CONST. Construction

Puddle Weld

Diameter Quality Assurance Quality Control Q.C. Double DCW Demand Critical Weld Reduced Beam Section DET. RDWD Redwood

Continue, Continuous

DEMO Demolition REBAR Reinforcing Bar DF Douglas Fir REINF. Reinforcement DIAG. Diagonal RET. Retaining Dead Load REQ'D Required

Division of State Architect

Engineer of Record

Foundation

Finish floor

Face of ___

Floor

Framina

Footina

Foot, Feet

DWGS. Drawinas Square Feet Sheet Fach SHT'G Sheathing ELEC. Electric, Electrical Similar ELEV. Elevation SLRS Seismic Load Resisting EMBED. Embedded, Embedment Edge Nailing Sheet Metal Screw

Select Structural EQUIP. Equipment STAGG'D Staggered E.W. Each Wau STD. Standard STL. Existina EXT. Exterior Shearwall Structural Engineer of Fabricated

SQ.

Record Structural Insulated Panel T#B Top and bottom T&G Tonque and Groove THR'D Threaded Top of ____ T.O. TYP.

Typical

Gauge UNBLKD. Unblocked GALV. Galvanized Unless Noted Otherwise GEOR Geotechnical Engineer of URM Unreinforced Masonry Record Glued-Laminated Beam **VERT**

GYP. BD. Gypsum Board VIF Verifu in Field Holdown Water/Cement Ratio HORIZ. Horizontal WD. Wood Hollow Steel Section Working Point

W.S.M.F. Welded Steel Moment International Building Code WSS Welded Steel Stud International Code Council WT. Insulated Concrete Form MMM Welded Wire Mesh

SEAL

PRIME CONSULTANT

ARCHITECTURE PLANNING

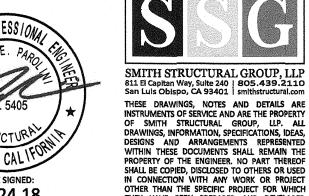
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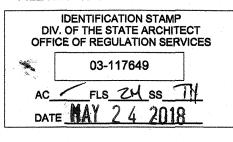


THEY HAVE BEEN PREPARED AND DEVELOPE WITHOUT THE EXPRESSED WRITTEN CONSENT O

AGENCY INFORMATION:

05.24.18

AGENCY TRACKING NO. <u>63321-238</u> FILE NO. 15-6



BAKERSFIELD CITY SCHOOL DISTRICT



NEW MARQUEE AT FREMONT **ELEMENTARY SCHOOL**

607 TEXAS ST., BAKERSFIELD, CA 93307 OPSC or OSHPD PROJ. NO: PROJECT NO: 16125.000 DRAWN BY: JLMH CHK'D BY: JMM ISSUE DATE: 05/24/2018

STRUCTURAL NOTES

SHEET NUMBER

SHEET TITLE

ISTRUCTURAL DESIGN VALUES

All values reported are unfactored and strength level, unless noted otherwise						
Gravity Design Data		Value				
Dead Loads:						
Electronic Sign, front and	back of steel column	1,600 lbs.				
Wind Design Data		Value				
Design Wind Speed (3-sec gus	et), V _{ULT}	115 mph				
Design Wind Speed (3-sec gus	it), V _{ASD}	85 mph				
Risk Category		Ш				
Exposure Category		C				
Applicable Internal Pressure (Coefficient	± 0.18				
Design Wind Pressure(s) for C (Not specifically designed by the Re modified by applicable factors per	gistered Design Professional, and to be	qz = 24.8 psf				
Earthquake Design Data		Value				
Risk Category		Ш				
Importance Factor, Ie		1.25				
Mapped Spectral Response Accelerations		Se= 1.10 g Si= 0.41 g				
Site Class		D				
Spectral Response Coefficien	ts	Sps= 0.776 g Sp= 0.43 g				
Seismic Design Category		D				
Analysis Procedure Used	Equivalent Lateral Force Proced (ASCE 7, 12.8)	dure				
Nonbuilding Structure, not Similar to Building System	Signs and Billboards					
Response Modification Fac	ctor	R= 3				
Seismic Response Coeffic	lent	Ce= 0.323				
Design Base Shear		V= Cs WD				
Geotechnical Design Dat	a	Value				
Geotechnical Report prepare 2013 California Building Code,						
Allowable Soil Bearing Pressu	re (DL + LL)	1,500 psf				
Design Passive Pressure, Pp		100 pcf				
Design Skin Friction, f₅		100 psf				

DINOCIONAL D	LOION YALULU)		LOIAL INJI		
All values reported are unfactored and			CENEDAL NOTEC			
Gravity Design Data	Value	6	SENERAL NOTES			
Dead Loads:				All Constal Insposition she		
Electronic Sign, front and b	ack of steel column	1,600 lbs.	1.	All Special Inspection should be and 1705.		
Nind Design Data		Value				
Design Wind Speed (3-sec gust), V _{ULT}	115 mph	2.	Where Special Inspection provided by an "approved		
Design Wind Speed (3-sec gust), V _{ASD}	85 mph		703.1 and 1704.1.		
Risk Category		Ш	3.	Special Inspectors shall I		
Exposure Category		C		shall furnish inspection rep		
Applicable Internal Pressure C	oefficient	± 0.18		the Architect or Enginee		
Design Wind Pressure(s) for Co (Not specifically designed by the Reg modified by applicable factors per A	istered Design Professional, and to be	qz = 24.8 psf		inspected was done in a Discrepancies shall be br for correction. If the dishall be brought to the a		
Earthquake Design Data	Value		the Architect or Engineer			
Risk Category		Ш		of work. A final report correction of any discrepa		
Importance Factor, Ie		1.25		at a point in time agreed		
Mapped Spectral Response Ac	celerations	S= 1.10 g S= 0.41 g	4.	Having Jurisdiction prior to		
Site Class	D	-	Special Inspectors shall be accordance with CBC Sect			
Spectral Response Coefficient	Sps= 0.776 g Sps= 0.43 g	5. Loca	Local Authority Having J			
Seismic Design Category		D		"Special Cases" in accorda		
Analysis Procedure Used	Equivalent Lateral Force Proced (ASCE 7, 12.8)	dure	6.	Contractor's responsibility:		

Special Inspection shall be provided in accordance with CBC Section

lhere Special Inspection is required, all inspection or testing shall be rovided by an "approved agency" in accordance with CBC Section 1702.1,

pecial inspectors shall keep records of inspections. The Special inspector hall furnish inspection reports to the Authority Having Jurisdiction, and to he Architect or Engineer of Record. Reports shall indicate that work spected was done in conformance to approved construction documents. viscrepancies shall be brought to the immediate attention of the contractor or correction. If the discrepancies are not corrected, the discrepancies hall be brought to the attention of the Authority Having Jurisdiction and to ne Architect or Engineer of Record prior to the completion of that phase work. A final report documenting required Special Inspections and orrection of any discrepancies noted in the inspections shall be submitted t a point in time agreed upon by the permit applicant and the Authority aving Jurisdiction prior to the start of work.

pecial Inspectors shall be approved by local Authority Having Jurisdiction in ccordance with CBC Section 1704.2.1.

ocal Authority Having Jurisdictions may require Special Inspection for Special Cases" in accordance with CBC Section 1705.1.1

ontractor's responsibility: Each contractor responsible for the construction of a Main Lateral-Force-Resisting System, listed in the Statement of Special Inspection shall submit a written statement of responsibility to the Authority Having Jurisdiction and the owner prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain the following:

A. Acknowledgement of awareness of the special requirements contained in the statement of special inspections;

B. Acknowledgement that control will be exercised to obtain conformance with the construction documents approved by the authority having

C. Procedures for exercised control within the contractor's organization, the method and frequency of reporting and the distribution of the reports; and

D. Identification and qualifications of the person(s) exercising such control and their position(s) in the organization.

Refer to Special Inspection requirements by other disciplines not included

CONCRETE CONSTRUCTION^{ab}

Ve	rification and Inspection	Continuous	Periodic
1.	Inspection of reinforcing steel including prestressing tendons, and placement.		✓
2.	Inspection of reinforcing steel welding in accordance with Table 1705.2.2. item 2b.d		
3.	Inspection of anchors cast in concrete where allowable loads have been increased or where strength design is used. ⁶		✓
4.	Inspection of anchors post installed in hardened concrete members. ^{b,f}		✓
5.	Verifying use of required design mix.9		✓
6.	At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete. ^h	✓	
7.	Inspection of concrete and shotcrete placement for proper application techniques. ¹	✓	·
8.	Inspection for maintenance of specified curing, temperature and techniques. ^J		✓
9.	Inspection of prestressed concrete: ^k a. Application of prestressing forces b. Grouting of bonded prestressing tendons in the Seismic Force-Resisting System	√	
10.	Erection of precast concrete members.		/
11.	Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs. ^m		✓
12.	Inspect formwork for shape, location and dimensions of the concrete member being formed."		/
			

Notes: Concrete Construction a. Where applicable, see also CBC Section 1705.11, Special Inspections for seismic resistance

. Specific requirements for Special Inspection shall be included in the research report for the anchor issued by an approved source in accordance with ACI 355.2 or other requirements. Where specific requirements are not provided, Special Inspection requirements shall be specified by the Registered Design Professional and shall be approved by the Building Official prior to the

5. k-Area^f

(if required)

Repair activies

welded joint or member

Backing removed and weld tabs removed

Document acceptance or rejection of

commencement of the work. ACI 318: 3.5, 7.1-7.7, IBC 1910.4

d. AWS DI.4, ACI 318, 3.5.2 e. ACI 318: 8.1.3, 21.2.8, IBC 1908.5, 1909.1 ACI 318: 3.8.6, 8.1.3, 21.2.8, IBC 1909.1

ACI 318: CH. 4, 5.2-5.4, IBC 1904.2, 1910.2, 1910.3 ASTM C172, ASTM C31, ACI 318: 5.6, 5.8, IBC 1910.10

ACI 318: 5.9, 5.10, IBC 1910.6, 1910.7, 1910.8

ACI 318: 5.11-5.13, IBC 1910.9 . ACI 318: 18.20, 18.18.4

ACI 318: CH. 16

m. ACI 318: 6.2 n. ACI 318: 6.1.1

o. CBC Section 1705.3 and Table 1705.3

SPECIAL INSPECTION

5	TEEL CONSTRUCTION ^{ab}		
Ve	rification and Inspection	Continuous	Periodic
Mat	erial verification of structural steel & cold-for	med steel deck	
l.	For structural steel, identification markings to conform to AISC 360.		/
2.	Material verification of cold-form steel deck:		
	a. Identification markings to conform to ASTM standards specified in the approved construction documents.		V
Mantaphandhianaca	b. Manufacturer's certified test reports.		/
3.	Inspection of welding:		
	a. Cold formed steel deck:		
	1) Floor and roof deck welds ^c		/
	b. Reinforcing steel: ^d		
Na Antiferica de Antiero de Antie	Verification of weldability of reinforcing steel other than ASTM A706.		/
	Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement.	✓	
	3) Shear reinforcement	√	
	4) Other reinforcing steel	Michael (Anna Anna Anna Anna Anna Anna Anna Ann	/
Insp	ection tasks prior to welding	Mesoveleracheroleración placebra entre esta HAMINO MARIA (Mesos escriber en Aramana)	
1.	Welding procedure specifications (WSPs) available	✓	
2.	Manufacturer certifications for welding consumables available	√	
3.	Material identification (type/grade)		1
4.	Welder identification system ^e		/
5.	Fit-up of groove welds (including joint geometry) Joint preparation, dimensions, cleanliness, tacking, backing type and fit		✓
6.	Configuration and finish of access holes		1
7.	Fit-up of fillet welds Dimensions, cleanliness, tacking		/
8.	Check welding equipment	The state of the s	
Insp	vection tasks during welding		
 .	Use of qualified welders		/
2.	Control and handling of welding consumables Packaging, exposure control		
3.	No welding over cracked tack welds	мых может и в обосновного полиции в достом и подобления посторования и обосновного в обосновного в обосновного	1
4.	Environmental conditions Wind speed within limits, precipitation and temperature		✓
5.	WPS followed Settings on welding equipment, travel speed, selected welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained min./max./proper position (F, V, H, OH)		✓
6.	Welding techniques Interpass and final cleaning, each pass within profile limitations		/
Insp	ection tasks after welding		
1.	Welds cleaned		/
2.	Size, length and location of welds	/	
3.	Welds meet visual acceptance criteria Crack prohibition, weld/base-metal fusion, crater cross section, weld profiles, weld size, undercut, porosity	√	
	1 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		1

	STEEL CONSTRUCTION, CONTI	NUED	
dic	Verification and Inspection	Continuous	Periodic
	Inspection tasks prior to bolting ^g		
	l. Manufacturer's certifications available for fastener materials	✓	
	Fasteners marked in accordance with ASTM requirements		/
	3. Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)		/
	4. Proper bolting procedure selected for joint detail		/
	5. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements		/
	6. Pre-installation certification testing by installation personnel observed and documented for fastener assemblies and methods used		/
	7. Proper storage provided for bolts, nuts, washer and other fastener components		/
	Inspection tasks during bolting	***************************************	
	I. Fastener assemblies, of suitable condition, placed in all holes and washers (If required) are positioned as required	en Personal Province de Constantino de La Constantino de Constantino de Constantino de Constantino de Constanti La Constantino de Co	/
	Joint brought to the snug-tight condition prior to the pretensioning operation		/
	3. Fastener component not turned by the wrench prevented from rotating		/
	4. Fasteners are pretensioned in accordance with the RCSC specification, progressing systematically from the most rigid point toward the free edges, see Minimum Bolt Pretension table below		/
	Inspection tasks after boiling		
	Document acceptance or rejection of bolted connections	/	
	Notes: Steel Construction a. CBC Section 1705.2 and Table 1705.2.2 b. CBC Section 1707.11.1		
	c. AWS DI.3 d. AWS DI.4, ACI 318: Section 3.5.2 e. The fabricator or erector, as applicable, si welder what has welded a joint or member of		
	shall be the low-stress type. f. When welding of doubler plates, continuity p performed in the k-area, visually inspect th inches of the weld All methods of installation for high strength	e web k-area for	cracks within 3
	g. All methods of installation for high strength pre-tension by a Skidmore-Welhelm calibrat bolts used (see minimum pre-tension chart b	or for each batch	or source of
	Minimum Bolt Pretension (kips)		

Minimum Bolt Pretension (kips)		
Bolt size , inches	Group A (A325, etc.)	Group B (A490, etc.)
½" Diameter	12	15
%″ Dlameter	19	24
3/4" Diameter	28	35
%" Diameter	39	49
l" Diameter	51	64
Ve" Diameter	56	80
14" Diameter	71	102
13%" Diameter	85	121
比" Diameter	103	148

CAST-IN-PLACE DEEP FOUNDATIONS®

a. CBC Section 1705.8 and Table 1705.8

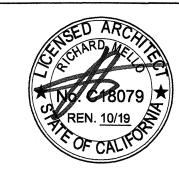
Verification and Inspection		Continuous	Periodic	
I.	Observe drilling operations and maintain complete and accurate records for each element.	· ✓		
2.	Verify placement locations and plumbness, confirm element diameters, bell diameters (If applicable), lengths, embedment into bedrock (If applicable) and adequate end bearing strata capacity. record concrete or grout volumes.	✓		
3.	For concrete elements, perform additional inspections in accordance with CBC Section 1705.3.			

PRIME CONSULTANT

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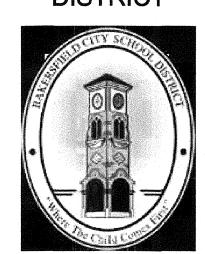
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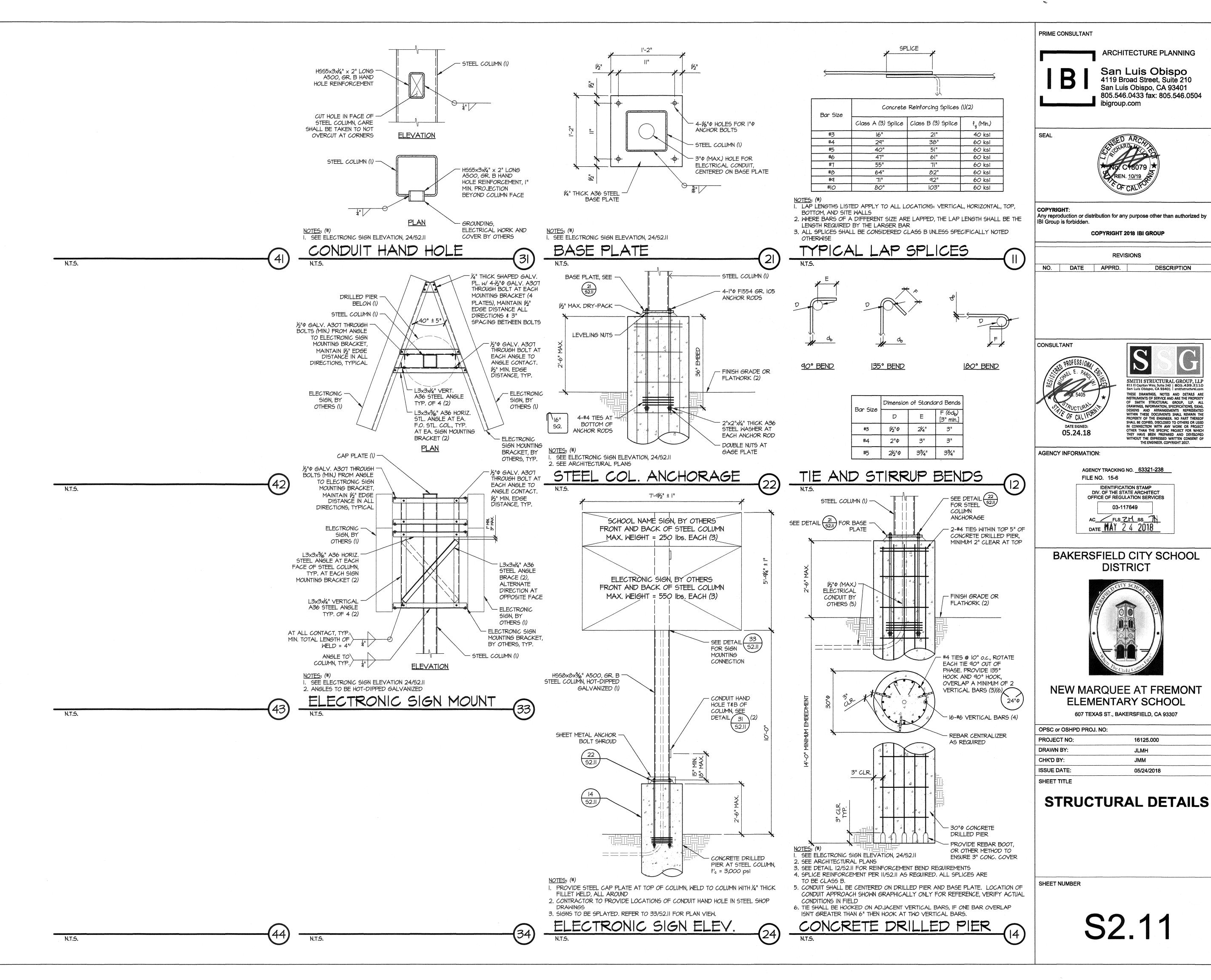


NEW MARQUEE AT FREMONT **ELEMENTARY SCHOOL**

607 TEXAS ST., BAKERSFIELD, CA 93307 OPSC or OSHPD PROJ. NO: PROJECT NO: 16125.000 DRAWN BY: JLMH CHK'D BY: JMM ISSUE DATE: 05/24/2018

STRUCTURAL NOTES

SHEET NUMBER



16125.000

05/24/2018

JLMH JMM

ARCHITECTURE PLANNING

San Luis Obispo

San Luis Obispo, CA 93401

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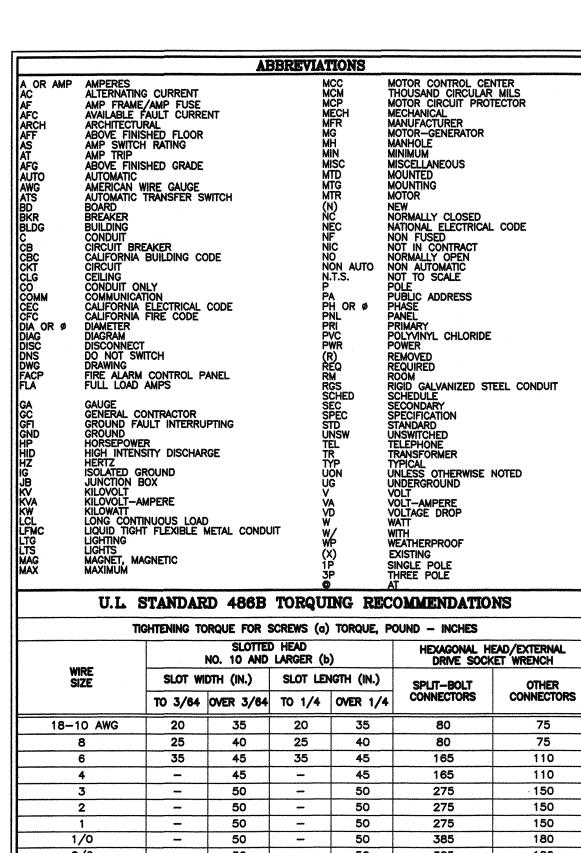
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1100 600 -- -- --THIS TABLE GIVES RECOMMENDED CONNECTOR INSTALLING TORQUES FOR COPPER AND ALUMINUM CONDUCTORS. THEY ARE FOR GUIDANCE ONLY WHERE NO TIGHTENING INFORMATION IS AVAILABLE AND SHOULD NOT BE USED TO REPLACE MANUFACTURER'S INSTRUCTIONS WHICH SHOULD ALWAYS BE

- | -

-

4/0

250 kcmil

400

1000

(a) CLAMPING SCREWS WITH MULTIPLE TIGHTENING MEANS; FOR EXAMPLE FOR A SLOTTED HEXAGONAL HEAD SCREW, USE THE HIGHEST TORQUE VALUE ASSOCIATED WITH THE DIFFERENT TIGHTENING MEANS. (b) FOR VALUES OF SLOT WIDTH OR LENGTH OTHER THAN THOSE SPECIFIED, SELECT THE LARGEST TORQUE VALUE ASSOCIATED WITH CONDUCTOR SIZE.

