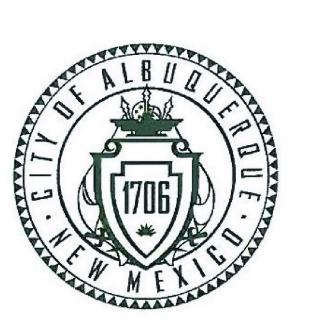
# CENTRAL BRIDGE UNDERPASS -PEDESTRIAN TUNNEL IMPROVEMENTS RECORD DRAWINGS

6/15/2021



**COA PROJECT #401893 ON-CALL DESIGN PROJECT #788209 ON-CALL STUDY PROJECT #788108** 

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT DOWNTOWN WALKABILITY IMPROVEMENTS MARCH 13, 2020

**Property Information** 

**Property Address: Central Ave & First St** Albuquerque, NM 87102

**Legal Description** 

Contacts

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**GENERAL** 

**ARCHITECTURAL** 

FLOOR PLAN & REFLECTED CEILING PLAN SECTIONS / ELEVATIONS

**ELECTRICAL** 

**ELECTRICAL LEGEND** E-002 **ELECTRICAL SPECIFICATIONS** E-003 **ELECTRICAL SPECIFICATIONS** E-101 **ELECTRICAL FLOOR PLAN ELECTRICAL DIAGRAMS** 

LIGHTING

**LEGEND & SCHEDULES LIGHTING PLAN & ELEVATIONS** 

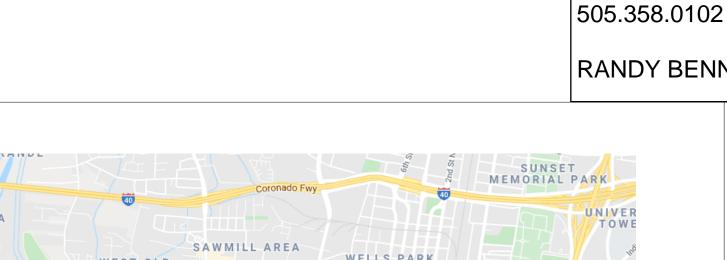
## **ALTERNATES**

1) PVC-COATED ACOUSTIC BAFFLES OVERHEAD.

2) RGB LIGHTING OVER ARCHES AT BRIDGE ENTRANCE.

3) RGB LIGHTING PILASTERS IN PEDESTRIAN TUNNELS.

4) RGB LIGHTING COLUMNS ON VEHICULAR SIDE OF UNDERPASS.



PLAZA VIEJA DOWNTOWN S P CITIZENS IMP T HURLEY NEW BRIDGE MARTINEZTOWN SPRUCE PARK HUNING CASTLE LA VIDA NUEVA HUNING DISTRICT ESTVIEW **PROJECT SITE** BARELAS BOULTON GARDENS BROADWAY CLAYTON
HEIGHTS-LOMAS
DEL CIELO