250

325

325

325

375

375

500

600

600

600

1000

1100

1100

CEC ART. 310 CONDUCTOR DERATING

NEC #310.15 (B)(2)(a) ADJUSTMENT FACTORS (a) MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE. WHERE THE NUMBER OF CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE EXCEEDS THREE, THE ALLOWABLE AMPACITIES SHALL BE REDUCED AS SHOWN IN THE FOLLOWING TABLE: PERCENT OF VALUES IN TABLES AS NUMBER OF ADJUSTED FOR AMBIENT TEMPERATURE IF NECESSARY CONDUCTORS
4 THROUGH 6

THROUGH

THROUGH

41 AND ABOVE

WHERE SINGLE CONDUCTORS OR MULTICONDUCTOR CABLES ARE STACKED OR BUNDLED LONGER THAN 24 INCHES (610 mm) WITHOUT MAINTAINING SPACING AND ARE NOT INSTALLED IN RACEWAYS, THE ALLOWABLE AMPACITY OF EACH CONDUCTOR SHALL BE REDUCED AS SHOWN IN THE ABOVE TABLE. EXCEPTION NO. 1: WHERE CONDUCTORS OF DIFFERENT SYSTEMS, AS PROVIDED IN SECTION 300-3, ARE INSTALLED IN A COMMON RACEWAY OR CABLE, THE DERATING FACTORS SHOWN ABOVE SHALL APPLY TO THE NUMBER OF POWER AND LIGHTING (ARTICLES 210, 215, 220, AND 230) CONDUCTORS ONLY. EXCEPTION NO. 2: FOR CONDUCTORS INSTALLED IN CABLE TRAYS, THE PROVISIONS OF SECTION 392.11

EXCEPTION NO. 3: DERATING FACTORS SHALL NOT APPLY TO CONDUCTORS IN NIPPLES HAVING A LENGTH NOT EXCEEDING 24 INCHES (600mm).

EXCEPTION NO.4: DERATING FACTORS SHALL NOT APPLY TO UNDERGROUND CONDUCTORS ENTERING OR LEAVING AN OUTDOOR TRENCH IF THOSE CONDUCTORS HAVE PHYSICAL PROTECTION IN THE FORM OF RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT, OR RIGID NONMETALLIC CONDUIT HAVING A LENGTH NOT EXCEEDING 10 FEET (3,05m) ABOVE GRADE AND THENUMBER OF CONDUCTORS DOES NOT EXCEED FOUR.

CEC	WIRE FI	LL TABI	E 370-	16		
JUNCTION BOX DIMENSION,	MIN. CU. IN.		MAXIMUM NI	JMBER OF C	CONDUCTORS	}
INCHES TRADE SIZE OR TYPE	CAP.	NO. 14	NO. 12	NO. 10	NO. 8	NO. 6
4 x1-1/4 ROUND OR OCTAGONAL	12.5	6	5	5	4	2
4 X1-1/2 ROUND OR OCTAGONAL	15.5	7	6	6	5	3
4 X2-1/8 ROUND OR OCTAGONAL	21.5	10	9	8	7	4
4 x1-1/4 SQUARE	18.0	9	8	7	6	3
4 X1-1/2 SQUARE	21.0	10	9	8	7	4
4 X2-1/8 SQUARE	30.3	15	13	12	10	6
4-11/16 x1-1/4 SQUARE	25.5	12	11	10	8	5
4-11/16 X1-1/2 SQUARE	29.5	14	13	11	9	5
4-11/16 X2-1/8 SQUARE	42.0	21	18	16	14	8
3 x2 x1-1/2 DEVICE	7.5	3	3	3	2	1
3 x2 x2 DEVICE	10.0	5	4	4	3	2
3 x2 x2-1/4 DEVICE	10.5	5	4	4	3	2
3 x2 x2-1/2 DEVICE	12.5	6	5	5	4	2
3 x2 x2-3/4 DEVICE	14.0	7	6	5	4	2
3 x2 x3-1/2 DEVICE	18.0	9	8	7	6	3
4 X2-1/8 X1-1/2 DEVICE	10.3	5	4	4	3	2
4 X2-1/8 X1-7/8 DEVICE	13.0	6	5	5	4	2
4 X2-1/8 X2-1/8 DEVICE	14.5	7	6	5	4	2
3-3/4 x2 x2-1/2 MASONRY BOX / GANG	14.0	7	8	5	4	2
3-3/4 x2 x3-1/2 MASONRY BOX / GANG FS - MINIMUM INTERNAL DEPTH	21.0	10	9	8	7	4
1-3/4 SINGLE COVER / GANG	13.5	6	6	5	4	2
FD — MINIMUM INTERNAL DEPTH 2-3/8 SINGLE COVER / GANG	18.0	9	8	7	6	3
FS - MINIMUM INTERNAL DEPTH 1-3/4 MULTIPLE COVER / GANG	18.0	9	8	7	6	3
FD — MINIMUM INTERNAL DEPTH 2-3/8 MULTIPLE COVER / GANG	24.0	12	10	9	8	4

SCOPE:
THE DRAWINGS AND THESE GENERAL NOTES DESCRIBE THE SCOPE OF WORK AND SYSTEMS. THE MATERIAL REQUIRED FOR THE WORK SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED, UNLESS SPECIFICALLY NOTED OTHERWISE. THE WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING PRINCIPAL SYSTEMS AND EQUIPMENT.

GENERAL ELECTRICAL NOTES

PERMITS AND CHARGES: OBTAIN AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS, INSPECTION FEES, AND OTHER CHARGES BY AGENCIES HAVING JURISDICTION. REGULATIONS AND CODES: PROVIDE AND INSTALL ALL MATERIALS IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE, CALIFORNIA

ADMINISTRATIVE CODE TITLE 8, AND OTHER CODES AND REGULATIONS HAVING JURISDICTION. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE INSPECTING AUTHORITY AND MANUFACTURERS VERIFYING EXISTING CONDITIONS:
BEFORE SUBMITTING BID, BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE
BUILDING SITE. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER. BY
THE ACT OF SUBMITTING A BID PROPOSAL FOR THE WORK, THE CONTRACTOR SHALL BE DEEMED TO HAVE
MADE SUCH STUDY AND EXAMINATION AND TO ACCEPT ALL CONDITIONS PRESENT AT THE SITE. NO REQUEST
FOR ADDITIONAL PAYMENT WILL BE CONSIDERED AS VALID, DUE TO FAILURE TO ALLOW FOR CONDITIONS

COORDINATE ALL WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTIONS REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT. ELECTRICAL EQUIPMENT LOCATIONS INDICATED ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION SHALL BE

SERVICE CONTINUITY:
UNINTERRUPTED EXISTING ELECTRICAL POWER SHALL BE MAINTAINED TO OTHER TRADES FOR TEMPORARY
POWER AREAS OF THE SITE DURING CONSTRUCTION. PROVIDE ANY TEMPORARY SERVICES AS MAY BE
REQUIRED. IDENTIFY AT BID TIME, ALL WORK TO BE DONE ON PREMIUM TIME AND THE TOTAL OVERTIME

PROJECT. RECORD DRAWINGS TO THE OWNER WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL BE SIGNED AND DATED BY CONTRACTOR PRIOR TO RELEASE OF

MARK PROJECT RECORD DOCUMENTS DAILY TO INDICATE ALL CHANGES MADE IN THE FIELD A.) IN ADDITION TO GENERAL REQUIREMENTS OF PROJECT RECORD DRAWINGS, INDICATE ON DRAWINGS, CHANGES OF EQUIPMENT LOCATIONS AND RATINGS, TRIP SIZES, AND SETTINGS ON CIRCUIT BREAKERS, ALTERATIONS IN RACEWAY RUNS AND SIZES, CHANGES IN WIRE SIZES, CIRCUIT DESIGNATIONS, INSTALLATION DETAILS, ONE—LINE DIAGRAMS, CONTROL DIAGRAMS AND SCHEDULES.

UNDERGROUND CONDUIT STUBBED-OUT FOR FUTURE USE, UNDERGROUND FEEDER CONDUITS, AND FEEDER PULL BOX LOCATIONS USING BUILDING LINES BY INDICATING ON THE PROJECT RECORD DRAWINGS. AT THE COMPLETION OF UNDERGROUND CONDUIT INSTALLATION, PROVIDE UNDERGROUND CONDUIT RECORD DOCUMENTS TO OWNER'S REPRESENTATIVE.

A.) USE THE SAME SYMBOLS AND FOLLOW THE SAME DRAFTING PROCEDURES USED ON THE CONTRACT

TWO COPIES, IN BINDER FORM, OF ALL TEST RESULTS AS REQUIRED BY THESE DOCUMENTS. TWO COPIES OF LOCAL AND/OR STATE CODE ENFORCING AUTHORITIES FINAL INSPECTION CERTIFICATES. FIRE ALARM SYSTEM RECORDS AND TESTING REPORTS AS OUTLINED IN NFPA 72, CHAPTER 10. TWO COPIES, IN BINDER FORM, OF ELECTRICAL EQUIPMENT CUT SHEETS, MANUFACTURER'S INSTALLATION INSTRUCTIONS, WARRANTY CERTIFICATES, AND PRODUCT LITERATURE FOR ALL PRODUCTS UTILIZED ON

CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS ON ALL WORK AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR.

SHOP DRAWINGS:
SUBMIT SHOP DRAWINGS AND MATERIAL LIST FOR REVIEW PRIOR TO COMMENCING ANY WORK. ALL EQUIPMENT
TO BEAR U.L. LABEL OR THAT OF ANOTHER ACCEPTABLE TESTING LABORATORY. SHOP DRAWINGS MUST BE
STAMPED BY THE CONTRACTOR FOR CONFORMANCE PRIOR TO SUBMITTAL.
SUBMIT SIX SETS OF SHOP DRAWINGS FOR REVIEW PRIOR TO PURCHASING ALL BREAKER MOUNTING
HARDWARE, DISCONNECT SWITCHES, FUSES, CONTROLLERS, LIGHTING FIXTURES, LIGHT SWITCHES,

CONTRACTOR'S BID SHALL BE BASED ON ALL WORK SHOWN ON THE PLANS AND AS SPECIFIED. IF CONTRACTOR PROPOSES TO SUBSTITUTE FOR EQUIPMENT SPECIFIED, HE SHALL SUBMIT HIS REQUEST FOR CONSIDERATION OF THE OWNER AND ENGINEER PRIOR TO BID IN WRITING. ALL SUBSTITUTIONS SHALL BE EVIEWED BY THE ENGINEER IN WRITING. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM OMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS, AND THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS/HER OWN EXPENSE FOR ANY CHARGES RESULTING FROM HIS PROPOSED SUBSTITUTIONS WHICH AFFECT OTHER PARTS OF HIS/HER OWN WORK, THE OWNER, ENGINEER OF RECORD OR THE WORK OF OTHER CONTRACTORS.

ALL MATERIALS SHALL BE NEW AND LISTED BY UNDERWRITERS LABORATORY (U.L.).
ALL WORK AND MATERIAL SHALL CONFORM TO THE LATEST RULES OF THE GOVERNING ELECTRICAL CODE AND INSTALLATION SHALL BE OF THE LATEST INDUSTRY STANDARDS OF WORKMANSHIP.

CONDUITS:

CONDUIT SHALL BE EMT, PVC, IMC, RIGID OR FLEXIBLE STEEL TYPE. CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH UL-1. A GROUND WIRE IS REQUIRED IN ALL FLEXIBLE CONDUIT AND UNDERGROUND CONDUIT. BUSHINGS SHALL BE INSTALLED ON ALL COMMUNICATION, TELEPHONE & SPEAKER CONDUITS. PROVIDE 3/16" NYLON PULL STRING IN ALL EMPTY CONDUITS. NO MC, BX, OR AC90 SHALL BE PERMITTED.

SWITCHES AND RECEPTACLES:
PROVIDE 20 AMP NEMA RATED SWITCHES AND RECEPTACLES OF SPECIFICATION GRADE. ALL SWITCHES SHALL BE RATED 120 AND/OR 277 VOLT AND RECEPTACLES SHALL BE NEMA 5-20R. IN ALL OFFICES AND OFFICE AREAS, DEVICES SHALL BE DECORA TYPE WITH COLOR SELECTION BY CONTRACTOR/OWNERS REPRESENTATIVE.

FEEDERS AND BRANCH CIRCUITS IDENTIFICATION:
IDENTIFY FEEDERS WITH THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER—CURRENT DEVICE, LOAD END, AND IN PULL BOXES WITH E-Z CODE OR OTHER APPROVED WIRE MARKER.
IDENTIFY BRANCH CIRCUITS WITH I.D. MARKERS, THE CORRESPONDING CIRCUIT DESIGNATION AT
THE OVER-CURRENT DEVICE, AT ALL SPLICES, IN JUNCTION BOXES, AND IN OUTLETS. USE
PLASTIC COATED SELF-STICKING MARKERS SUCH AS THOMAS & BETTS E-Z CODE FOR
IDENTIFICATION OF CONDUCTORS. IDENTIFY SIGNAL & COMMUNICATION CABLES AT TERMINAL AND OUTLET.

CONDUCTORS:
DELIVER ALL CONDUCTORS TO THE JOB SITE IN ORIGINAL UNBROKEN CARTON OR REEL, PROPERLY TAGGED WITH U.L. LABEL, SIZE, TYPE, MANUFACTURER, TRADE NAME AND THE DATE OF MANUFACTURE. CONDUCTORS MUST BE MANUFACTURED WITHIN 6 MONTHS. PROVIDE COPPER CONDUCTORS #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. PROVIDE STRANDED COPPER CONDUCTORS FOR ALL WIRING. USE CONDUCTORS WITH THHN/THWN 600 VOLTS INSULATION, UNLESS OTHERWISE NOTED.

PANELBOARDS:
DISTRIBUTION AND LIGHTING PANELBOARDS WITHIN PROJECT AREA SHALL BE OF THE COPPER BUS THREE PHASE, FOUR WIRE DISTRIBUTED PHASING TYPE. CIRCUITING SHALL BE ARRANGED TO PROVIDE, AS NEARLY AS POSSIBLE, AN EVENLY BALANCED LOAD ON ALL PHASES. PANELBOARDS SHALL BE BOLT-ON CIRCUIT BREAKER TYPE. AVAILABLE FAULT CURRENT IS STATED ON PANELBOARD SCHEDULE. PROVIDE PANEL IDENTIFICATION NAMEPLATE (ENGRAVED ON -ADHESIVE 1/2" MINIMUM LETTERS) AND TYPEWRITTEN LIST OF CIRCUITS IN THE DIRECTORY

STRUCTURAL SUPPORT:
EACH SECTION OF FLOOR MOUNTED SWITCHBOARD, DISTRIBUTION BOARD, MCC, ETC. SHALL BE BOLTED TO THE CONCRETE HOUSEKEEPING PAD USING (6) 3/4"-10 GRADE 2 BOLTS AND CONICAL WASHERS TORQUED TO 70LB-FT. PROVIDE MINIMUM 4000 PSI STRENGTH CONCRETE BELOW ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. TIE THE TOP OF ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT TO THE BUILDING STRUCTURE IN A SEISMICALLY APPROVED MANNER.

DEMOLITION:
NOTIFY THE OWNER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, AND WHICH IS NOT INDICATED ON THE PLANS. 1. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY THE OWNER, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY THE OWNER TO BE SCRAP.

2. ALL DEVICES, CIRCUIT CONDUCTORS, FEEDERS, ETC., WHEN NOTED TO BE REMOVED, SHALL BE REMOVED TO THE LAST ACTIVE DEVICE. ALL OVER-CURRENT PROTECTION AND DISCONNECT DEVICES NO LONGER UTILIZED BUT REMAINING AS LAST ACTIVE DEVICE SHALL BE LABELED AS "SPARE". COORDINATE ALL OUTAGES WITH OWNER'S REPRESENTATIVE

CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE CONFINES AS MUCH AS POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THE WORK 1.) EQUIPMENT, MATERIALS AND SUPPLIES REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL

LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.

INDICATED OR HEREIN SPECIFIED. ALL HOLES, CURBS, ETC., IN FLOORS, CEILINGS AND WALLS SHALL BE PATCHED, UNLESS INDICATED OTHERWISE. PAINT ALL NEW ELECTRICAL RACEWAYS, CABINETS, ENCLOSURES, AND FITTINGS PENETRATING INTO FIRE RATED ENVELOPES, SPACES, ETC. 3.) ALL CONDUIT RUNS SHALL BE CONCEALED, UNLESS SHOWN OTHERWISE. PROVIDE A PULL WIRE IN ALL EMPTY CONDUITS. 4.) EXISTING CONDITION SHOWN IS FROM AVAILABLE RECORD DRAWINGS AND VISUAL FIELD SURVEY AND IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITION AT SITE. 5.) ALL WORK SHOWN IS NEW UNLESS SPECIFICALLY INDICATED AS EXISTING (X). ALL ELECTRICAL EQUIPMENT MOUNTING AND ANCHORAGE MUST CONFORM WITH LOCAL AND STATE SEISMIC CODES. PROVIDE RACEWAYS, AND ALL MATERIAL INCLUDING PULLING CABLE IN EACH RACEWAY AS REQUIRED FOR THE TELEPHONE SYSTEM PER THE SERVING TELEPHONE COMPANY REQUIREMENTS. GROUNDING AND BONDING:
FURNISH AND INSTALL COMPLETE BONDING AND GROUNDING SYSTEM AS REQUIRED BY CODES. CONTINUITY
OF GROUNDING SHALL BE MAINTAINED MECHANICALLY AND ELECTRICALLY THROUGHOUT THE SYSTEM. A GREEN
GROUNDING CODE SIZED CONDUCTOR SHALL BE CARRIED THROUGH IN ALL CONDUITS.

IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS THAT A COMPLETE AND WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL THE EQUIPMENT DESCRIBED OR SHOWN AS BEING IN THIS CONTRACT. TOWARD THIS END FURNISH ALL LABOR AND TOOLS NECESSARY AND FURNISH AND INSTALL ALL APPARATUS, MATERIALS AND EQUIPMENT IN A FASHION COMPLYING WITH ALL APPLICABLE CODES, INCLUDING ITEMS REQUIRED BUT NOT NORMALLY SHOWN, SUCH AS LAMPS, COUPLINGS, HANGERS, BRACKETS, CLAMPS, BOXES,

1.) PROCURE ALL PERMITS FROM LEGALLY CONSTITUTED AUTHORITIES, ARRANGE FOR ALL INSPECTIONS AND PAY ALL COSTS FOR FEES AND TESTS IN CONNECTION THEREWITH. COMPLY WITH CODES: NOTHING IN THESE DRAWINGS AUTHORIZES DEVIATION FROM APPLICABLE CODES. 2.) DETERMINE EXACT ROUTING OF CONCEALED FEEDERS AND BRANCH CIRCUIT HOMERUNS IN COOPERATION WITH OTHER TRADES TO SIMPLIFY INSTALLATION WHEREVER POSSIBLE BUT SUBJECT TO APPROVAL OF

3.) Provide a code approved disconnect switch or circuit breaker within sight of every motor AND FEED MOTORS NOT EQUIPPED WITH "BUILT IN" PROTECTION THROUGH A MAGNETIC OR MANUAL STARTER WITH OVERLOAD HEATERS SIZED TO COMPLY WITH MOTOR MANUFACTURER'S RECOMMENDATIONS AND

4.) FOR CONNECTIONS TO EXHAUST FANS, PUMPS, COMPRESSORS, SPACE HEATERS, WATER HEATERS, AQUASTATS, SOLENOID VALVES, AND OTHER MECHANICAL EQUIPMENT AND FOR CONDUITS AND WIRE REQUIRED BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS, REFER TO MECHANICAL PLANS AND DETERMINE EXACT LOCATIONS UNDER DIRECTION OF HEATING AND VENTILATING CONTRACTOR. 5.) DO NOT RUN ANY CONDUIT IN SLAB IF ITS OUTSIDE DIAMETER EXCEEDS 1/3 THE THICKNESS OF THE SLAB. LOCATE CONDUITS WITHIN THE MIDDLE OF THE SLAB. WHERE CONDUITS ARE GROUPED IN PARALLEL RUNS, SPACE THEM 3" OR MORE APART. WHERE CONDUITS CROSS EACH OTHER, THICKEN THE SLAB

PROPORTIONATELY OVER A HORIZONTAL AREA EQUAL TO TEN TIMES THE DIAMETER OF THE LARGEST CONDUIT SIZE OUTLET BOXES IN CONFORMITY WITH CODE FOR NUMBER AND GUAGE OF CONDUCTORS THEREIN. EXCEPT WHERE NOTED TO BE LARGER. MINIMUM BOX SIZE SHALL BE 4" SQUARE BY 1-1/2" DEEP.

7.) ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. EXPOSED CONDUIT SHALL BE IN STRAIGHT LINES PARALLEL WITH, OR AT RIGHT ANGLES TO, COLUMN LINES OR BEAMS AND SEPARATED BY AT LEAST THREE (3) INCHES FROM WATER LINES WHENEVER THEY RUN ALONG SIDE OR ACROSS SUCH LINES. CONDUIT SHALL NOT BE RUN BELOW CABLE TRAYS OR LIGHT FIXTURES WITHOUT SPECIFIC APPROVAL OF THE OWNER'S REPRESENTATIVE. HANGERS SHALL BE FASTENED TO STEEL, CONCRETE VISUAL ENVIRONMENT. ALL HANGERS AND SUPPORTS EXPOSED TO PUBLIC VIEW MUST BE SHOWN IN DETAIL ON PLANS SUBMITTED TO LANDLORD FOR APPROVAL OF APPEARANCE. ALL HANGERS MUST BE UNIFORMLY SPACED AND NEATLY INSTALLED WITH NO EXCESS MATERIAL BEYOND WHAT IS REQUIRED FOR THE SUPPORT FUNCTION. CONTRACTOR SHALL SELECT ACCESSORIES AND HARDWARE WITH A SMOOTH, NEAT FINISHED APPEARANCE AND PAINT ALL EXPOSED CONDUIT HANGERS TO MATCH THE ADJACENT FINISHES.

8.) ALL WALL SWITCHES AND RECEPTACLES SHALL BE MOUNTED BETWEEN 18" AND 48" PER A.D.A. REQUIREMENTS UNLESS OTHERWISE NOTED.

ELECTRICAL SWITCHES: CONTROLS AND SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES OR COOLING, HEATING AND VENTILATING EQUIPMENT, SHALL BE LOCATED NO MORE THAN 48" MEASURED FROM THE TOP OF OUTLET BOX NOR LESS THAN 15" MEASURED FROM THE BOTTOM OF THE OUTLET BOX TO THE LEVEL OF THE FINISHED

ELECTRICAL RECEPTACLE OUTLETS: ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES, SHALL BE LOCATED NO MORE THAN 48" MEASURED FROM THE TOP OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING NOR LESS THAN 15" MEASURED FROM THE BOTTOM OF THE RECEPTACLE OUTLET BOX OR RECEPTACLE HOUSING TO THE LEVEL OF THE FINISHED FLOOR OR WORKING PLATFORM.

9.) CONTRACTOR SHALL EXAMINE PLANS AND VERIFY IN FIELD LOCATIONS OF ALL FIRE RATED WALLS, CEILINGS AND FLOORS. CONTRACTOR SHALL SEAL ALL ELECTRICAL SYSTEM PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS AND FLOORS WITH U.L. LISTED MATERIAL APPROVED BY THE AUTHORITY HAVING

10.) SURFACE MOUNTED RACEWAY COMPLETENESS: CONTRACTOR SHALL PROVIDE ALL RACEWAY, FITTINGS, SUPPORTS, BOXES, DEVICES, PLATES ETC. NECESSARY FOR A COMPLETE AND WORKABLE SURFACE MOUNTED ELECTRICAL RACEWAY SYSTEM. PRIOR TO INSTALLATION, CONTRACTOR SHALL PERFORM A PRE-INSTALLATION SURFACE MOUNTED RACEWAY JOB WALK WITH OWNER & ARCHITECT FOR CONTRACTOR TO FIELD VERIFY EXACT ROUTING OF ANY & ALL SURFACE MOUNTED RACEWAYS.

ELECTRICAL SYSTEM ANCHORAGE:
ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR SEISMICALLY ANCHORED BY THE CONTRACTOR TO RESIST SEISMIC FORCES ACTING IN ANY DIRECTION. PROVIDE COMPLETE SEISMIC ANCHORAGE AND BRACING FOR SUPPORT OF ELECTRICAL RACEWAYS, CONDUITS, CABLE TRAYS, ELECTRICAL EQUIPMENT, ETC. IN ACCORDANCE WITH THE UNIFORM BUILDING CODE WITH CALIFORNIA AMENDMENTS.

THE SEISMIC BRACING AND ANCHORAGE SHALL BE PROVIDED PER THE LATEST EDITION OF THE SMACNA SEISMIC RESTRAINT GUIDELINES. ALL ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA GUIDELINES. WHERE BRACING DETAILS ARE NOT SHOWN ON THE PLANS, THE FIELD INSTALLATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEERS, AND THE ARCHITECT. A COPY OF LATEST SMACNA GUIDELINES SHALL BE KEPT AT THE JOB SITE AT ALL TIMES.

FIRE ALARM SYSTEM BY CONTRACTOR CONTRACTOR SHALL FURNISH AND INSTALL A FIRE ALARM SYSTEM FOR THE PROJECT AREA TO INCLUDE:

A.) SMOKE DETECTORS IN ALL REQUIRED AREAS 3.) HEAT DETECTORS IN ALL REQUIRED AREAS) DUCT DETECTORS IN ALL REQUIRED SPACES

.) STROBES/ALARMS IN ALL REQUIRED AREAS .) PULL STATIONS AT ALL LEGAL FIRE EXITS — WHERE REQUIRED) TAMPER AND FLOW SWITCHES AT FIRE SPRINKLER RISERS AND BACKFLOW PREVENTERS G.) BRANCH CIRCUIT AND CONTROL WIRING TO FIRE SPRINKLER ALARM BELLS

1. CONTRACTOR SHALL SUBMIT FOR THE OWNER'S SIGNED APPROVAL, APPROVED FIRE DEPARTMENT FIRE ALARM DRAWINGS FOR THE PROJECT SPACE.

H.) SMOKE/FIRE DAMPER/HVAC UNIT SHUT-DOWN BRANCH CIRCUIT WIRING, CONTROL WIRING, CONTROL

2. ALL DEVICES AND EQUIPMENT SHALL BE CALIFORNIA STATE FIRE MARSHAL APPROVED. 3. CONTRACTOR SHALL WARRANTY ALL DEVICES AND SYSTEMS FOR A PERIOD OF TWO YEARS.

4. CONTRACTOR SHALL PROVIDE SIX (6) SETS OF FIRE ALARM MANUALS FOR ALL SYSTEMS AND DEVICES ADDITION TO SIX (6) SETS OF A SYSTEM OPERATIONAL MANUAL TAILORED FOR THE PROJECT SPACE. 5. CONTRACTOR SHALL PROVIDE A SATISFACTORY TEST IN THE PRESENCE OF THE OWNER, FIRE PREVENTION BUREAU, AND CONSULTING ENGINEER.

6. CONTRACTOR SHALL PROVIDE ALL CONNECTIONS TO POWER PANELS, CONDUIT AND WIRE AND CONNECTIONS REQUIRED TO PROVIDE AN OPERATIONAL FIRE ALARM SYSTEM. SUBMITTAL DOCUMENTS FOR DEFERRED ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH DESIGN OF THE BUILDING. THE DEFERRED ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

APPLICABLE CODES AND REGULATIONS

PART 2-CALIFORNIA BUILDING CODE

PART 3-CALIFORNIA ELECTRICAL CODE

PART 4-CALIFORNIA MECHANICAL CODE

PART 8-CALIFORNIA HISTORICAL BUILDING CODE

PART 10-CALIFORNIA EXISTING BUILDING CODE

PART 11-CALIFORNIA GREEN BUILDING STANDARDS CODE

PART 5-CALIFORNIA PLUMBING CODE

PART 6-CALIFORNIA ENERGY CODE

PART 7-NO LONGER PUBLISHED

PART 9-CALIFORNIA FIRE CODE

CALIFORNIA CODE OF REGULATIONS (C.C.R.), TITLE 24 (APPLIES AFTER JULY 1, 2014);

PART 1-CALIFORNIA BUILDINGS STANDARD ADMINISTRATIVE CODE 2013 EDITION

ELECTRICAL SYMBOL LIST DIMENSIONS INDICATED ARE MEASURED TO CENTERLINE OF ENCLOSURE, UNLESS OTHERWISE NOTED NOTE: SOME SYMBOLS SHOWN MAY NOT APPLY TO THIS PROJECT POWER ANNOTATIONS & CALLOUTS 1) ELECTRICAL KEYNOTE: DENOTES KEYNOTE #1 OF NOTES ON SAME SHEET. PANELBOARD PER PLANS, FLUSH MOUNTED IN WALL @ +6'-6" TO TOP OF TRIM A INDICATES LIGHTING FIXTURE TAG NUMBER - Panelboard per plans, surface mounted on wall 👁 +6'-6" to top of trim 162 INDICATES WATTAGE OF LIGHT FIXTURE SINGLE RECEPTACLE, WALL MOUNTED @ +18" AFF, NEMA 5-20R UON (FOUND ON LIGHT FIXTURE SCHEDULE) DUPLEX RECEPTACLE, WALL MOUNTED • +18" AFF, NEMA 5-20R UON INDICATES MECHANICAL/PLUMBING EQUIPMENT OR DEVICE (FOUND ON ELECTRICAL SCHEDULE FOR MECHANICAL EQUIPMENT OR ON MECHANICAL PLANS (GFI DENOTES GROUND FAULT INTERRUPTER RECEPTACLE) DUPLEX RECEPTACLE, WALL MOUNTED HORIZONTALLY @ +18" AFF, NEMA DUPLEX TVSS RECEPTACLE, WALL MOUNTED • +18" AFF, NEMA 5-20R UON 1 INDICATES DETAIL NUMBER DUPLEX RECEPTACLE, WALL MOUNTED • +18" AFF, NEMA 5-20R UON E3.0 INDICATES SHEET NUMBER TO FIND DETAIL TOP RECEPTACLE SWITCHED CEILING MOUNTED DUPLEX RECEPTACLE, NEMA 5-20R UON BREAK LINE INDICATES WORK EXTENDED BEYOND LIMITS SHOWN ON DRAWING. DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED @ +18" AFF, NEMA 5-20R UON CONDUIT & WIRING SYMBOLS SPECIAL PURPOSE ELECTRICAL OUTLET PER PLAN IN WALL @ +18", UON /--A5-1-3-5,7 INDICATES A HOMERUN TO PANEL A5, CKTS 1-3-5 WITH SHARED JUNCTION BOX (ACCESSIBLE CEILING SPACE MTD.) SIZE PER TABLE AND NEUTRAL & CKT 7 WITH DEDICATED NEUTRAL. JUNCTION BOX (WALL MTD.) SIZE PER TABLE AND NEC ARTICLE 370 CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALLS RECESSED FLUSH FLOORBOX, FLOOR MOUNTED. SEE POWER AND SIGNAL PLANS. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH—IN. COORDINATE COVER CONDUIT RUN CONCEALED BELOW FLOOR OR UNDERGROUND FINISH/COLOR WITH ARCHITECT PRIOR TO ORDERING. 3/4°C - 2 #12 & 1 #12 CU GND THERMOSTAT OUTLET BOX. 4S BOX WITH SINGLE GANG RING @ +42" AFF 3/4"C - 2 #12 & 1 #12 CU GND 3/4°C - 3 #12 & 1 #12 CU GND VOICE/DATA SYSTEM TELE/DATA OUTLET BOX IN WALL @ +18", STUB A 1" CO UP 12" ABOVE TELE/DATA OUTLET BOX, MOUNTED IN WALL +6" ABOVE COUNTER OR SPLASH, STUB A 1" CO UP 12" ABOVE ACCESSIBLE CEILING WITH BUSHING, 5S BOX WITH H#10 3/4"C - 2 #10 & 1 #10 GND FLUSH CEILING MOUNTED TELE/DATA OUTLET, 5S BOX WITH SINGLE GANG PLASTER RING, UON $\frac{1}{100}$ 3/4°C - 3 #10 & 1 #10 GND TELEVISION OUTLET IN WALL @ +84", 5S BOX WITH 1-GANG RING, UON CONDUIT STUB, CAP AND IDENTIFY SINGLE-POLE SWITCH MOUNTED @ +42" AFF FLEXIBLE CONDUIT CONNECTION. SEE PLAN. SINGLE POLE SWITCH # +42", UON a INDICATES LIGHT FIXTURE TO BE SWITCHED LIGHTING FIXTURE SYMBOLS TWO-POLE SWITCH MOUNTED @ +42" AFF 2'X4' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE W/OUTLET BOX 3-WAY SWITCH MOUNTED @ +42" AFF (RECESSED, SURFACE MOUNTED) 4-WAY SWITCH MOUNTED @ +42" AFF KEYED SWITCH MOUNTED @ +42" AFF _ a & b, ETC. INDICATES SWITCH IDENTIFICATION NUMBER INDICATES LIGHT FIXTURE BRANCH CIRCUIT HORSEPOWER RATED SWITCH MOUNTED @ +42" AFF 2'X2' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE W/OUTLET BOX DIMMER SWITCH MOUNTED @ +42" AFF, 0-10V DIMMER COMPATIBLE WITH LED LIGHT FIXTURE, UON. (RECESSED, SURFACE MOUNTED) CEILING MOUNTED FLUORESCENT LIGHTING FIXTURE WITH 4S OUTLET BOX OCCUPANCY SENSOR WALL SWITCH PER PLANS, MOUNTED @ +42" AFF (RECESSED, SURFACE MOUNTED) FLUORESCENT LIGHT FIXTURE WITH INTEGRAL 90 MINUTE EMERGENCY BATTERY SINGLE-POLE SWITCH (WITH PILOT LIGHT) 6 +42" AFF PACK WITH 4S OUTLET BOX. (RECESSED, SURFACE MOUNTED) TIME SWITCH, FLUSH MOUNTED @ +42" AFF. WATTSTOPPER, TS-400-W SURFACE MOUNTED FLUORESCENT STRIP LIGHTING FIXTURE WITH 4S BOX CEILING MOUNTED OCCUPANCY SENSOR COMPLETE WITH OUTLET BOX, PER PLANS. CEILING SURFACE MOUNTED LIGHTING FIXTURE WITH OUTLET BOX CEILING RECESSED DOWNLIGHT FIXTURE CHELSEA DIGITAL WALL SWITCH MOUNTED @ +42" AFF CEILING RECESSED WALL WASH DOWNLIGHT FIXTURE PUSH BUTTON WALL SWITCH MOUNTED @ +42" AFF TRACK LIGHTING (TRIANGLES INDICATE # OF HEADS) CIRCUIT BREAKERS AND FUSES LIGHT FIXTURE, WALL MOUNTED WITH OUTLET BOX

EXIT SIGN WITH OUTLET BOX

PART 12-CALIFORNIA REFERENCE STANDARDS CODE

NFPA 20- STANDARD FOR THE INSTALLATION OF STATIONARY

PUMPS FOR FIRE PROTECTION

NFPA 72- NATIONAL FIRE ALARM & SIGNALING CODE

NFPA 96- STANDARD FOR VENTILATION CONTROL AND FIRE

PROTECTION OF COMMERCIAL COOKING OPERATIONS

NFPA 72- NAT. FIRE ALARM & SIGNALING CODE

(CALIFORNIA AMENDED)

NFPA 13- AUTOMATIC SPRINKLER SYSTEM,

PARTIAL LIST OF NFPA STANDARDS:

2013 EDITION

NFPA 14- STANDPIPES SYSTEMS,

NFPA 24- PRIVATE FIRE MAINS.

NFPA 17A- WET CHEMICAL SYSTEMS,

NFPA 70- NATIONAL ELECTRICAL CODE

-ARROW DENOTES DIRECTIONAL CHEVRON

SHADING DENOTES FACE OF EXIT SIGN.

EMERGENCY LIGHTING UNIT WITH OUTLET BOX.

EXIT SIGN, END MOUNT ON WALL, WITH OUTLET BOX.

EXIT-EMERGENCY LIGHTING UNIT COMBO WITH OUTLET BOX.

PENDANT MOUNTED LIGHT FIXTURE WITH OUTLET BOX.