**VICINITY MAP** 

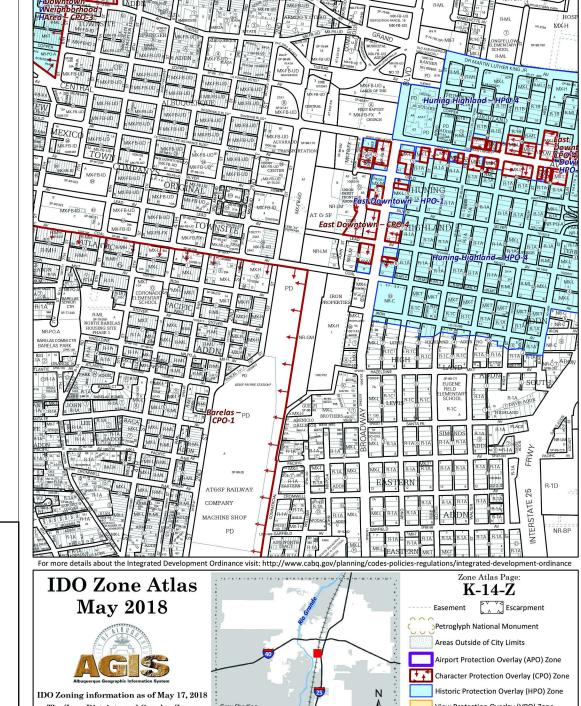


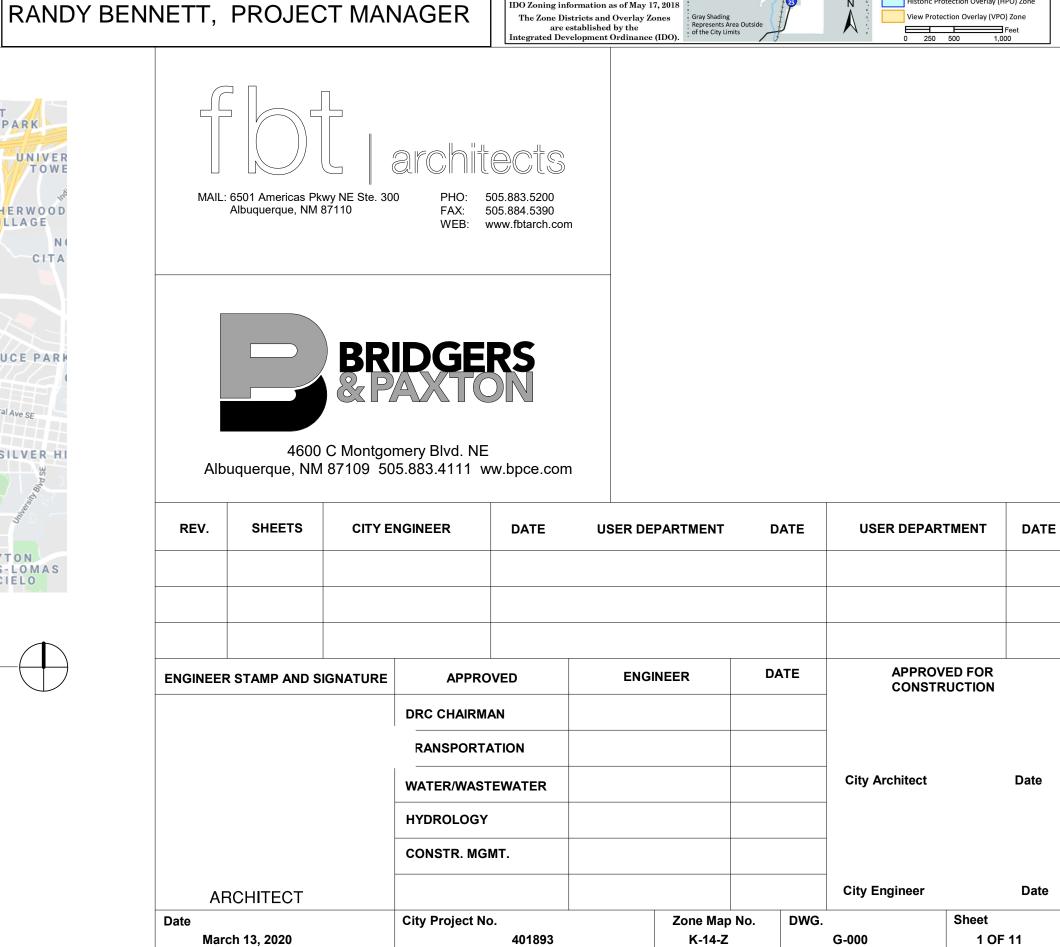
CONTRACTOR:

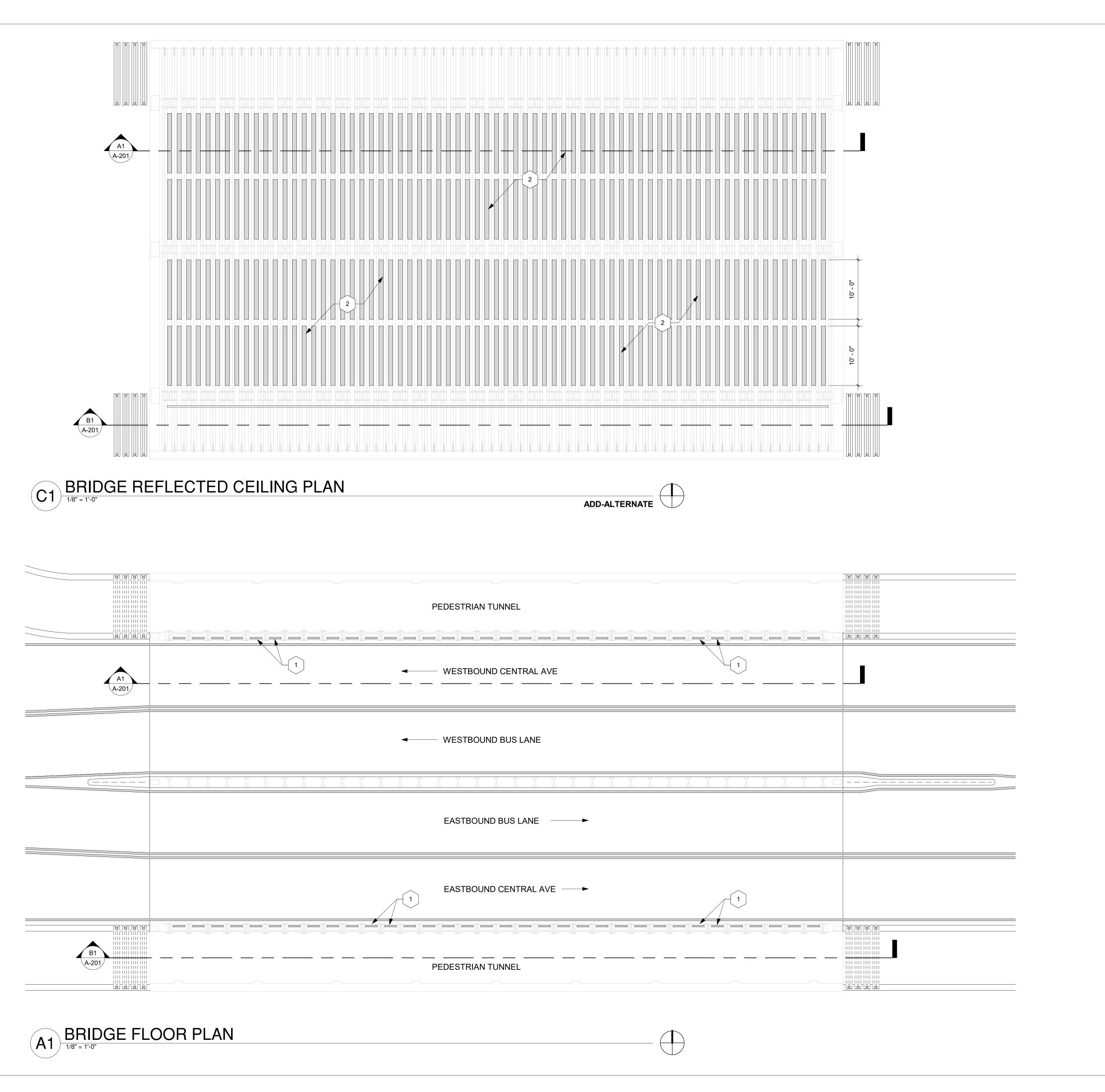
215 COWBOY WAY,

EDGEWOOD, NM 87015

BASIC IDIQ







## **GENERAL NOTES**

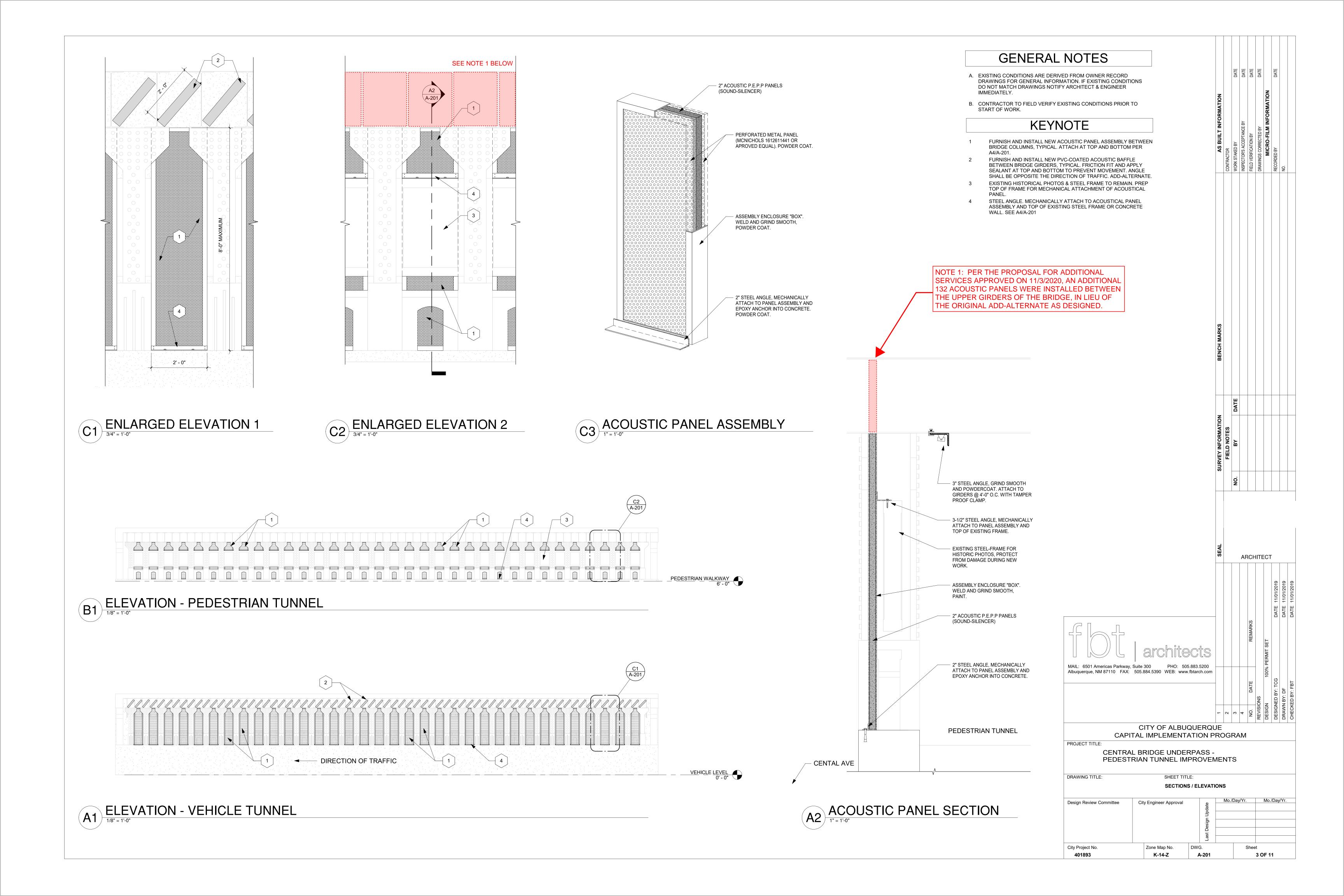
- A. EXISTING CONDITIONS ARE DERIVED FROM OWNER RECORD DRAWINGS FOR GENERAL INFORMATION. IF EXISTING CONDITIONS DO NOT MATCH DRAWINGS NOTIFY ARCHITECT & ENGINEER IMMEDIATELY.
- B. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.