225AF 150AT MOLDED CASE CIRCUIT BREAKER 225 AMP FRAME, 150 AMP TRIP RATING, 3-POLE FUSED SWITCH, 100 AMP SWITCH RATING WITH 60 AMP FUSES, 3-POLE

100A UTILITY METER (OR AS NOTED) DISCONNECT SWITCH, 60AMP SWITCH, 35 AMP FUSES, 3-POLE WITH OVERCURRENT PROTECTION UON

COMBINATION STARTER / DISCONNECT SWITCH SIZED PER PLAN

EXHAUST FAN/MOTOR, SIZE AS INDICATED ON PLANS

F	TRE A	LLARM SYMBOLS		
	FACP	FIRE ALARM CONTROL PANEL		
	©	SMOKE DETECTOR W/ BASE		
	匠	PULL STATION		
		WALL MOUNT STROBE		
		WALL MOUNT HORN/STROBE		
	P	DUCT DETECTOR		
	Ø	CEILING MOUNT AUDIBLE/VISIBLE		
	Ø.	CEILING MOUNT VISIBLE		
	HD	HEAT DETECTOR W/ BASE		

HEAT DETECTOR W/ BASE END-OF-LINE RESISTOR HORN WITH WEATHERPROOF ENCLOSURE

MINI-HORN

2013 EDITION

2013 EDITION

2013 EDITION

2013 EDITION

2013 EDITION

2013 EDITION

2014 EDITION

2013 EDITION

2013 EDITION

2014 EDITION

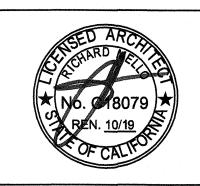
WALL MOUNT SPEAKER/STROBE FERRANTI ENGINEERING OUTDOOR WALL MOUNT SPEAKER

CONSULTING ELECTRICAL ENGINEERS 1211 MARICOPA HWY. SUITE 250 OJAI, CA 93023 (805) 705-4772

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BAKERSFIELD CITY SCHOOL DISTRICT



NEW MARQUEE AT FREMONT ELEMENTARY SCHOOL

607 TEXAS ST, BAKERSFIELD, CA 93307

OPSC or OSHPD PROJ. NO: PROJECT NO: DRAWN BY: VZ CHK'D BY: ISSUE DATE: 5/23/2018 SHEET TITLE

> SYMBOLS & **GENERAL NOTES**

SHEET NUMBER

AL

DRAWING'S. THE COMPLETE INSTALLATION SHALL MEET THE REQUIREMENTS OF THE LATEST NATIONAL ELECTRICAL CODE AND ALL LOCALLY INSTALL HANDHOLES AND BOXES LEVEL AND PLUMB AND WITH ORIENTATION AND DEPTH COORDINATED WITH CONNECTING CONDUITS TO ADOPTED AMENDMENTS, INCLUDING BUT NOT NECESSARILY LIMITED TO THE FOLLOWING: ADOPTED AMENDMENTS, INCLUDING BUT NOT NECESSARILY LIMITED TO THE FOLLOWING:

CALIFORNIA ELECTRICAL CODE-LATEST EDITION

- . CALIFORNIA ADMINISTRATIVE CODE, TITLE 24 . CALIFORNIA ADMINISTRATIVE CODE, TITLE 19 FIRE CODE
- UNDERWRITERS LABORATORY . AMERICAN NATIONAL STANDARD INSTITUTE
- 5. NEMA (NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION)
 6. ALL OTHER APPLICABLE STATE, LOCAL LAWS AND REGULATIONS

ELECTRICAL DIVISION OF THE DEPARTMENT OF BUILDING AND SAFETY

WHERE THESE SPECIFICATIONS CALL FOR A HIGHER STANDARD THAN THE ABOVE—MENTIONED RULES, THE SPECIFICATIONS SHALL GO SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL ALL WORK IN ACCORDANCE WITH STAMPED PLANS APPROVED BY THE

PRIOR TO CONTRACTOR SUBMITTING HIS/HER BID. HE/SHE SHALL VISIT THE JOB SITE TO BECOME COMPLETELY FAMILIAR WITH ALL ASPECTS OF THE NEW CONSTRUCTION AND ALL REQUIREMENTS THAT MAY BE IMPOSED BY THE OWNER. FAILURE TO DO THIS WILL RELIEVE OWNER OF ANY FINANCIAL OBLIGATION FOR EXTRA WORK OR COST INCURRED BY THE CONTRACTOR. CONTRACTOR SHALL TAKE NOTICE OF ALLOWABLE WORK HOURS, ON-SITE STORAGE FACILITIES, AND AVAILABLE PARKING AND INCLUDE THIS IN HIS/HER BID. ALL PERMITS SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.

ACCURATE RECORD DRAWINGS SHALL BE MAINTAINED AND PRESENTED TO THE OWNER AND ELECTRICAL ENGINEER AT THE TIME OF

THE CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL HIS/HER WORK FOR ONE YEAR AFTER ACCEPTANCE AND FURNISH ALL MANUFACTURER WARRANTIES FOR THE EQUIPMENT HE/SHE FURNISHES.

THE CONTRACTOR SHALL INSTALL ALL ELECTRICAL EQUIPMENT IN A NEAT AND WORKMANLIKE MANNER. ELECTRICAL EQUIPMENT SHALL FIRMLY SECURED TO THE SURFACE ON WHICH IT IS MOUNTED. SHOP DRAWINGS SHALL BE SUBMITTED ON ALL MAJOR PIECES OF ELECTRICAL EQUIPMENT, INCLUDING SERVICE—ENTRANCE EQUIPMENT. LIGHTING FIXTURES, PANELBOARDS, SWITCHES, WIRING DEVICES, AND PLATES, AND EQUIPMENT FOR MISCELLANEOUS SYSTEMS. EACH ITEM OF EQUIPMENT PROPOSED SHALL BE A STANDARD CATALOG PRODUCT OF AN ESTABLISHED MANUFACTURER. THE SHOP DRAWING SHALL GIVE COMPLETE INFORMATION ON THE PROPOSED EQUIPMENT. EACH ITEM OF THE SHOP DRAWING SHALL BE PROPERLY LABELED, INDICATING THE INTENDED SERVICE OF THE MATERIAL, THE JOB NAME, AND THE ELECTRICAL CONTRACTOR'S NAME

WHERE EQUIPMENT IS IDENTIFIED BY MANUFACTURER AND CATALOG NUMBER, IT SHALL BE CONSTRUED AS THE BASE OF REQUIREMENTS FOR QUALITY AND PERFORMANCE. WHERE MANUFACTURERS FOR EQUIPMENT ARE IDENTIFIED BY NAME, THE ELECTRICAL CONTRACTOR MAY SUBMIT FOR APPROVAL, SIMILAR EQUIPMENT BY OTHER MANUFACTURERS AS SUBSTITUTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SUFFICIENT SUPPORTING DATA TO PERMIT EVALUATION OF THE PROPOSED SUBSTITUTE WITH RESPECT TO QUALITY, PERFORMANCE, SERVICEABILITY, AND WARRANTY. THE ENGINEER'S DECISION AS TO WHETHER THE SUBMITTED EQUIPMENT IS ACCEPTABLE

ALL CHANGES NECESSARY TO ACCOMMODATE THE SUBSTITUTED EQUIPMENT SHALL BE MADE AT THE CONTRACTOR'S EXPENSE, AND SHALL BE AS APPROVED BY THE ENGINEER. DETAILED DRAWINGS INDICATING THE REQUIRED CHANGES SHALL BE SUBMITTED FOR

F SUBSTITUTIONS ARE MADE IN LIEU OF THE LIGHTING FIXTURES SPECIFIED, PHOTOMETRIC PERFORMANCE, FORM, DIMENSION, DESIGN AND PROFILE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

AT COMPLETION OF WORK, THIS CONTRACTOR SHALL CLEAN UP AND REMOVE ALL DEBRIS AND MATERIALS NOT INSTALLED IN WORK, DISPOSE IN AN ENVIRONMENTALLY APPROVED MANNER, LEAVING PREMISES CLEAN.

ELECTRICAL CONTRACTOR SHALL PROVIDE A TEMPORARY CONSTRUCTION SERVICE IF REQUIRED FOR THIS PROJECT TO MAINTAIN ESSENTIAL SERVICES DURING CIRCUIT CUT—OVER PERIODS. SECURE PERMISSION FROM THE OWNER BEFORE PERFORMING ANY CUTTING OR PATCHING WORK WHICH IS LIKELY TO AFFECT THE STRENGTH OF A STRUCTURAL MEMBER. ALL PENETRATIONS THROUGH CONCRETE CONSTRUCTION SHALL BE DONE BY THE MEANS DENOTED BY ARCHITECT.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL EQUIPMENT AND WIRING AS REQUIRED AND AS INDICATED ON THE ELECTRICAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS. SEE MECHANICAL DRAWINGS FOR EXACT EQUIPMENT LAYOUTS AND REQUIREMENTS INCLUDING SIZES, VOLTAGES, CONTROL WIRING, CONTROL DEVICES TO BE FURNISHED AND/OR INSTALLED, LOCATIONS

CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATIONS AND ROUTING SHALL BE DETERMINED IN THE FIELD TO SUIT

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE AND OBTAIN APPROVAL FOR ALL NECESSARY ADJUSTMENTS IN CIRCUITING AS REQUIRED TO ACCOMMODATE THE RELOCATIONS OF EQUIPMENT AND/OR DEVICES WHICH ARE AFFECTED BY ANY APPROVED AUTHORIZED CHANGE. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD (AS-BUILT) DRAWINGS.

ALL MATERIAL AND EQUIPMENT SHALL BE NEW, UL LISTED, APPROVED BY THE LOCAL JURISDICTION AND, UNLESS OTHERWISE NOTED, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. EQUIPMENT EXPOSED TO WEATHER SHALL BE UL LISTED WEATHERPROOF.

ALL MOTORS OR EQUIPMENT LOCATED OUT OF SIGHT OR MORE THAN 50 FEET FROM AN ELECTRICAL PANEL, SHALL HAVE HORSEPOWER RATED DISCONNECTS INSTALLED AT THE MOTOR EQUIPMENT.

ALL REQUIRED POWER OUTAGES THAT ARE NECESSARY IN ORDER TO COMPLETE ANY PORTION OF THE WORK SHALL BE ENTIRELY AT THE OWNER'S CONVENIENCE AND AT A TIME DESIGNATED BY HIM/HER AND BE FULLY COORDINATED WITH THE OWNER'S REPRESENTATIVE A MINIMUM OF 48 HOURS OF ADVANCED NOTICE SHALL BE GIVEN TO THE OWNER OF TIME DESIRED. OWNER SHALL APPROVE TIME OF OUTAGE BEFORE THIS CONTRACTOR DISCONNECTS ANY CIRCUITS. CONTRACTOR SHALL FURNISH, INSTALL AND REMOVE ANY TEMPORARY JUMPERS ETC. TO MAINTAIN ALL LOADS THAT THE OWNER DESIGNATES AS NOT BEING ABLE TO SHUT DOWN DURING CONSTRUCTION. SHOULD ANY CONDITIONS EXIST THAT DIFFER FROM WHAT IS INDICATED ON THESE DRAWINGS THAT CAUSE DEVIATIONS IN THE WORK SHOWN, THE CONTRACTOR SHALL IN A TIMELY MANNER SO NOT TO IMPAIR THE CONSTRUCTION SCHEDULE OR SEQUENCE OF EVENTS,

SUBMIT A WRITTEN REPORT OF THE CONDITIONS FOUND TO THE OWNER'S REPRESENTATIVE FOR APPROPRIATE DIRECTION ON HOW TO COMPLETE THE WORK IN QUESTION.

PRIOR TO START OF INSTALLATION THE CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF EACH OUTLET AND DEVICE WITH THE INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTION AUTHORITY AND KEPT AT THE JOB SITE. OWNER'S REPRESENTATIVE. THE OWNER RESERVES THE RIGHT TO RELOCATE ANY OUTLET OR DEVICE UP TO 8 FEET FROM THE LOCATION INDICATED ON THE PLANS AT NO ADDITIONAL COST.

COORDINATE ALL EXIT SIGN LOCATIONS WITH THE LOCAL FIRE MARSHAL PRIOR TO BEGINNING WORK.

THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS TO VERIFY DIMENSIONS, CLEARANCES, OBSTRUCTIONS, TYPE OF CONSTRUCTION, DOOR SWINGS, SINK AND SPLASH BOARD DIMENSIONS AND BATH MIRRORS, TO CLEAR SWITCHES AND RECEPTACLES PRIOR TO INSTALLATION.

WHERE ACCESS PANELS FOR ACCOMMODATING ELECTRICAL WORK ARE LOCATED AND/OR SIZED ON THESE DRAWINGS, OR DRAWINGS PREPARED UNDER SEPARATE DIVISIONS OF THE WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RE-SIZE AND/OR PROVIDE SUITABLE ACCESS PANELS FOR THE CONDITIONS. WHERE INSUFFICIENT SPACE EXISTS TO ACCOMMODATE LARGER ACCESS PANELS, A SUITABLE ALTERNATIVE IS TO MOUNT THE ELECTRICAL COMPONENTS TO THE BACKSIDE OF THE HINGED DOOR WITH AN APPROPRIATELY SIZED AND CODE APPROVED FLEXIBLE FITTING, THUS ALLOWING ACCESS TO ELECTRICAL COMPONENTS FROM THE OCCUPIED SPACE IN LIEU OF THE ATTIC.

WHERE FLECTRICAL RACEWAYS ARE INSTALLED THROUGH 2 TO 4-HOUR RATED FLOORS OR WALLS. THE CONTRACTOR SHALL PROVIDE WHERE ELECTRICAL RACEWAYS ARE INSTALLED THROUGH 2 TO 4—HOUR RATED FLOORS OR WALLS, THE CONTRACTOR SHALL PROVIDE
APPROPRIATE FITTINGS APPROVED BY THE LOCAL AUTHORITIES FOR THE INTENDED PURPOSE AND APPLICATION. FITTINGS SHALL SEAL
TIGHT THE INTERIOR AND EXTERIOR OF EACH RACEWAY PENETRATION TO PROHIBIT FIRE PASSING FROM ONE AREA TO ANOTHER. WHERE
EMPTY CONDUITS ARE INSTALLED FOR FUTURE USE, THE CONTRACTOR SHALL PROPERLY SEAL THE RACEWAY TO COMPLY WITH THE
PROVISIONS INDICATED ABOVE. THE ELECTRICAL CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW THE PROPOSED FITTINGS TO
BE USED AND DETAILS REGARDING THE INSTALLATION METHODS PRIOR TO THEIR INSTALLATION. THE INSTALLATION SHALL NOT BE
COMPLETED UNTIL FINAL APPROVAL HAS BEEN RECEIVED FROM THE ARCHITECT TO PROCEED.

AS A CONDITION FOR FURNISHING MATERIAL TO THIS PROJECT, THE MANUFACTURERS AND SUPPLIERS AGREE TO DEFEND, HOLD HARMLESS, AND TO INDEMNIFY OWNER, ARCHITECT, ELECTRICAL ENGINEER, AND ALL RELATED SUBSIDIARIES AGAINST ANT LIABILITY ARISING OUT OF PRODUCT FAILURE OR MANUFACTURING DEFECT OF THE EQUIPMENT THEY FURNISH.

THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OF THE NECESSARY DEMOLITION WORK REQUIRED TO ACCOMMODATE THE REMODELING WITHIN THE VARIOUS PROJECT AREAS. RESTORE CONTINUITY OF ALL EXISTING CIRCUITING THAT IS TO REMAIN THAT BECOMES DISTURBED AS A RESULT OF THE WORK PERFORMED DURING CONSTRUCTION. FURNISH ALL LABOR AND MATERIALS TO REROUTE CIRCUITRY TO REMAIN, CONCEAL FROM VIEW IN PUBLIC AREAS AND MAINTAIN ALL CODE REQUIRED CLEARANCES AND ACCESSIBILITY. FIELD VERIFY ALL CONDITIONS AND REQUIREMENTS PRIOR TO STARTING WORK. WHERE EXISTING CONDUITS BECOME EXPOSED AS A RESULT OF THE NEW WORK, CONTRACTOR SHALL REWORK AS REQUIRED TO SUIT CONDITIONS TO CONCEAL SUCH CONDUIT FROM VIEW IN ALL PUBLIC AND BACK OF HOUSE AREAS.

ALL WIRING WITHIN EXISTING OUTLETS ARE TO BE RE-IDENTIFIED WITH EASY-MARKERS TO REFLECT THE NEW CIRCUIT DESIGNATIONS WHERE REWORK OR EXISTING IS REQUIRED TO COMPLETE NEW WORK. ALL EXISTING ELECTRICAL EQUIPMENT AND MATERIAL THAT IS REMOVED AS A PART OF THIS WORK SHALL BE DELIVERED TO OWNER A

WHERE EXISTING OUTLETS, AFFECTED BY THE NEW WORK ARE TO BE ABANDONED, REMOVE EXISTING OUTLET AND WIRING, CUT OFF AND PLUG EXISTING CONDUIT. WHERE THERE IS A POSSIBILITY TO REUSE A PORTION OF THE EXISTING CONDUIT SYSTEM, EXTEND EXISTING CONDUIT TO NEAREST ACCESSIBLE LOCATION AND PROVIDE JUNCTION BOX WITH SUITABLE COVER. COORDINATE EXTENT OF THIS WORK WITH OWNER'S REPRESENTATIVE.

WIRE AND CABLES:

ALL WIRING SHALL BE COPPER, MINIMUM SIZE #12-AWG. USE THHN IN DRY LOCATIONS ONLY AND THWN IN WET LOCATIONS. ALL FIXEL ELECTRICAL APPLIANCES SHALL BE WIRED IN APPROVED ENCLOSURES. ALL FINAL FLEX CONDUIT CONNECTIONS TO ANY EQUIPMENT SHALL INCLUDE SUFFICIENT SLACK IN FLEX TO MOVE WITH THE EQUIPMENT. COLOR CODE SECONDARY SERVICE, FEEDER AND BRANCH CIRCUIT CONDUCTORS WITH FACTORY APPLIED COLOR AS FOLLOWS:

480Y/277 VOLTS 208Y/120 VOLTS WHITE GREEN

A LOCATION ON THE PROPERTY THAT HE/SHE DESIGNATES.

TERMINAL CABINETS TERMINAL CABINETS SHALL BE FLUSH OR SURFACE MOUNTED AS INDICATED WITH HINGED DOORS AND LOCK, MATCH PANEL BOARD LOCK. EXTERIOR FINISH TO BE SAME AS FOR PANEL BOARDS, PROVIDE 3/4" PLYWOOD BACKING INSIDE OF CABINET. PROVIDE PROPER

NUMBER OF TERMINALS IN CABINETS AS REQUIRED. PROVIDE FLAT MOUNT TERMINAL BLOCKS MOUNTED ON PLYWOOD BACKING INSIDE TERMINAL CABINETS FOR CONDUCTOR TERMINATION. PROVIDE QUANTITY OF TERMINAL BLOCKS FOR EACH SYSTEM AS REQUIRED. TERMINAL BLOCKS SHALL BE KULKA STANDARD 600-600A SERIES AS MANUFACTURED BY MARATHON SPECIAL PRODUCTS.

PROVIDE A BAKELITE NAMEPLATE FASTENED WITH SCREWS TO THE FACE OF EACH TERMINAL CABINET WHICH WILL IDENTIFY IT. MATCH PANEL KEY

PROVIDE CIRCUIT DIRECTORY AND HOLDER ON INSIDE OF DOOR WITH ONE LINE FOR EACH CONDUCTOR ENTERING AND EACH CONDUCTOR LEAVING CABINET.

UNLESS OTHERWISE INDICATED, SUPPORT UNITS ON A LEVEL BED OF CRUSHED STONE OR GRAVEL, GRADED FROM 1/2 INCH SIEVE TO

NO. 4 SIEVE AND COMPACTED TO SAME DENSITY AS ADJACENT UNDISTURBED EARTH. ELEVATION: IN PAVED AREAS, SET SO COVER SURFACE WILL BE FLUSH WITH FINISHED GRADE. SET COVERS OF OTHER ENCLOSURES INCH ABOVE FINISHED GRADE.

INSTALL REMOVABLE HARDWARE, INCLUDING PULLING EYES, CABLE STANCHIONS, CABLE ARMS, AND INSULATORS, AS REQUIRED FOR N. INSTALLATION AND SUPPORT OF CABLES AND CONDUCTORS AND AS INDICATED. SELECT ARM LENGTHS TO BE LONG ENOUGH TO PROVIDE SPARE SPACE FOR FUTURE CABLES BUT SHORT ENOUGH TO PRESERVE ADEQUATE WORKING CLEARANCES IN ENCLOSURE.

FIELD_CUT OPENINGS FOR CONDUITS ACCORDING TO ENCLOSURE MANUFACTURER'S WRITTEN INSTRUCTIONS. CUT WALL OF ENCLOSURE WITH A TOOL DESIGNED FOR MATERIAL TO BE CUT. SIZE HOLES FOR TERMINATING FITTINGS TO BE USED, AND SEAL AROUND

THE DRAWINGS INDICATE THE ARRANGEMENT OF OUTLETS ON EACH BRANCH CIRCUIT AND THE CIRCUIT TAGS SHOW THE NUMBER OF THE CIRCUIT, AND THE BOARD TO WHICH IT WILL BE CONNECTED. CIRCUITS INDICATED WITH THE SAME NUMBERS SHALL BE CONNECTED TO THE SAME BREAKER ON THE PANEL BOARD.