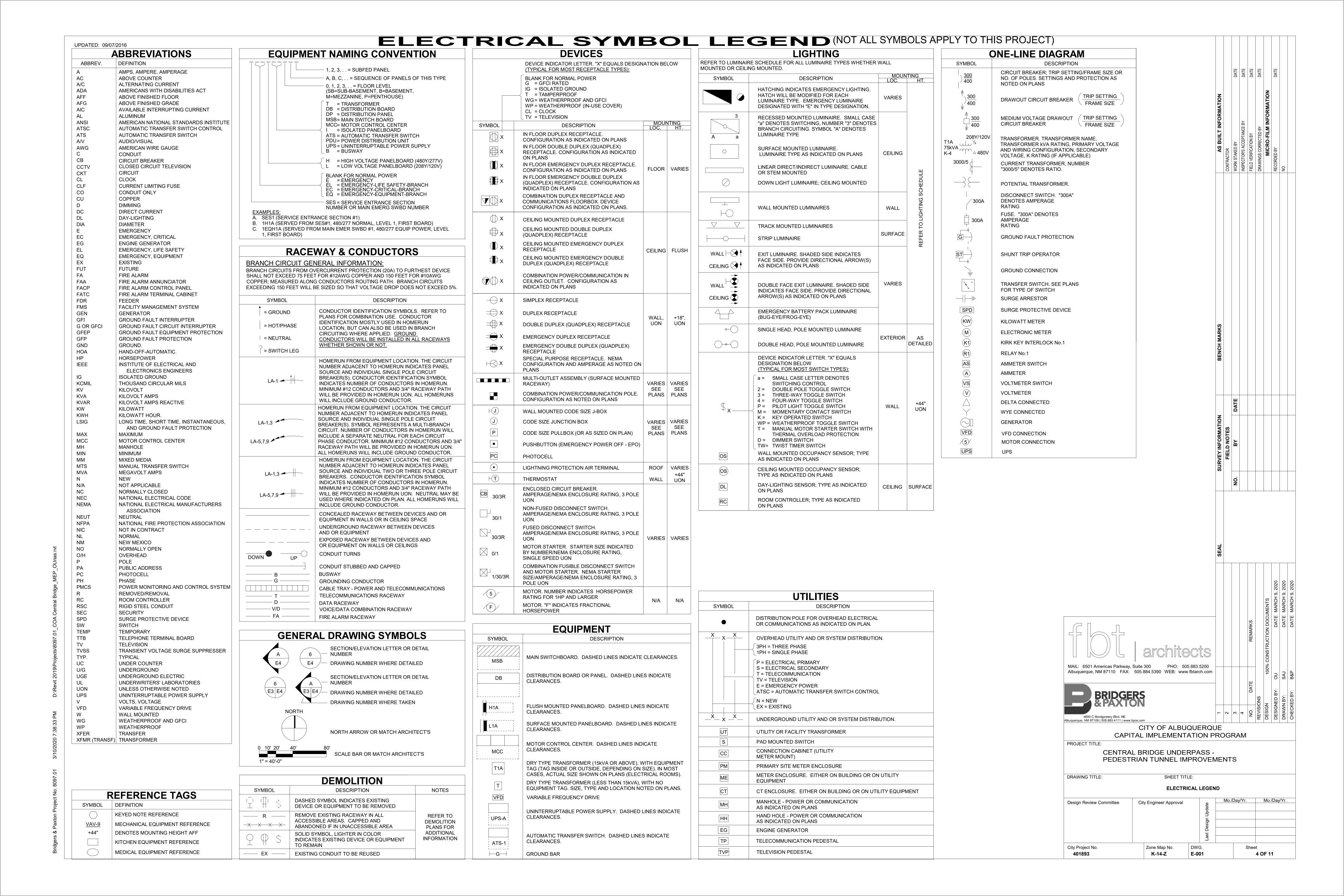
## KEYNOTE

FURNISH AND INSTALL NEW ACOUSTIC PANEL ASSEMBLIES, TYPICAL. SEE C3/A-201.

FURNISH AND INSTALL NEW PVC-COATED ACOUSTIC BAFFLE, TYPICAL. FRICTION FIT AND APPLY SEALANT AT TOP AND BOTTOM TO PREVENT MOVEMENT. ANGLE SHALL BE OPPOSITE THE

DATE
DATE
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DATE DIRECTION OF TRAFFIC, SEE A1/A-201. ADD-ALTERNATE. ARCHITECT MAIL: 6501 Americas Parkway, Suite 300 PHO: 505.883.5200 Albuquerque, NM 87110 FAX: 505.884.5390 WEB: www.fbtarch.com CITY OF ALBUQUERQUE CAPITAL IMPLEMENTATION PROGRAM PROJECT TITLE: CENTRAL BRIDGE UNDERPASS -PEDESTRIAN TUNNEL IMPROVEMENTS DRAWING TITLE: SHEET TITLE: FLOOR PLAN & REFLECTED **CEILING PLAN** Mo./Day/Yr. Mo./Day/Yr. Design Review Committee City Engineer Approval City Project No. Zone Map No. DWG. Sheet 401893 K-14-Z A-101 2 OF 11