ALL FEEDERS AND BRANCH CIRCUITS SHALL BE TAGGED IN ALL PULL BOXES AND IN THE GUTTERS OF ALL PANELS TO WHICH THEY

. WIRING SHALL BE INSTALLED WITH IDENTIFIED NEUTRAL CONDUCTORS.

INSTALL HANDHOLES WITH BOTTOM BELOW FROST LINE, BELOW GRADE.

NO WIRE SHALL BE INSTALLED UNTIL ALL WORK OF OTHER CONTRACTORS THAT MIGHT CAUSE INJURY TO THE SAID WIRE HAS BEEN COMPLETED. CARE SHALL BE USED TO PULL WIRES TO INSURE THAT NO DAMAGE OCCURS TO THE INSULATION. POWDERED SOAPSTONES OR WIRE EASE SHALL BE USED FOR PULLING IN WIRES.

IN MAKING THE CONNECTION OF ALL BRANCH CIRCUITS TO THE TERMINALS OF SWITCHES, BASE PLUGS, ETC. THE WIRES SHALL BE LOOPED AROUND THE BINDING SCREWS OR BE FITTED WITH CONNECTING LUGS. AT THE CEILING OUTLETS, THE CONTRACTOR SHALL LEAVE NOT LESS THAN 6" OF FREE ENDS ON EACH WIRE FOR CONNECTIONS TO THE FIXTURES.

NO SPLICES SHALL BE PERMITTED EXCEPT IN OUTLET BOXES, AND IN PANEL BOARD GUTTERS. SWITCHES AND RECEPTACLES SHALL BE SECURELY FASTENED TO THE OUTLET BOX. WHERE THE OUTLET BOX COVERS ARE BACK OF T FINISHED WALLS THE SWITCH OR RECEPTACLE SHALL BE BUILT OUT FROM THE SAME WITH WASHERS SO THAT IT IS RIGIDLY HELD IN PLACE TO THE BOX. THE FLOATING OF ANY SWITCH OR RECEPTACLE WILL NOT BE PERMITTED.

ALL SIGNAL AND COMMUNICATIONS CONDUCTORS SHALL BE IDENTIFIED IN TERMINAL CABINETS AS TO TYPE OF SYSTEM, E.G.: CLOCK, BELL, FIRE ALARM, ETC. AS WELL AS THE LOCATION OF THE OTHER END OF THE CONDUCTOR BY ROOM NUMBER OR NAME, AS DIRECTED BY THE OWNER. IDENTIFICATION SHALL BE BY NUMBERS AT TERMINAL STRIPS AND A NUMBERED DIRECTORY IN A CARD

FIRE ALARM SYSTEM WIRING SHALL BE COLOR-CODED AS FOLLOWS:

TATING DEVICES - TWO YELLOW WIRES, TWO ORANGE WIRES. NOTIFICATION DEVICES - TWO BLACK WIRES, TWO RED WIRES.

TELECOMMUNICATION SYSTEM WIRING SHALL BE COLOR—CODED GREEN AND YELLOW

SECURITY SYSTEM WIRING SHALL BE COLOR-CODED BLUE AND YELLOW.

ALL POWER WIRING #6 GAUGE AND SMALLER SHALL BE FACTORY COLOR CODED. FOR LARGER THAN #6, MARK CONDUCTORS ON EACH END AND AT ALL JUNCTION AND/OR PULL BOXES WITH A 1" BAND OF COLORED PRESSURE—SENSITIVE PLASTIC TAPE. FOR ISOLATED GROUND WIRES, MARK WITH A 1" BAND OF GREEN TAPE, FOLLOWED BY A 1" BAND OF YELLOW TAPE, FOLLOWED BY A 1" BAND O GREEN TAPE. COLORS FOR EACH PHASE AND THE NEUTRAL SHALL BE CONSISTENT THROUGHOUT THE SYSTEM.

THE WHITE OR GRAY CONDUCTOR SHALL BE THE NEUTRAL AT EACH OUTLET. CONDUCTORS HAVING WHITE, GRAY OR GREEN COVERING SHALL NOT BE USED TO INDICATE OTHER THAN NEUTRAL OR GROUNDING. THIS LIMITATION APPLIES TO ALL POWER, LIGHTING, AND CONTROL CIRCUITS.

INSTALLATION OF CONDUCTORS SHALL BE MADE IN A NEAT AND WORKMANLIKE MANNER TO MEET CODE REQUIREMENTS AND SHALL BE RUN CONTINUOUS WITHOUT WELD, SPLICE OR JOINT BETWEEN BOXES. DO NOT INSTALL WIRES IN CONDUIT UNLESS THE ENTIRE SYSTEM OF CONDUIT AND OUTLET BOXES ARE PERMANENTLY IN PLACE. ALL CONDUCTORS SHALL BE PULLED USING A U.L. APPROVED WIRE LUBRICANT. MAKE ALL TERMINATIONS AT MOTORS USING 3M SERIES 5300 MOTOR LEAD/CABLE SPLICING KITS. MAKE CONNECTION PER 3M WRITTEN INSTALLATION PROCEDURES.

ON ALL BOLTED ELECTRICAL CONNECTIONS, THE CONTRACTOR SHALL USE BELVILLE WASHERS. WIRING TO BE NEATLY BUNDLED AND TIED WITH NYLON CORD OR PLASTIC STRAPS.

SPLICES IN UNDERGROUND BOXES SHALL BE MADE WITH CRIMP ON COMPRESSION CONNECTORS AND INSULATED WITH HEAT SHRINK SLEEVES OR WITH SPLICE KITS LISTED BY THE MANUFACTURER FOR WET LOCATIONS. WIRE NUTS ARE NOT PERMITTED.

WHERE CONDUIT, CABINETS, OR BOXES PENETRATE FIRE RATED CEILINGS, WALLS OR FLOORS PROVIDE A FIRE RATED ENCLOSURE OR FIRE STOP. RATING OF ENCLOSURE OR FIRE STOP SHALL MATCH OR EXCEED RATING OF AREA PENETRATED. VERIFY LOCATION OF FIRE RATED AREAS WITH ARCHITECTURAL DRAWINGS.

WHERE OUTLET BOXES ARE RECESSED ON OPPOSITE SIDE OF A FIRE RATED WALL, BOXES SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24 INCHES. WHERE OPENING FOR STEEL ELECTRICAL OUTLET BOXES EXCEED 15 SQ. INCHES IN AREA, OR AN AGGREGATE OF MORE THAN 100 SQ. INCHES FOR ANY 100 SQ. FEET OF WALL OR PARTITION AREA, FIRE STOPPING IS REQUIRED. PENETRATIONS IN WALLS, FLOOR OR CEILINGS REQUIRING PROTECTED OPENINGS SHALL BE FIRE—STOPPED. FIRE—STOPPING SHALL BE AN APPROVED MATERIAL, SECURELY INSTALLED AND CAPABLE OF MAINTAINING ITS INTEGRITY WHEN SUBJECTED TO THE TIME-TEMPERATURE CURVE OF STATE FIRE MARSHAL STANDARD 12-43-3 AND STANDARD 12-43-1. MANUFACTURER'S INSTALLATION

ALL FEEDER LENGTHS INDICATED ON SINGLE LINE DIAGRAMS OR FEEDER SCHEDULE ARE FOR VOLTAGE DROP PURPOSES ONLY AND ARE NOT TO BE USED FOR MATERIAL TAKE—OFF OR BIDDING PURPOSES.

SINGLE—POLE SWITCHES SHALL BE 20 AMPERES, 120/277 VOLT, AC, SIDE AND BACK WIRED, HUBBELL CAT. #HBL—1221—W, OR EQUAL BY G.E., PASS & SEYMOUR, OR LEVITON. VERIFY FINISH COLOR WITH ARCHITECT.

THREE-WAY SWITCHES SHALL BE 20 AMPERES, 120/277 VOLT, AC, SIDE AND BACK WIRED, HUBBELL CAT. #HBL-1223-W, OR EQUAL BY G.E., PASS & SEYMOUR, OR LEVITON. VERIFY FINISH COLOR WITH ARCHITECT. DUPLEX RECEPTACLES FOR 120 VOLT, SINGLE-PHASE SERVICE TO BE RATED 20 AMPERES, 125 VOLT, BACK AND SIDE WIRED, 2-WIRE (NEMA 5-20R) GROUNDING TYPE, VERIFY FINISH COLOR WITH ARCHITECT, HUBBELL CAT, #HBL8300 OR EQUAL BY PASS & SEYMOUR.

DOUBLE DUPLEX RECEPTACLES (4-PLEX): TO BE SAME AS DUPLEX RECEPTACLES. TWO DUPLEX RECEPTACLES IN 4" X 4" OUTLET BOX WITH ONE TWO-GANG FACEPLATE. LEVITON, PASS & SEYMOUR, G.E., OR HUBBELL. ALL DEVICE PLATES SHALL BE OF THE UNBREAKABLE PLASTIC TYPE, MANUFACTURED BY PASS & SEYMOUR, LUTRON, LEVITON, G.E., OF HUBBELL AND VERIFY FINISH COLOR WITH ARCHITECT. DEVICE PLATES FOR EQUIPMENT, STORAGE, KITCHEN, AND LABORATORY AREAS

OUTLETS AND DEVICES SHALL BE SET RIGID, PLUMB, FASTENED SECURELY; WHERE CONCEALED, SET FLUSH WITH FINISH SURFACE. ING CONNECTIONS: CURL WIRE AROUND TERMINAL SCREWS AND TIGHTEN FIRMLY. SNAP-IN, PRESSURE-TYPE TERMINALS ARE NOT

GFI/GFCI TYPE RECEPTACLES FOR 120 VOLT, SINGLE-PHASE SERVICE TO BE RATED 20 AMPERES, 125 VOLT, BACK AND SIDE WIRED, 2-WIRE (NEMA 5-20R) GROUNDING TYPE, VERIFY FINISH COLOR WITH ARCHITECT, HUBBELL CAT #GFR8300H. ALL RECEPTACLE AND SWITCH COVER PLATES SHALL CLEARLY INDICATE, WITH PERMANENT BLACK MARKER ON THE INSIDE OF THE PLAT THE CIRCUIT NUMBER AND THE SOURCE OF POWER FEEDING THAT SWITCH OR RECEPTACLE.

ALL LIGHTING CONTROLS SHALL BE +48" TO +36" AND WITHIN SIGHT OF LIGHTING FIXTURES. CAC-24. ALL CONVENIENCE RECEPTACLES SHALL BE +15". CAC-24.

. HEATING AND COOLING CONTROLS SHALL BE +48". CAC-24.

ALL LIGHTING FIXTURES SHALL BE U.L. LISTED.

PROVIDE LIGHTING FIXTURES WHERE INDICATED ON PLANS AND AS INDICATED IN LIGHT FIXTURE SCHEDULE. LAMPS SHALL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR SHALL INCLUDE IN HIS/HER BID ALL LABOR AND MATERIAL TO INSTALL ALL LIGHT FIXTURES, INCLUDING THOSE FURNISHED BY THE OWNER. PROVIDE 1-1/2" CEILING SPACERS FOR FLUORESCENT FIXTURES WHERE REQUIRED. LL RECESSED LIGHTING FIXTURES SHALL HAVE JUNCTION BOXES APPROVED FOR THE NUMBER OF CONDUCTORS REQUIRED. BOXES MAY E LOCATED IN NEARBY ACCESSIBLE AREAS SUCH AS STORAGE ROOMS, EQUIPMENT ROOMS, CLOSETS, ACCESSIBLE CEILING SPACES, OR REMOTE AREAS AS APPROVED, BUT NOT WHERE VISIBLE TO PUBLIC.

PROVIDE LENSED LIGHTING FIXTURES WITH LENSES OF 100% PURE VIRGIN ACRYLIC.

PROJECT SHALL BE BID WITH LIGHTING FIXTURES AND OTHER EQUIPMENT AS SPECIFIED ON PLANS. SUBSTITUTIONS SHALL BE LISTED A ALTERNATE. WHERE THERE IS INSUFFICIENT SPACE FOR A SPECIFIED RECESSED FIXTURE, PROVIDE EITHER A MORE SHALLOW FIXTURE AS APPROVED, OR A SURFACE MOUNTED FIXTURE OF EQUAL QUALITY AND SIMILAR PHYSICAL APPEARANCE TO MATCH OTHER FIXTURES IN THE SAME

PROVIDE ALL NECESSARY SUPPORTS FOR LIGHTING FIXTURES AS REQUIRED. WHERE FIXTURES ARE INSTALLED ON OR IN SUSPENDED CEILINGS, SECURE FIXTURES TO CEILING FRAME SYSTEM AND PROVIDE FIXTURE SUPPORTS INDEPENDENT OF THE CEILING SUSPENSION SYSTEM, AS REQUIRED. PROVIDE PENDANT FIXTURES WITH SWIVEL HANGER, LEGALLY APPROVED FOR WEIGHT SUPPORTED AND FOR EARTHQUAKE COMPLIANCE. WHEN INSTALLED, ALL PENDANT FIXTURES INCLUDING CONTINUOUS FLUORESCENT ROWS SHALL SWING A MINIMUM OF 20" IN ANY

RECESSED FIXTURES IN FIRE RATED CEILINGS AND SUPPLY AIR PLENUMS SHALL BE EITHER APPROVED FOR THE FIRE RATINGS OF THI CEILING, OR SHALL BE FULLY ENCLOSED IN A FIRE RATED HOUSING ACCEPTABLE TO LEGAL AUTHORITIES. SEAL ALL OPENINGS AS COORDINATE LOCATION OF ALL LIGHTING FIXTURES WITH THE EXISTING CONDITIONS PRIOR TO STARTING WORK, PROVIDE MOUNTING

ETHOD AS REQUIRED BY CEILINGS AND FIXTURES TO BE INSTALLED. ALL LIGHTING FIXTURES SHOWN AND SPECIFIED ON THE ELECTRICAL DRAWINGS AS WELL AS THOSE REFLECTED ON THE ARCHITECTURAL INTERIOR DESIGN OR OTHER DRAWINGS PREPARED UNDER OTHER DIVISIONS OF WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE STATED.

CONDUIT INSTALLED WITHIN CONCEALED AREAS MAY BE EMT OR RIGID STEEL. IN EXPOSED AREAS SUBJECT TO CONDUIT DAMAGE, ONLY GALVANIZED RIGID STEEL CONDUIT MAY BE USED. ALL CONDUIT IN FINISHED AREAS SHALL BE CONCEALED. A MAXIMUM OF 4' OF

ALL CONDUITS INSTALLED UNDERGROUND SHALL BE A MINIMUM OF 1". UNDERGROUND CONDUITS SHALL BE PVC, SCHEDULE 40 ELECTRICAL CONDUIT, AS MANUFACTURED BY CARLON OR EQUAL, UNLESS OTHERWISE NOTED. CONDUITS SHOWN ON THE DRAWINGS HAVE BEEN SIZED BASED ON METALLIC RACEWAYS UNLESS NOTED OTHERWISE. ELECTRICAL CONTRACTOR MAY OPT TO USE SCHEDULE 40 PVC WHERE PERMITTED BY CODE AND THE OWNER. IF PVC IS USED, ELECTRICAL CONTRACTOR SHALL SIZE ALL SUCH CONDUITS AS REQUIRED TO INCLUDE GROUND CONDUCTOR, AND SHALL SIZE GROUND WIRE PER CODE. PVC RACEWAYS SHALL NOT BE INSTALLED ABOVE GRADE. ALL FLEX CONDUITS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED

ALL PVC UNDERGROUND CONDUITS SHALL UTILIZE COATED OR WRAPPED RIGID STEEL ELBOWS AND RISERS WHEN RISING ABOVE GRADI EXCEPT IN AREAS NOT SUBJECT TO MECHANICAL DAMAGE AND WITH PRIOR APPROVAL FROM THE ELECTRICAL ENGINEER. MAINTAIN A MINIMUM OF 6" CLEARANCE BETWEEN ALL CONDUIT SLEEVES. VERIFY WITH GENERAL CONTRACTOR.

IE ELECTRICAL CONTRACTOR SHALL PROVIDE EXPANSION/DEFLECTION FITTINGS FOR CONDUITS CROSSING EXPANSION JOINTS. FITTINGS SHALL BE SUITABLE FOR CONDITIONS TO BE ENCOUNTERED. VERIFY WITH OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL.

PARKING LOT CONDUITS SHALL HAVE A MINIMUM COVER OF 24".

A CONCEALED CONDUIT SYSTEM SHALL BE INSTALLED FOR ALL INTERIOR WIRING INCLUDING CONTROLS. CONDUIT SHALL BE RUN CONTINUOUS BETWEEN OUTLETS, ETC., AND WITH THE MINIMUM NUMBER OF BENDS. conduit runs for circuits operating over 600V shall have a grounding bushing installed at each termination.

ALL CONDUIT RUNS ON ROOF AND UP TO TEN FEET ABOVE FINISH GRADE SHALL BE GALVANIZED RIGID STEEL CONDUIT WITH THREADED

WHERE UNDERGROUND CONDUIT CANNOT BE RUN BELOW BUILDING FOOTINGS THE CONTRACTOR SHALL PROVIDE PVC-80 SLEEVES THROUGH THE FOOTINGS (CONTRACTOR SHALL OBTAIN APPROVAL FOR ALL SLEEVE SIZES AND LOCATIONS WITH THE STRUCTURAL

ALL CONDUIT RISERS THROUGH SLAB SHALL BE RIGID STEEL OR IMC (FACTORY WRAPPED WITH PVC TAPE OR WITH FACTORY APPLIED PVC COATING) AND SHALL EXTEND A MINIMUM OF FOUR INCHES (4") ABOVE FINISHED FLOOR. ALL CONDUIT SHALL BE DELIVERED TO THE SITE OF CONSTRUCTION IN THEIR ORIGINAL BUNDLES. EACH LENGTH OF CONDUIT SHALL BEAR THE LABEL OF THE NATIONAL BOARD OF FIRE UNDERWRITERS. ALL CONDUIT SUBJECTED TO ROUGH USAGE WHILE ON THE JOB BEFORE INSTALLATION AND NOT ACCEPTABLE TO THE ARCHITECT SHALL BE REMOVED FROM THE PREMISES UPON NOTICE.

CONDUIT INSTALLED IN MASONRY WALLS SHALL BE RIGID STEEL GALVANIZED CONDUIT OR PVC, NOT IN THE SAME MASONRY CELL AS THE BUILDING STRUCTURAL REINFORCING STEEL.

THE JOINTS IN ALL CONDUITS INSTALLED UNDER CONCRETE SLABS ON THE GROUND, OR UNDERGROUND, OR EXPOSED TO THE WEATHER, SHALL BE MADE LIQUID AND GAS—TIGHT. ALL UNDERGROUND CONDUIT OUTSIDE OF THE BUILDINGS SHALL BE BURIED TO A DEPTH OF NOT LESS THAN 24" BELOW FINISH GRADE. UTILITY SERVICES SHALL COMPLY WITH UTILITY COMPANY REQUIREMENTS. TWO OR MORE POWER OR TELECOMMUNICATIONS CONDUIT RUNS INSTALLED IN A COMMON TRENCH SHALL BE SEPARATED HORIZONTALLY BY AT LEAST FOUR INCHES (4"). TWO OR MORE POWER AND TELECOMMUNICATIONS CONDUIT RUNS INSTALLED IN A COMMON TRENCH SHALL BE SEPARATED HORIZONTALLY BY AT LEAST TWELVE (12"). ELECTRICAL CONDUIT RUNS INSTALLED IN A COMMON TRENCH WITH OTHER UTILITY LINES SHALL BE SEPARATED HORIZONTALLY FROM SUCH LINES BY AT LEAST TWELVE INCHES (12").

CHANGES IN DIRECTION SHALL BE MADE WITH CONDUIT SWEEP ELBOWS OR LONG RADIUS BENDS MADE ON THE JOB. WHERE TWO OR MORE CONDUITS ARE GROUPED IN EXPOSED LOCATIONS, THE SWEEPS SHALL BE STRUCK FROM THE SAME CENTER FORMING

ALL JOINTS IN CONDUIT SHALL BE MADE WITH STANDARD COUPLING. IN MAKING JOINTS, CONDUITS MUST BE TRULY AND ACCURATELY CUT AND THREADED (WHERE APPLICABLE) WITH STRAIGHT THREAD, SMOOTHLY REAMED AND SQUARELY BUTTED. ALL CONDUIT SHALL BE KEPT CORKED AND DRY DURING CONSTRUCTION, USING PLASTIC CAPS OR CONDUIT PENNIES HELD IN PLACE WITH CONDUIT BUSHINGS. SHOULD DIRT OR MOISTURE COLLECT IN ANY CONDUIT, THE CONTRACTOR SHALL SWAB THEM OUT TO THE SATISFACTION OF THE

CONDUITS ENDING AT THE MOTORS SHALL BE CARRIED AS CLOSE AS POSSIBLE TO THE TERMINAL BLOCKS MAKING ALLOWANCE FOR MOVEMENT OF THE MOTORS WHEN THEY ARE EQUIPPED WITH SLIDE RAILS. THE CONNECTION BETWEEN THE CONDUIT TERMINALS ON MOTOR AND THE CONDUIT SHALL BE MADE WITH LIQUID—TIGHT FLEXIBLE CONDUIT USING THE PROPER FITTINGS. ALL CONDUITS WHERE THEY ENTER PANEL BOXES, PULL BOXES, OR OUTLET BOXES SHALL BE SECURED IN PLACE BY GALVANIZED

LOCKNUTS - ONE (1) LOCKNUT INSIDE OF BOX. AN INSULATED THROAT SHALL BE USED WHERE CONDUCTORS ARE #4 OR LARGER. WHERE CONDUITS ARE RUN EXPOSED, THE SAME SHALL BE INSTALLED STRAIGHT AND TRUE WITH REFERENCE TO THE ADJACENT

CONDUIT 1" AND ABOVE SHALL HAVE INSULATED THROAT BUSHINGS.

ANY CONDUIT INSTALLED UNDER BUILDING SHALL BE UNDER THE SLAB.

ALL BOXES FOR BRACKET OUTLETS SHALL BE EQUIPPED WITH 3/8" "NO-BOLT" FIXTURE STUD. THESE BOXES SHALL BE SO SET THAT WHEN IN PLACE THE FIXTURE SHALL BE AT RIGHT ANGLES TO THE CEILING OR WALLS. L EMPTY CONDUIT SHALL BE EQUIPPED WITH A #12 GALVANIZED IRON PULL WIRE OR NYLON PULL ROPE CONTINUOUS FROM OUTLET

FLEXIBLE CONDUIT WILL BE PERMITTED FOR CONNECTING LIGHTING FIXTURES TO JUNCTION BOXES. FLEXIBLE CONNECTION IN OUTDOOR AND DAMP LOCATIONS SHALL BE FLEXIBLE LIQUID—TIGHT METAL CONDUIT.

INSTALL ROOF JACKS FOR THIS CONSTRUCTION IN ACCORDANCE WITH OTHER SECTIONS OF THIS SPECIFICATION

THE MAXIMUM ALLOWED LENGTH OF FLEX CONDUIT AT EQUIPMENT CONNECTIONS IS 18". EXPANSION JOINTS FOR CONDUIT SHALL BE PROVIDED WHERE REQUIRED TO COMPENSATE FOR THERMAL EXPANSION AND CONTRACTION. NO CONDUIT SMALLER THAN 1/2 INCH ELECTRICAL TRADE SIZE SHALL BE USED.

OUTLET. PULL BOXES & JUNCTION BOXES: JUNCTION BOXES AND OUTLET BOXES SHALL BE SIZED PER CODE, BUT IN NO CASE LESS THAN THE FOLLOWING: OUTLETS WITH (9) LESS #12 CONDUCTORS SHALL BE 4"/S X 2-1/2"/D AND OUTLETS WITH (10) THROUGH (18) CONDUCTORS SHALL BE 4-11/16"/S

ALL JUNCTION BOXES SHALL CLEARLY INDICATE WITH PERMANENT BLACK MARKER, IN 1/2" LETTERING, THE CIRCUIT NUMBERS AND THE SOURCE OF POWER OF ALL CONDUCTORS CONTAINED WITHIN THAT JUNCTION BOX. OUTLETS FOR THE ATTACHMENT OF THE FIXTURES TO BE PROVIDED WITH 3/8" MALLEABLE IRON FIXTURE STUDS AND BOX HANGERS WHERE REQUIRED. IELEPHONE OUTLETS SHALL BE DOUBLE GANG BOX WITH SINGLE GANG 1—HOLE TELEPHONE COVER PLATE, UNLESS OTHERWISE NOTED

ON DRAWINGS. CABLE TELEVISION OUTLETS SHALL BE DOUBLE GANG BOX WITH SINGLE GANG 1—HOLE CATV COVER PLATE, UNLESS OTHERWISE NOTED INTERIOR BOXES SHALL BE GALVANIZED STEEL, MANUFACTURERS: B & C METAL STAMPING, BRYANT, GENERAL ELECTRIC, LEVITON COMPANY, NORRIS STEEL CITY, CROUSE—HINDS, APPLETON, RACO, CARLON.

ALL SWITCHBOARDS AND PANELBOARDS SHALL BE CONSTRUCTED PER THE NATIONAL ELECTRICAL CODE AND ALL LOCALLY ADOPTED AMENDMENTS. WHERE REGULATIONS APPLY, CONSTRUCTION SHALL MEET REQUIREMENTS OF SERVING UTILITY COMPANY.
ALL SWITCHBOARDS AND MOTOR CONTROL CENTERS SHALL HAVE WITHSTAND RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT WITH 42,000 AMP BEING THE MINIMUM. CONFIRM CONDITIONS WITH SERVING UTILITY COMPANY, SUBMIT CERTIFICATION OF COMPLIANCE

EXTERIOR BOXES SHALL BE "FS" TYPE BOXES WITH THREADED HUBS AS REQUIRED AND FULLY GASKETED UNLESS OTHERWISE NOTED.

ALL OVERCURRENT DEVICES IN EQUIPMENT SHALL BE U.L. LISTED TO INTERRUPT THE AVAILABLE FAULT CURRENT. ALL PANELBOARDS AND SWITCHBOARDS SHALL BE GROUNDED IN ACCORDANCE WITH THE NEC AND ALL LOCALLY ADOPTED AMENDMENTS. WALL-MOUNTED PANELS SHALL BE PROVIDED WITH TRIM AND DOOR CONSTRUCTED OF CODE GUAGE SHEET STEEL AND SHALL HAVE FACTORY FINISH. DOOR SHALL BE FITTED WITH HINGES, SPRING CATCH LATCH AND CYLINDER LOCK. PROVIDE 2 KEYS WITH EACH PANEL. PROVIDE DIRECTORY CARD HOLDER AND TYPEWRITTEN PANEL SCHEDULE. PANELBOARD SHALL BE SO CONSTRUCTED AS TO PROVIDE FOR

ADJUSTABLE ALIGNMENT OF TRIM AND INTERIOR PANEL. PROVIDE ENGRAVED NAMEPLATES IDENTIFYING SWITCHBOARDS AND PANELBOARDS. ALL EQUIPMENT NAMEPLATE IDENTIFICATIONS SHOWN O THE DRAWINGS ARE FOR REFERENCE ONLY. PRIOR TO FABRICATING THE FINISHED NAMEPLATES, CONSULT WITH THE OWNER'S BUILDING ENGINEER FOR THE ACTUAL NOMENCLATURE TO BE USED.

PROVIDE PANELBOARDS WITH SEPARATE GROUND BAR.

G.E., SYLVANIA, OR PHILLIPS.

UNLESS OTHERWISE INDICATED ON PLANS, PANEL SHALL BE INSTALLED WITH TOP OF CABINET AT 6'-6" A.F.F. MANUFACTURERS SHALL BE SQUARE D OR EQUAL APPROVED BY ENGINEER PRIOR TO BID PROPOSAL

WHERE LOADS ARE ADDED TO EXISTING PANELBOARDS, THE PANEL SCHEDULE SHALL BE UPDATED AND SHALL INDICATE THE LOCATION AND DESCRIPTION OF THE LOAD.

LL LUG CONNECTIONS TO PANEL BUSSING, SWITCHES, AND BREAKERS TO BE SIZED TO ACCOMMODATE CONDUCTOR SIZES INDICATED ON THESE DRAWINGS. REDUCTION OF CIRCULAR MIL CAPACITY OF CONDUCTORS IS NOT PERMITTED. ALL LUGS SHALL BE RATED FOR

MOLDED CASE CIRCUIT BREAKERS SHALL BE OF THE QUICK-MAKE, QUICK-BREAK, TRIP-FREE, THERMAL MAGNETIC BOLT-ON TYPE WITH

CIRCUIT BREAKERS ABOVE 225 AMPERE RATING SHALL HAVE INTERCHANGEABLE TRIP ELEMENTS.

ALL CIRCUIT BREAKERS SHALL BE CALIBRATED FOR OPERATION IN AN AMBIENT TEMPERATURE OF 40 DEGREES CELSIUS. ALL MUTI-POLE BREAKERS SHALL BE SO DESIGNED THAT AN OVERLOAD IN ONE POLE AUTOMATICALLY CAUSES ALL POLES TO OPEN. ALL PANELBOARD CIRCUIT BREAKERS USED FOR DIRECT SWITCHING OR LIGHTING CIRCUITS, SHALL BE SWITCH DUTY RATED. ALL CIRCUIT BREAKERS SHALL HAVE A MINIMUM 10,000 AIC RATING FOR 250V PANELS AND 14,000 AIC RATING FOR 600V PANELS.

ALL FUSES SHALL BE MANUFACTURED BY GOULD SHAMUT, LITTLEFUSE, OR BUSSMANN MANUFACTURING CO.

ALL FLUORESCENT FIXTURES WITH ELECTRONIC BALLASTS OPERATING AT 120 VOLTS SHALL HAVE A HARMONIC DISTORTION OF NOT MORE ALL FLUORESCENT FIXTURES WITH ELECTRONIC BALLASTS OPERATING AT 277 VOLTS SHALL HAVE A HARMONIC DISTORTION OF NOT MORE

ALL FLUORESCENT FIXTURES IN INDOOR LOCATIONS SHALL BE INSTALLED WITH A DISCONNECTING MEANS PER NEC ART. 410.73(G).

INCANDESCENT LAMPS SHALL BE OF THE EXTENDED SERVICE TYPE, INSIDE FROSTED. RATING TYPE, ENVELOPE AND OTHER BASE AS RECOMMENDED BY FIXTURE MANUFACTURER UNLESS SPECIFIED OTHERWISE. FLUORESCENT LAMPS SHALL BE T8, 3500 KELVIN, RAPID START, UNLESS OTHERWISE SHOWN ON DRAWINGS

HIGH INTENSITY DISCHARGE LAMPS SHALL BE CALIFORNIA TITLE 20 COMPLIANT AND OF TYPE RECOMMENDED BY FIXTURE MANUFACTURER

TRANSFORMERS SHALL BE TP-1 RATED, DRY TYPE, SHEET METAL ENCLOSED, CLASS 220 DEGREES INSULATION, TWO WINDING WITH PRIMARY AND SECONDARY VOLTAGES AND KVA RATINGS AS SHOWN ON THE DRAWINGS. THREE—PHASE TRANSFORMERS SHALL BE DELTA CONNECTED ON PRIMARY WINDINGS. SECONDARY WINDINGS SHALL I

TRANSFORMERS SHALL BE PROVIDED WITH FOUR (4) 2-1/2% TAPS. TWO ABOVE AND TWO BELOW NOMINAL VOLTAGE ON

TERMINALS SHALL BE READILY ACCESSIBLE FROM TOP AND FRONT OF TRANSFORMER, WITH TOP AND/OR FRONT PANELS

TRANSFORMERS 15 KVA AND LARGER SHALL BE IN A HEAVY GUAGE, SHEET STEEL, VENTILATED ENCLOSURE. THE VENTILATING OPENINGS SHALL BE DESIGNED TO PREVENT ACCIDENTAL ACCESS TO LIVE PARTS IN ACCORDANCE WITH UL, NEMA, AND NATIONAL ELECTRICAL CODE STANDARDS FOR VENTILATED ENCLOSURES. SINGLE PHASE TRANSFORMERS THROUGH 167 KVA, AND THREE TRANSFORMERS THROUGH 112 5 KVA SHALL BE DESIGNED SO THEY CAN BE EITHER FLOOR OR WALL MOUNTED.

L TRANSFORMERS SHALL BE INSTALLED TO MEET THE MANUFACTURERS RECOMMENDED NAMEPLATE CLEARANCES. RANSFORMERS SHALL BE MOUNTED ON VIBRATION ISOLATORS FINAL CONDUIT CONNECTIONS TRANSFORMERS SHALL USE FLEXIBLE CONDUIT AS VIBRATION ISOLATION.

GENERAL: PROVIDE A COMPLETE GROUNDING SYSTEM AND SAFELY GROUND ALL SERVICE DISTRIBUTION EQUIPMENT AND RELATED METALLIC EQUIPMENT IN AN APPROVED MANNER AND AS REQUIRED BY THE NEC AND AS SHOWN ON THE DRAWINGS. GROUNDING CONNECTIONS SHALL BE MADE WITH THE FOLLOWING TYPES OF CONNECTORS AS MANUFACTURED BY BURNDY, ILLSCO OR AN EQUIVALENT MANUFACTURER.

. CABLE TO WATER PIPE 3. CABLE TO UFER SYSTEM TYPE "QAB" C. CABLE TO BOX OR CABINET

THE MAIN GROUNDING CONNECTIONS FOR THE SERVICE EQUIPMENT SHALL BE MADE TO THE UFER GROUNDING SYSTEM AND TO THE WATER MAIN OR NEAREST ACCESSIBLE WATER PIPE WITH CLAMP OR FITTINGS MADE OF COPPER BRONZE, OR OTHER

RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS AS MEASURED BY EITHER THE "FALL OF POTENTIAL" METHOD OR B' "DIRECT READING GROUND RESISTANCE." CONNECTIONS TO THE WATER MAIN SHALL BE MADE ON THE "STREET SIDE" OF THE WATER METERS. IF THE CONNECTION IS MADE ON THE "BUILDING SIDE" OF THE METERS, SUITABLE COPPER JUMPERS OF FLEXIBLE, STRANDED INSULATED CABLE, BY-PASSING ALL METERS, SHALL BE PROVIDED AND INSTALLED, ALL IN ACCORDANCE WITH LOCAL CODE.

ALL GROUNDING CONDUCTORS SHALL BE PROTECTED FROM MECHANICAL INJURY AND SHALL BE RIGIDLY SUPPORTED. UNLESS OTHERWISE SHOWN, GROUND CONDUCTORS SHALL NOT BE RUN IN CONCRETE SLAB OR FILL UNLESS PROTECTED BY STEEL CONDUIT AND BOTH ENDS OF THE CONDUIT SHALL BE PROVIDED WITH A CODE—APPROVED TYPE OF SOLDERLESS CONNECTOR AND SHALL BE BOLTED OR CLAMPED TO EQUIPMENT OR CONDUIT. NO SOLDER CONNECTIONS ALLOWED.

GROUND ALL INTERIOR METALLIC WATER AND GAS PIPING PER REQUIREMENTS OF THE LOCAL AUTHORITIES. PROVIDE A SEPARATE GREEN GROUND IN ALL CONDUIT.

CONTRACTOR SHALL FURNISH AND INSTALL NEW LIFE SAFETY DEVICES IN THE AREAS OF WORK. ALL DEVICES ARE TO BE OF THE SAME MANUFACTURER UNLESS NOTED AS THE EXISTING BUILDING LIFE SAFETY SYSTEM AND FULLY APPROVED FOR INSTALLATION BY ALL AUTHORITIES. AT NO TIME SHALL THE CONTRACTOR DISCONNECT OR DISABLE ANY PART OF THE BUILDING LIFE SAFETY SYSTEM WITHOUT APPROVAL OF THE BUILDING LIFE SAFETY DIRECTOR. COORDINATE ALL REQUIRED WORK WITH

l fire alarm related back boxes, junction boxes, and blank cover plates shall be painted dark red in color ALL FIRE ALARM CONTROLS SHALL BE +48". CAC-24.

ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL AND TELEPHONE SERVICES, EQUIPMENT LOCATIONS, ETC. WITH UTILITY COMPANIES PRIOR TO BID AND START OF WORK. INCLUDE ALL RELATED COSTS FOR THIS PROJECT AS PART OF BID

FIRE ALARM SYSTEM GENERAL NOTES

CONSULT WITH THE OAR AND/OR IOR BEFORE STARTING WORK.

ALL FIRE ALARM EQUIPMENT SHALL BE BRACED OR ANCHORED FOR SEISMIC RESTRAINT AS SHOWN ON DRAWINGS IT IS THE INTENT OF THESE DRAWINGS THAT THIS BE A COMPLETE FIRE ALARM JOB. ANY ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO BIDDING THE JOB.

REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS, EQUIPMENT AND MATERIALS APPROVED FOR USE IN THIS

ALL FIRE ALARM EQUIPMENT, DEVICES, J. BOXES, RACEWAYS, ETC. EXPOSED TO WEATHER SHALL BE WEATHERPROOF. ALL RACEWAYS, INCLUDING CONDUITS, WIREMOLDS, ETC., SHALL BE SIZED PER N.E.C. FOR THE NUMBER AND SIZE OF CONDUCTORS ENCLOSED IN A RACEWAY, U.N.O. (SEE "RACEWAY AND WIRE SCHEDULE" ON E3.0).

THE CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE WORKING CONDITIONS AND THE EXACT NATURE AND EXTENT OF THE WORK TO BE DONE, TAKING INTO ACCOUNT ANY SPECIAL OR LINE IS A SECURIAR TO THIS LOR UNUSUAL FEATURES PECULIAR TO THIS JOB.

THE CONTRACTOR SHALL EXAMINE ALL CONTRACT PLANS AND EXISTING FIELD CONDITIONS IN ORDER TO LOGICALLY LOCATE

WORK IN ACCORDANCE WITH EXISTING CABINETS, BEAMS, FURRING, DOOR SWINGS, DUCTS, PIPES AND CEILINGS. THE INSTALLATION OF EQUIPMENT, DEVICES, PULL BOXES, CONDUITS, ETC. UNDER THIS PROJECT SHALL COMPLY WITH ALL APPLICABLE ADA REQUIREMENTS. SPECIFICALLY, NEW EQUIPMENT OR DEVICES SHALL BE INSTALLED WITH THE BOTTOM AT 80"A.F.F. OR HIGHER. OR 27"A.F.F. OR LOWER, WHERE NEW EQUIPMENT OR DEVICES ARE INSTALLED BETWEEN 80" A.F.F. AND 27"A.F.F., THEY SHALL NOT OBSTRUCT THE PASSAGE WAY OR BECOME A SAFETY HAZARD. CONSULT THE ARCHITECT/ENGINEER AND/OR INSPECTOR FOR AN ALTERNATE LOCATION IF REQUIRED. ALL INTERIOR AND EXTERIOR FIRE ALARM DEVICES SHOWN ON PLANS SHALL BE MOUNTED PER SPECIFICATIONS.

REFER TO VARIOUS SPECIFICATIONS FOR EXPOSED RACEWAYS, PULL BOXES, TERMINAL CABINETS, POWER SUPPLIES,

AND OTHER TYPES OF FIRE ALARM EQUIPMENT THAT SHALL BE PAINTED TO MATCH THE SURFACES WHERE . ALL FIRE ALARM MATERIALS, EQUIPMENT, DEVICES, BOXES, CONDUIT, WIRE, CABLE, ETC. USED ON THIS PROJECT SHALL BE NEW, UNLESS NOTED OTHERWISE.