- FURNISH ALL LABOR, MATERIALS, SERVICE, EQUIPMENT AND APPLIANCES REQUIRED TO COMPLETE THE INSTALLATION OF THE COMPLETE
- ELECTRICAL SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS AND CONTRACT DRAWINGS.
- REGULATORY AGENCIES: INSTALLATION, MATERIALS, EQUIPMENT AND WORKMANSHIP SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE NATIONAL ELECTRICAL CODE (NEC) - LATEST NEW MEXICO STATE ELECTRIC CODE EDITION, THE NATIONAL ELECTRICAL SAFETY CODE (NESC), AND THE TERMS AND THE CONDITIONS OF THE AUTHORITIES HAVING LAWFUL JURISDICTION PERTAINING TO THE WORK REQUIRED. ALL MODIFICATIONS REQUIRED BY THESE CODES, RULES, REGULATIONS AND AUTHORITIES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL CHARGE TO THE OWNER.
- UNDERWRITER'S LABORATORIES (UL): ALL MATERIALS, APPLIANCES, EQUIPMENT OR DEVICES SHALL CONFORM TO THE APPLICABLE
- ALL SIMILAR MATERIALS AND EQUIPMENT SHALL BE THE PRODUCT OF THE SAME MANUFACTURER. WHERE NO SPECIFIC MATERIAL APPARATUS OR APPLIANCE IS MENTIONED, ANY FIRST-CLASS PRODUCT MADE BY A REPUTABLE MANUFACTURER MAY BE USED, PROVIDING IT CONFORMS TO THE CONTRACT REQUIREMENTS AND MEETS THE APPROVAL OF THE OWNER.
- MATERIAL AND EQUIPMENT SHALL BE THE STANDARD PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTIONS OF SUCH MATERIAL AND SHALL BE THE MANUFACTURER'S CURRENT AND STANDARD DESIGN.
- FABRICATION, ERECTION AND INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM SHALL BE DONE IN A FIRST CLASS WORKMANLIKE MANNER BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH WORK AND SHALL PROCEED IN AN ORDERLY MANNER SO AS NOT TO HOLD UP PROGRESS OF THE PROJECT.
- THOROUGHLY TEST ALL FIXTURES, SERVICES AND ALL CIRCUITS FOR PROPER OPERATING CONDITION AND FREEDOM FROM GROUNDS AND SHORT CIRCUITS BEFORE ACCEPTANCE IS REQUESTED. ALL EQUIPMENT, APPLIANCES, AND DEVICES SHALL BE OPERATED UNDER LOAD
- DURING PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE SYSTEM, LOCATING EACH CIRCUIT PRECISELY BY DIMENSION. UPON COMPLETION OF THE INSTALLATION, TRANSFER ALL RECORD DATA TO BLUE LINE PRINTS OF THE
- IT WILL BE THE CONTRACTOR'S OBLIGATION TO INCLUDE, IN THEIR BID, THE COSTS FOR INSTALLING JUNCTION BOXES, PROVIDING MISCELLANEOUS COVERS, WORK WITH OTHER DISCIPLINES WHERE THE CONTRACT INVOLVES ELECTRICAL POWER OR CONTROL CONNECTIONS, SWITCHES, ETC. ALL OF THIS WORK SHALL BE PART OF THIS CONTRACT.
- SHOULD CONTRACTOR AT ANY TIME NOTICE THAT THE ACTUAL FIELD CONDITIONS DO NOT CORRESPOND TO THE INFORMATION GIVEN ON THE DRAWINGS, THEN IT WILL BE THEIR RESPONSIBILITY TO NOTIFY THE ENGINEER FOR CLARIFICATION, PRIOR TO COMMENCING SUCH WORK.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL TRADES FOR THE EXACT LOCATION OF EQUIPMENT AND APPURTENANCES THAT REQUIRE ELECTRICAL CONNECTIONS.
- INTERRUPTION OF ANY ELECTRICAL SERVICES OR SPECIAL SYSTEMS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AT LEAST SEVEN DAYS PRIOR TO THE INTENDED OUTAGE AND SHALL BE REQUESTED IN WRITING.
- SUBMIT EACH ITEM PRODUCT DATA FOR TRANSFORMER AND PANELBOARDS FOR ENGINEER REVIEW.
- SHOULD CONTRACTOR AT ANY TIME NOTICE THAT THE ACTUAL FIELD CONDITIONS DO NOT CORRESPOND TO THE INFORMATION GIVEN ON THE DRAWINGS, THEN IT WILL BE THEIR RESPONSIBILITY TO NOTIFY THE ENGINEER FOR CLARIFICATION, PRIOR TO COMMENCING SUCH WORK.
- CONTRACTOR SHALL MAKE AS-BUILT DRAWINGS DOCUMENTING ANY AND ALL WIRING AND EQUIPMENT CONDITIONS AND CHANGES WHILE COMPLETING THIS CONTRACT. PROVIDE TYPEWRITTEN DIRECTORIES FOR ALL PANELS AND LABEL ALL PANELS WITH PLASTIC LAMINATED NAMEPLATES.
- AFTER THE CONTRACTOR HAS RECEIVED APPROVED SHOP DRAWINGS FOR THE ELECTRICAL DISTRIBUTION EQUIPMENT, THEY SHALL SUBMIT SCALED LAYOUTS OF ALL ELECTRICAL EQUIPMENT TO THE ENGINEER FOR APPROVAL TO ENSURE THAT ALL CLEARANCE REQUIREMENTS ARE MET. THIS SUBMITTAL SHALL BE PROVIDED WITH SUFFICIENT TIME SO AS NOT TO INTERFERE WITH THE TIMELY EXECUTION OF THE ROUGH-IN WORK THAT WILL BE REQUIRED.