ALL RACEWAYS SHALL BE INSTALLED PER SPECIFICATION REQUIREMENTS

. WIRING INSTALLATION REQUIREMENTS: ALL WIRING, INCLUDING ELECTRICAL CONDUCTORS AND FIRE ALARM CABLES USED ON THIS PROJECT, REGARDLESS IF CONCEALED IN WALLS, CEILINGS, ATTICS, CRAWL SPACES, ETC. OR RUN EXPOSED, SHALL BE INSTALLED IN RACEWAYS. USE OF OPEN WIRING OF ANY KIND AND IN ANY LOCATION IS PROHIBITED — NO EXCEPTIONS.

ALL FIRE ALARM SYSTEM RACEWAYS AND PULL BOXES SHALL BE DEDICATED TO FIRE ALARM WIRING ONLY, AND SHALL NOT BE USED FOR ANY OTHER WIRING. WHERE IT IS NOT POSSIBLE TO PROVIDE DEDICATED UNDERGROUND OR ABOVEGROUND PULL BOXES, OTHER SIGNAL, BUT NOT POWER, PULL BOXES MAY BE USED, HOWEVER, MEANS OF PHYSICAL AND ELECTRICAL SEPARATION OF FIRE ALARM WIRING FROM ALL OTHER WIRING SHALL BE PROVIDED.

SPLICING OF FIRE ALARM SYSTEM WIRING IN JUNCTION BOXES, PULL BOXES, ETC., IS NOT ALLOWED. ALL TERMINATIONS SHALL BE MADE IN TERMINAL CABINETS ON TERMINAL BLOCKS OR ON FIRE ALARM EQUIPMENT OR DEVICE TERMINALS. . ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES.

e. T-TAPPING OF SLC LOOPS IS ONLY ALLOWED IN TERMINAL CABINETS, AND NOT ON DEVICE TERMINALS.

BE EASILY ACCESSIBLE.

. RACEWAY INSTALLATION REQUIREMENTS:

POINT AND COMMON ANNUNCIATION ARE PROHIBITED. . SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN A 36-INCH HORIZONTAL PATH FROM THE SUPPLY OR RETURN

REGISTERS OF A FORCED AIR HEATING OR COOLING SYSTEM AND SHALL BE INSTALLED OUTSIDE OF THE DIRECT AIRFLOW 5. HEAT DETECTORS INSTALLED ABOVE SUSPENDED CEILINGS SHALL HAVE THEIR LOCATIONS MARKED BELOW THE CEILING AND

6. THE ENTIRE FIRE ALARM WORK, INSTALLED UNDER THIS PROJECT, SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF NFPA 72, C.F.C., C.B.C. AND C.E.C, AS APPROVED BY DSA ON STAMPED DRAWINGS.

. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR. 8. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTIONS OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.

. FIRE ALARM DEVICES THAT HAVE END-OF-LINE RESISTORS INSTALLED IN THEM SHALL BE SO MARKED, INCLUDING AUDIBLE OR VISUAL LOOP NUMBER (EXAMPLE: "ELR-A1"), AND THIS MARKING SHALL BE DONE IN SUCH A MANNER THAT IT IS

SHALL BE CLEAR AND EASILY UNDERSTOOD BY THE OFFICE STAFF. DESCRIPTIONS SHALL BE BASED ON THE STAFF'S UNDERSTANDING OF THE SITE AND NOT ON INFORMATION TAKEN FROM DRAWINGS. VERIFY THIS INFORMATION WITH THE SCHOOL ADMINISTRATION PRIOR TO PROGRAMMING. 1. AFTER ALL FIRE ALARM EQUIPMENT AND DEVICES ARE INSTALLED, AND PROGRAMMING IS COMPLETED, THE FIRE ALARM DEVICE MAP IN THE SCHOOL MAIN OFFICE SHALL BE UPDATED TO INDICATE TO SCHOOL PERSONNEL THE LOCATION OF THE NEW DEVICES.

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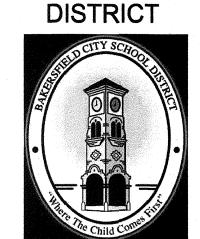
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AGENCY TRACKING NO. 63321-238

FILE NO. 15-6 DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES 03-117649 AC F.K. FLS ZM SS T DATE MAY 2'4 201

BAKERSFIELD CITY SCHOOL



NEW MARQUEE AT FREMONT ELEMENTARY SCHOOL

607 TEXAS ST, BAKERSFIELD, CA 93307

OPSC or OSHPD PROJ. NO:

PROJECT NO: DRAWN BY:

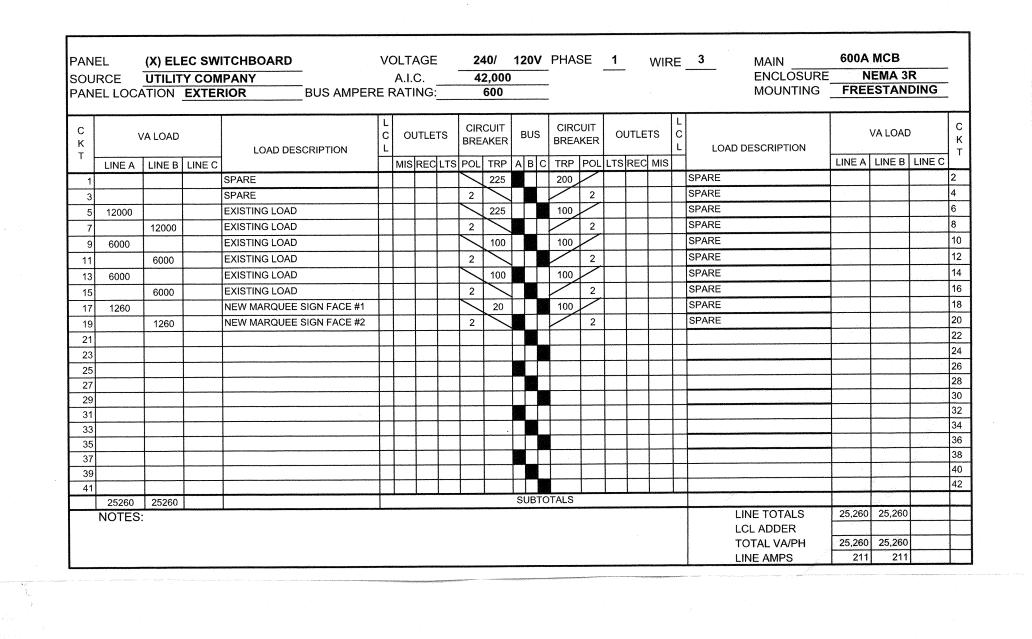
> **GENERAL ELECTRICAL SPECIFICATIONS**

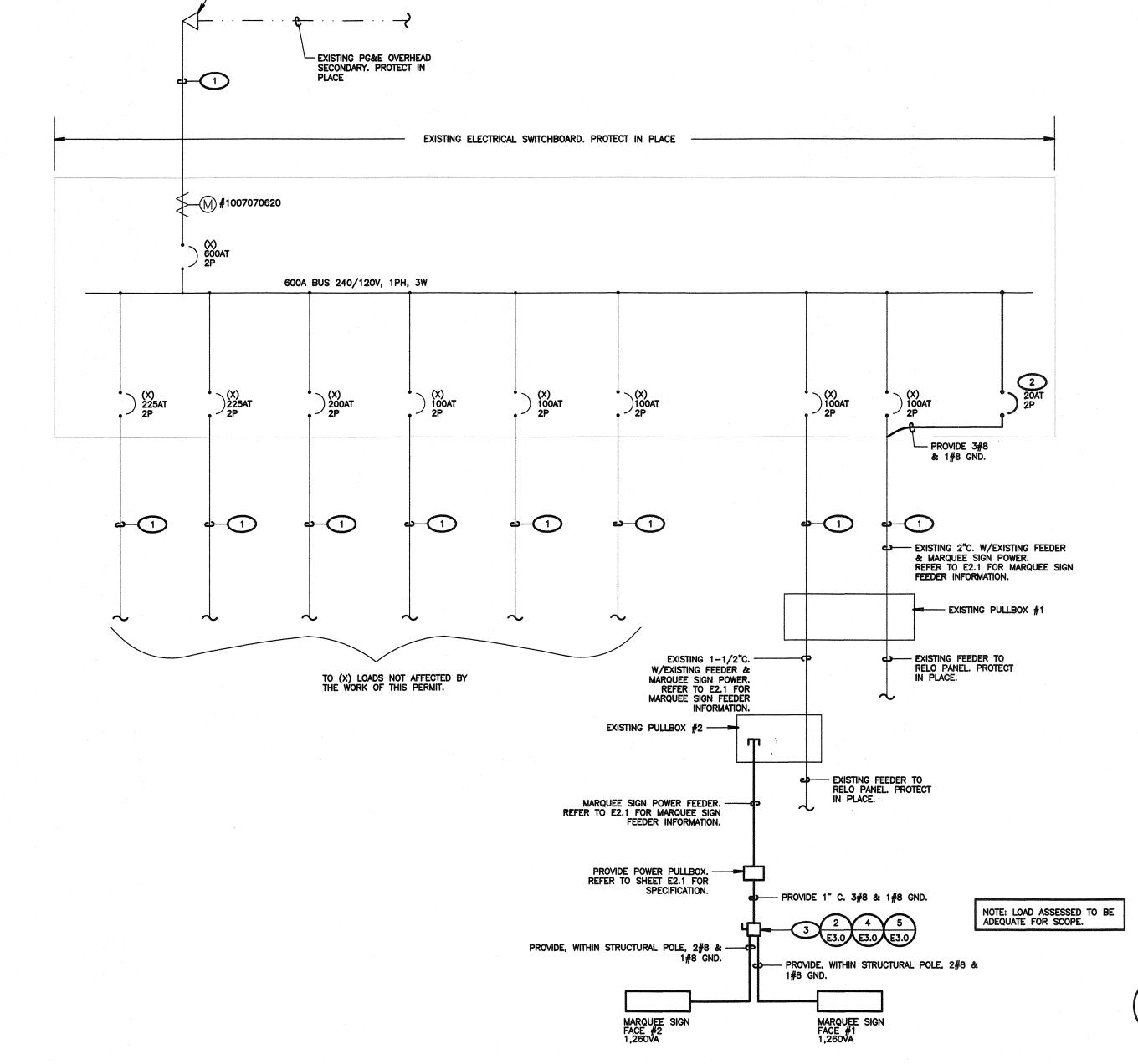
SHEET NUMBER

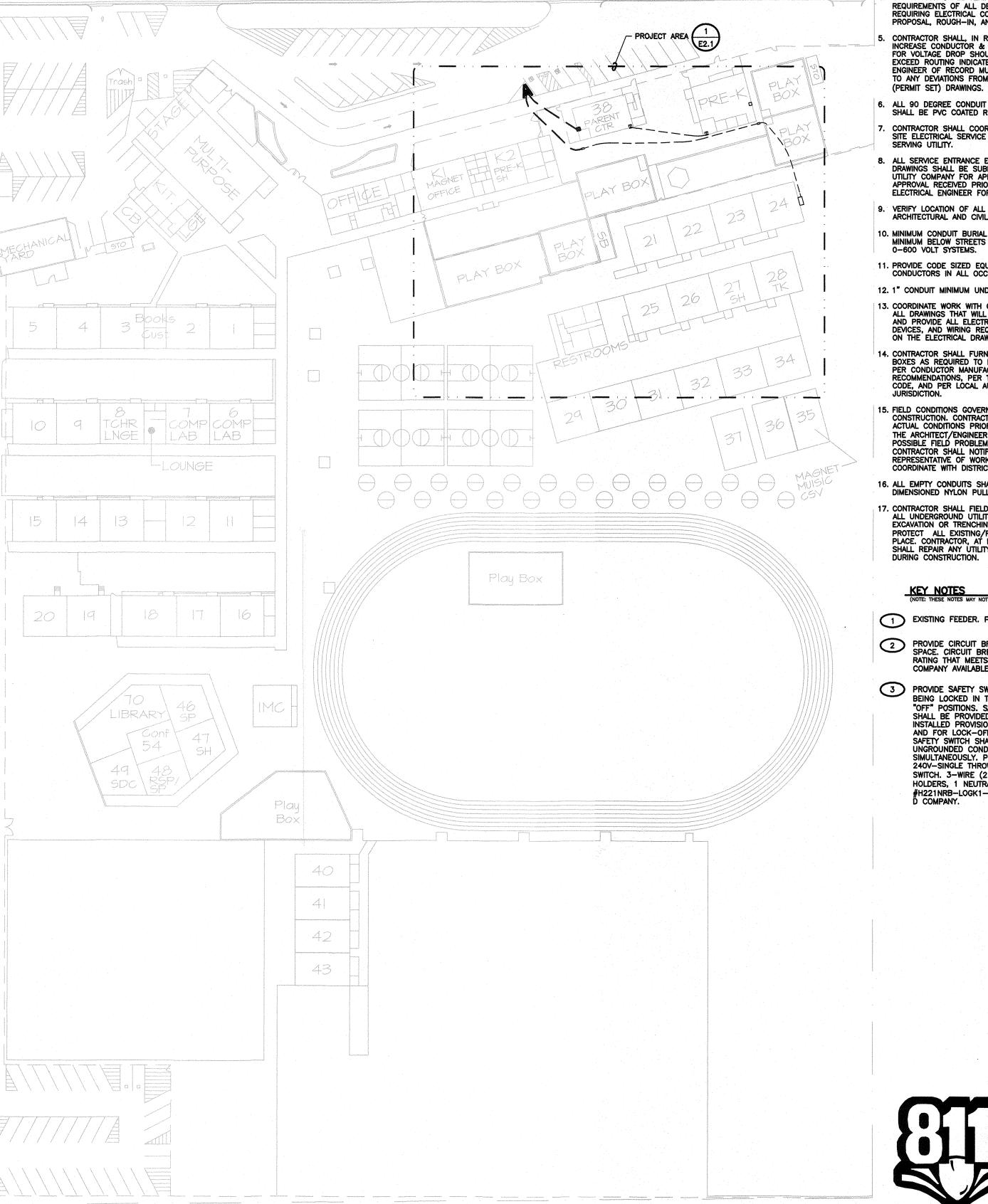
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DALÈFERRANTI@LIVE.COM

CHK'D BY: ISSUE DATE: 5/23/2018 SHEET TITLE O. "LABEL DESCRIPTIONS" INDICATING DEVICE TYPE AND LOCATION, THAT ARE DISPLAYED ON THE FIRE ALARM LCD DISPLAYS,







SHEET NOTES

1. CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT AT 811 TO LOCATE UNDERGROUND UTILITIES AT LEAST 2 WORKING DAYS PRIOR TO DIGGING. CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF EXISTING IMPROVEMENTS PRIOR TO START OF CONSTRUCTION.

2. VERIFY LOCATION OF ALL BUILDINGS AND APPENDITURES ON ARCHITECTURAL AND CIVIL PLANS.

3. FIELD VERIFY LOCATION ON ALL UNDERGROUND UTILITIES PRIOR TO TRENCHING. SCHEDULE AND COORDINATE ALL SITE WORK WITH OWNER PRIOR TO ANY TRENCHING.

. CONTRACTOR SHALL VERIFY LOCATION & REQUIREMENTS OF ALL DEVICES/EQUIPMENT
REQUIRING ELECTRICAL CONNECTION PRIOR TO BID
PROPOSAL, ROUGH—IN, AND FINISH.

SEAL

5. CONTRACTOR SHALL, IN ROUTING ALL CIRCUITS, INCREASE CONDUCTOR & CONDUIT SIZE TO ALLOW FOR VOLTAGE DROP SHOULD THE CONTRACTOR EXCEED ROUTING INDICATED ON DRAWINGS.

ENGINEER OF RECORD MUST BE NOTIFIED PRIOR TO ANY DEPARTMENT OF THE PROPERTY OF THE PROP TO ANY DEVIATIONS FROM APPROVED PLAN CHECK

6. ALL 90 DEGREE CONDUIT BENDS AND RISERS SHALL BE PVC COATED RIGID STEEL.

CONTRACTOR SHALL COORDINATE AND PROVIDE SITE ELECTRICAL SERVICE REQUIREMENTS WITH SERVING UTILITY.

8. ALL SERVICE ENTRANCE EQUIPMENT SHOP DRAWINGS SHALL BE SUBMITTED TO THE LOCAL UTILITY COMPANY FOR APPROVAL, WITH WRITTEN APPROVAL RECEIVED PRIOR TO SUBMISSION TO ELECTRICAL ENGINEER FOR APPROVAL.

9. VERIFY LOCATION OF ALL EQUIPMENT ON ARCHITECTURAL AND CIVIL PLANS.

11. PROVIDE CODE SIZED EQUIPMENT GROUNDING CONDUCTORS IN ALL OCCUPIED CONDUITS.

12. 1" CONDUIT MINIMUM UNDERGROUND. 13. COORDINATE WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTIONS, DEVICES, AND WIRING REQUIRED. WHETHER SHOWN ON THE ELECTRICAL DRAWINGS OR NOT.

14. CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES AS REQUIRED TO INSTALL CONDUCTORS PER CONDUCTOR MANUFACTURERS RECOMMENDATIONS, PER THE NATIONAL ELECTRICAL CODE, AND PER LOCAL AUTHORITIES HAVING

15. FIELD CONDITIONS GOVERN DEMOLITION AND NEW CONSTRUCTION. CONTRACTOR SHALL VERIFY ACTUAL CONDITIONS PRIOR TO START OF WORK. THE ARCHITECT/ENGINEER SHALL BE NOTIFIED OF POSSIBLE FIELD PROBLEMS PRIOR TO DEMOLITION. CONTRACTOR SHALL NOTIFY DISTRICT REPRESENTATIVE OF WORK BEING PERFORMED. COORDINATE WITH DISTRICT REPRESENTATIVE.

16. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH DIMENSIONED NYLON PULL STRING.

17. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION OR TRENCHING. CONTRACTOR SHALL PROTECT ALL EXISTING/REMAINING UTILITIES IN PLACE. CONTRACTOR, AT HIS SOLE EXPENSE, SHALL REPAIR ANY UTILITY SYSTEMS DAMAGED DURING CONSTRUCTION.

KEY NOTES
(NOTE: THESE NOTES MAY NOT APPEAR ON ALL SHEETS)

1 EXISTING FEEDER. PROTECT IN PLACE.

PROVIDE CIRCUIT BREAKER IN EXISTING SPACE, CIRCUIT BREAKER SHALL HAVE SPACE. CIRCUIT BREAKER SHALL HAVE KAIC RATING THAT MEETS OR EXCEEDS UTILITY COMPANY AVAILABLE FAULT CURRENT.

PROVIDE SAFETY SWITCH CAPABLE OF BEING LOCKED IN THE "ON" AND "OFF" POSITIONS. SAFETY SWITCH SHALL BE PROVIDED WITH FACTORY INSTALLED PROVISIONS FOR LOCK—ON AND FOR LOCK—OFF GUARD KIT. SAFETY SWITCH SHALL OPEN ALL UNGROUNDED CONDUCTORS SIMULTANEOUSLY. PROVIDE 30A, 240V—SINGLE THROW FUSIBLE SWITCH 3—WIRE (2 BLADES & FUSE SWITCH. 3-WIRE (2 BLADES & FUSE HOLDERS, 1 NEUTRAL), NEMA 3R. #H221NRB-LOGK1-SPLO, BY SQUARE D COMPANY.

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REVISIONS 10. MINIMUM CONDUIT BURIAL DEPTH IS 24", 36"
MINIMUM BELOW STREETS AND PARKING LOTS. FOR NO. DATE APPRD. DESCRIPTION 0-600 VOLT SYSTEMS.

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AGENCY INFORMATION:

AGENCY TRACKING NO. 63321-238 FILE NO. 15-6

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES 03-117649 AC F.K. FLS ZM SS TN DATE MAY 2 4 2018

BAKERSFIELD CITY SCHOOL DISTRICT



NEW MARQUEE AT FREMONT ELEMENTARY SCHOOL

607 TEXAS ST, BAKERSFIELD, CA 93307

OPSC or OSHPD PROJ. NO: PROJECT NO: DRAWN BY: VZ CHK'D BY: DF ISSUE DATE: 5/23/2018 SHEET TITLE

> SITE ELECTRICAL PLAN

SHEET NUMBER

E2.0

PARTIAL SINGLE LINE DIAGRAM NOT TO SCALE

- EXISTING WEATHERHEAD. PROTECT IN PLACE.

SITE ELECTRICAL PLAN SCALE: 1"=50'-0"

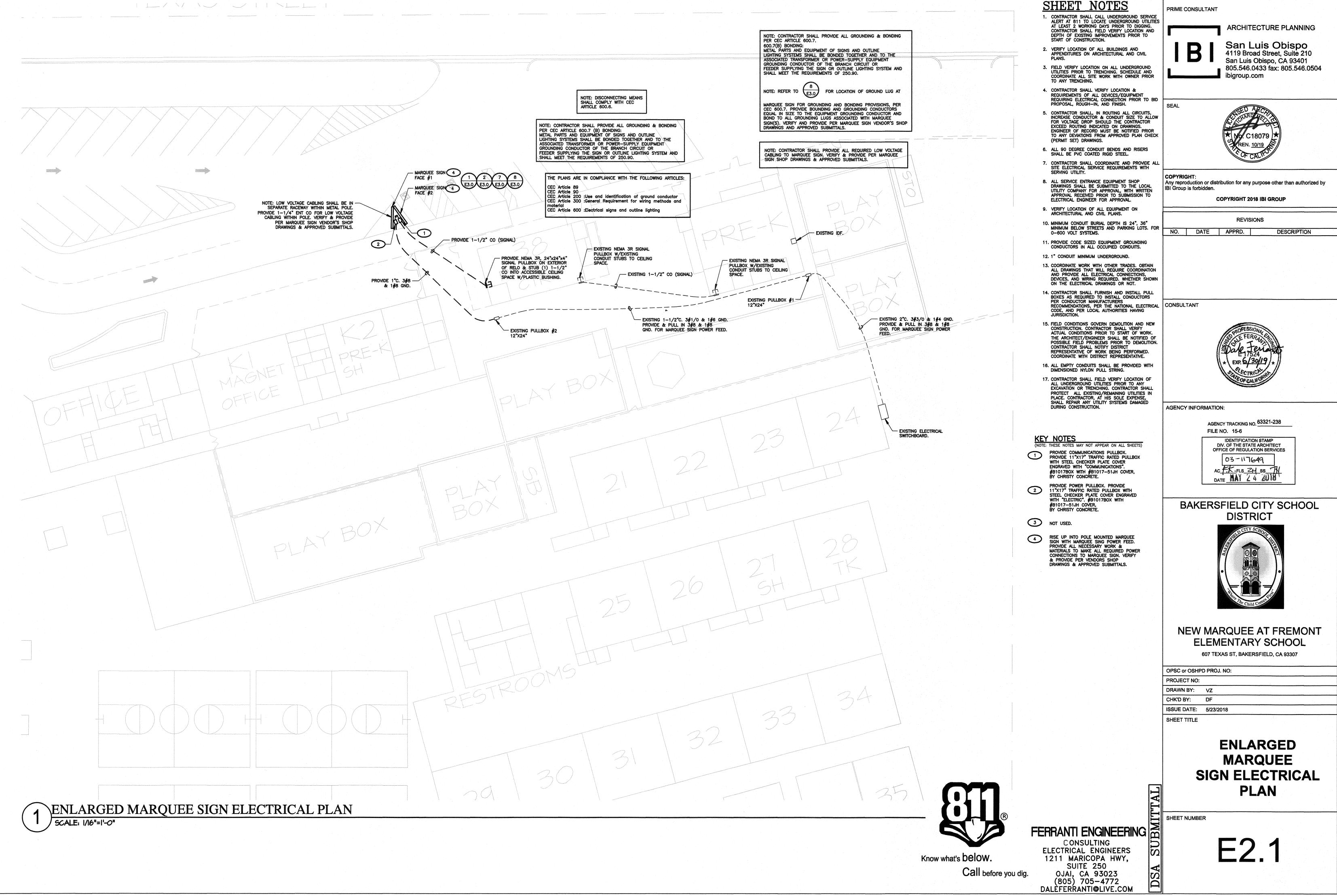
Know what's below.

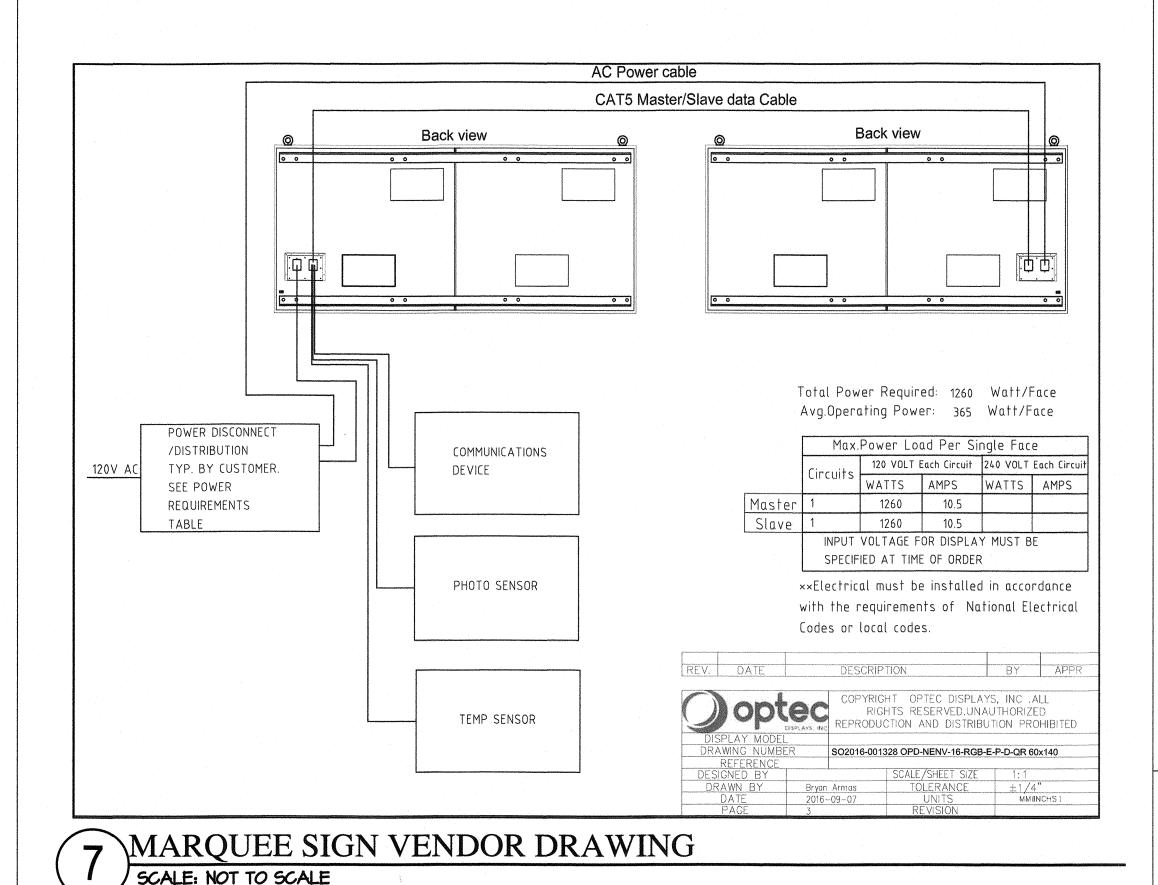
Call before you dig.

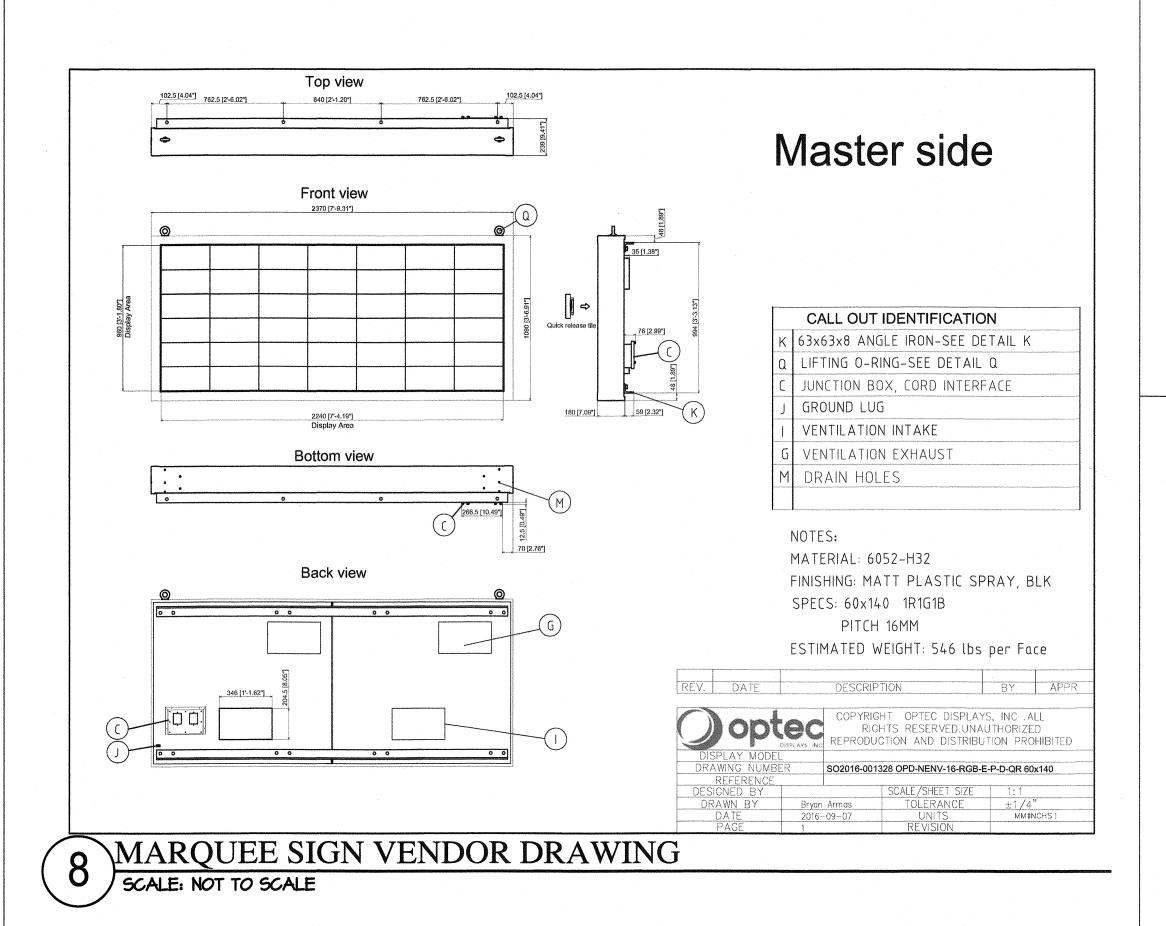
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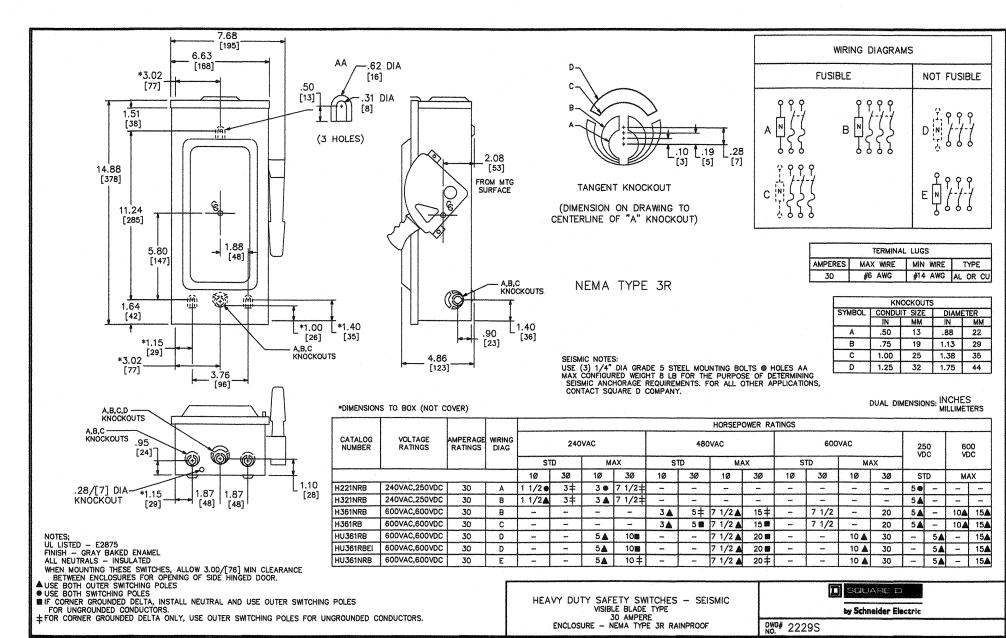
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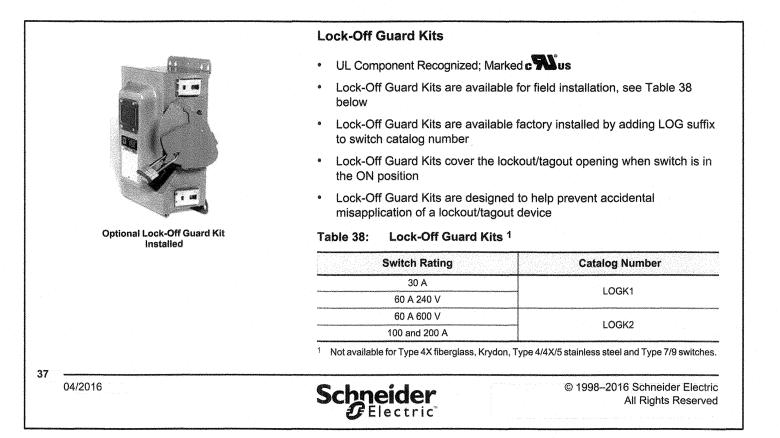




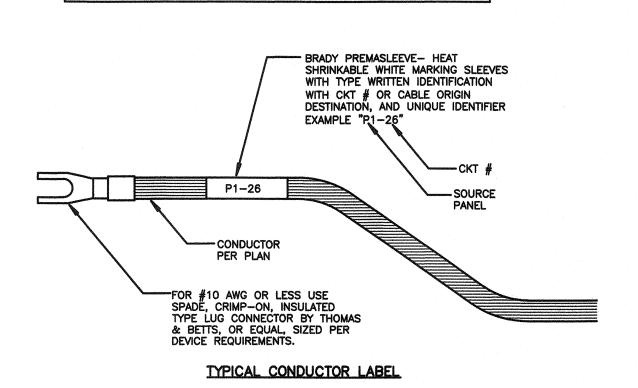




MARQUEE SIGN SAFETY SWITCH VENDOR DRAWING SCALE: NOT TO SCALE

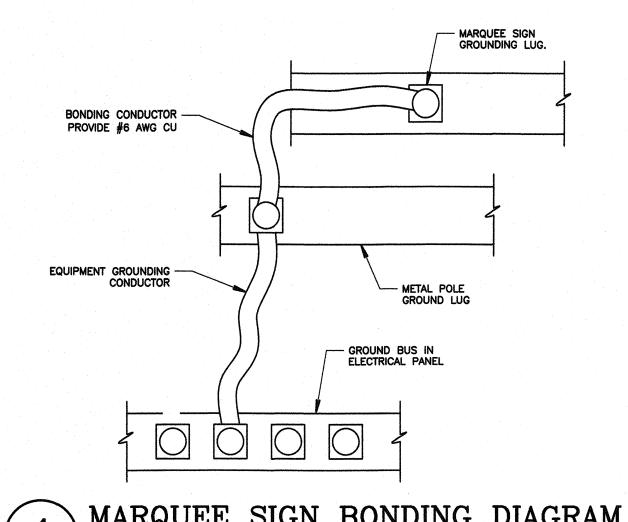


5 TYPICAL MARQUEE LOCK-OFF GUARD KIT DETAIL SCALE: NOT TO SCALE

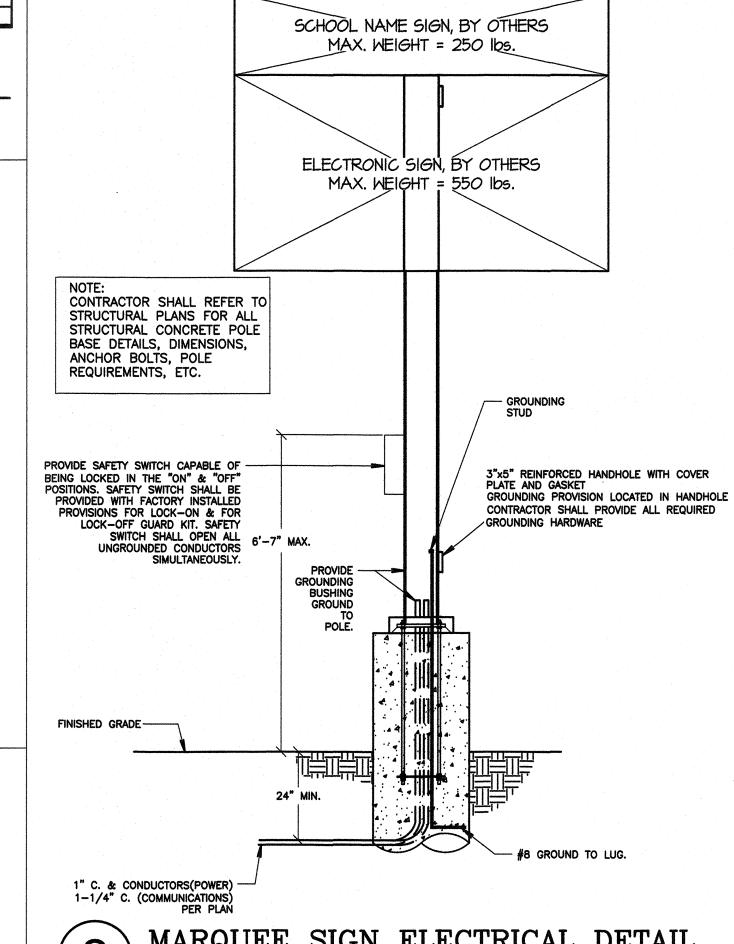


NOTE: CONTRACTOR SHALL PROVIDE CONDUCTOR LABELING TO ALL POWER FEEDERS, BRANCH CIRCUITS, CONTROLS CIRCUITS, COMMUNICATIONS CABLES, FIRE ALARM CABLING, AND SECURITY SYSTEM CONDUCTORS.

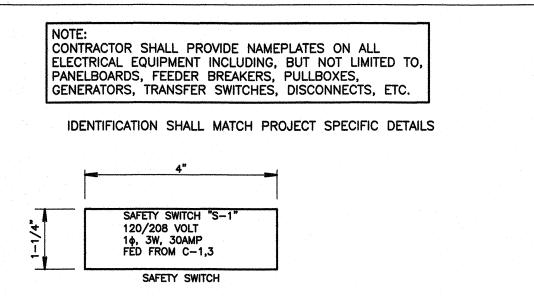
6 TYPICAL LABELING DETAIL
SCALE: NOT TO SCALE



1 MARQUEE SIGN BONDING DIAGRAM SCALE: NOT TO SCALE



2 MARQUEE SIGN ELECTRICAL DETAIL SCALE: NOT TO SCALE



TYPICAL NAMEPLATE DETAILS

NOT TO SCALE

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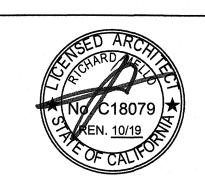
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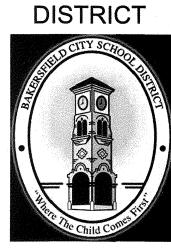
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DATE MAY 24 2018

BAKERSFIELD CITY SCHOOL



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SHEET TITLE

DETAILS

SHEET NUMBER

E3.0