#### **END OF SECTION**

#### DEMOLITION

PROVIDE ALL MATERIAL, EQUIPMENT AND LABOR AS REQUIRED TO REMOVE, RELOCATE AND/OR RECONNECT ALL ELECTRICAL WORK IDENTIFIED IN THESE SPECIFICATIONS AND INDICATED ON THE DRAWINGS.

- CONDITIONS AFFECTING SELECTIVE DEMOLITION: THE FOLLOWING PROJECT CONDITIONS APPLY:
- PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE LOCATE, IDENTIFY, AND PROTECT ELECTRICAL SERVICES PASSING THROUGH DEMOLITION AREA AND
- SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS. EXISTING LUMINAIRE TO REMAIN. MUST REMAIN OPERATIONAL DURING NIGHTTIME FOR SECURITY & SAFETY REASONS.
- COORDINATE WITH CITY REPRESENTATIVE FOR ADDITIONAL REQUIREMENT.
- CONDITIONS AFFECTING EXCAVATIONS: THE FOLLOWING PROJECT CONDITIONS APPLY:
- MAINTAIN AND PROTECT EXISTING BUILDING SERVICES WHICH TRANSIT THE AREA AFFECTED BY SELECTIVE DEMOLITION.
  - PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY
- EXISTING UTILITIES: LOCATE EXISTING UNDERGROUND UTILITIES IN EXCAVATION AREAS. IF UTILITIES ARE
- INDICATED TO REMAIN, SUPPORT AND PROTECT SERVICES DURING EXCAVATION OPERATIONS. REMOVE EXISTING UNDERGROUND UTILITIES INDICATED TO BE REMOVED.
- USE OF EXPLOSIVES IS NOT PERMITTED.

#### 2.1 MATERIALS AND EQUIPMENT

- VERIFY FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS AS SHOWN ON DRAWINGS.
- VERIFY & REMOVE ALL UNUSED WIRE & CONDUIT.
- DEMOLITION DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS. REPORT
- DISCREPANCIES TO ARCHITECT/ENGINEER BEFORE DISTURBING EXISTING INSTALLATION. BEGINNING OF DEMOLITION MEANS CONTRACTOR ACCEPTS EXISTING CONDITIONS.

- 3.1 PREPARATION COORDINATE UTILITY SERVICE OUTAGES WITH OWNER A MINIMUM OF 72 HOURS PRIOR TO OUTAGE.
- PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION AS NEEDED WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, USE PERSONNEL EXPERIENCED IN SUCH
- EXISTING ELECTRICAL SYSTEM: MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR SERVICE. DISABLE SYSTEM ONLY TO MAKE SWITCH OVERS AND CONNECTIONS. OBTAIN PERMISSION FROM THE OWNER'S REPRESENTATIVE AT LEAST 72 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION. MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN

#### AREAS ADJACENT TO WORK AREA. 3.2 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- DEMOLISH AND EXTEND EXISTING ELECTRICAL WORK UNDER PROVISIONS OF THIS SECTION.
- REMOVE, RELOCATE AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION. RECIRCUIT AND RECONNECT ALL ELECTRICAL LIGHTING, OUTLETS, AND EQUIPMENT NOT SCHEDULED FOR REMOVAL THAT HAVE
- BECOME DISCONNECTED DUE TO DEMOLITION WORK. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.
- REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH
- WALLS AND FLOORS, AND PATCH SURFACES. DISCONNECT AND REMOVE ELECTRICAL DEVICES AND EQUIPMENT SERVING UTILIZATION EQUIPMENT THAT HAS BEEN
- REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK. ANY DAMAGE TO BUILDING, PIPING OR EQUIPMENT SHALL BE REPAIRED BY SKILLED MECHANICS OF THE TRADES INVOLVED AT NO ADDITIONAL COST TO THE OWNER.
- MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR
- PROVIDE ACCESS PANEL AS APPROPRIATE. EXTEND EXISTING INSTALLATIONS USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING ELECTRICAL INSTALLATIONS, OR AS SPECIFIED.

#### 3.3 CLEANING AND REPAIR

SALVAGED.

- CLEAN AND REPAIR EXISTING MATERIALS AND EQUIPMENT WHICH REMAIN OR ARE TO BE REUSED. MATERIALS AND EQUIPMENT TO BE SALVAGED: REMOVE, DEMOUNT, AND DISCONNECT EXISTING ELECTRICAL MATERIALS AND EQUIPMENT INDICATED TO BE REMOVED AND SALVAGED, AND DELIVER MATERIALS AND EQUIPMENT
- TO THE LOCATION DESIGNATED FOR STORAGE. DISPOSAL AND CLEANUP: REMOVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS AND EQUIPMENT NOT INDICATED TO BE

#### 3.5 ITEMS SALVAGED TO OWNER

ITEMS SALVAGED TO OWNER ARE AS INDICATED ON DRAWINGS. MOVE AND STORE IN DRY LOCATION AS DIRECTED. REFUSE MATERIALS AND ITEMS NOT SALVAGED SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF.

## STANDARDS OF UNDERWRITER'S LABORATORIES, INC. THE LABEL OF, OR LISTING BY, UL IS REQUIRED.

USE OF ALUMINUM CONDUCTORS WILL NOT BE PERMITTED. ALL NEW WIRING SHALL BE COPPER.

SCREW OR BOLT TYPE PRESSURE CONDUCTORS, PROPERLY TAPED OR INSULATED.

SPECIFIED OR NOTED ON THE DRAWINGS.

- PHASE SEQUENCING SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE ELECTRICAL DISTRIBUTION SYSTEM.
- INSULATION: TYPE THHN INSULATION, 75 DEGREES C, FOR ALL CONDUCTORS OTHERWISE SPECIFIED OR NOTED ON THE DRAWINGS. 90 DEGREES C MINIMUM INSULATION WITHIN FIXTURE WIREWAYS OF LED FIXTURES.

TYPE: CONFORM TO THE APPLICABLE UL AND IPCEA STANDARDS FOR THE USE INTENDED. COPPER CONDUCTORS WITH 600 VOLTS INSULATION UNLESS OTHERWISE SPECIFIED OR NOTED ON THE DRAWINGS. STRANDED CONDUCTORS FOR ALL COPPER CONDUCTORS UNLESS OTHERWISE

- SIZE: NO. 14 MINIMUM FOR CONTROLS AND NO. 12 MINIMUM FOR LIGHTING AND CONVENIENCE OUTLETS, ETC. UNLESS OTHERWISE SPECIFIED OR NOTED ON THE DRAWINGS. NOT LESS THAN NEC REQUIREMENTS FOR THE SYSTEM TO BE INSTALLED. IF THE EQUIPMENT TO BE INSTALLED REQUIRED LARGER CONDUCTOR AND CONDUIT SIZES THAN INDICATED ON THE DRAWINGS. THE REQUIRED CHANGES SHALL BE MADE WITHOUT
- COLOR CODING: PHASE, NEUTRAL, AND GROUND CONDUCTORS COLOR-CODED IN ACCORDANCE WITH NEC. CONNECT ALL CONDUCTORS OF THE SAME COLOR TO THE SAME PHASE CONDUCTOR. COLOR CODING SHALL BE A-BLACK, B-RED, C-BLUE, N- WHITE, FOR 120/208 VOLTS AND A-BROWN, B-ORANGE, C-YELLOW, N-OFF WHITE FOR 277/480 VOLTS, WITH GREEN FOR ALL GROUND CONDUCTORS. CONDUCTORS NO. 14, 12 AND 10 SHALL BE SOLID COLOR COMPOUNDED FOR ENTIRE LENGTH.
- CONNECTORS & LUGS: FOR COPPER CONDUCTORS NO. 6 AND SMALLER: 3M SCOTCH-LOK OR T & B STA-KON COMPRESSION OR INDENT TYPE CONNECTORS WITH INTEGRAL OR SEPARATE INSULATING CAPS. FOR COPPER CONDUCTORS LARGER THAN NO. 6: SOLDERLESS, INDENT, HEX
- PLASTIC TAPE: 8.5 MILS MINIMUM THICKNESS, 1,000,000 MEGOHMS MINIMUM INSULATION RESISTANCE, OIL RESISTANT VINYL BACKING, OIL RESISTANT ACRYLIC ADHESIVE, INCAPABLE OF SUPPORTING COMBUSTION PER ASTM D-568 TEST METHOD B.
- SPLICES (480 VOLTS AND UNDER): CONDUCTOR LENGTHS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION WITHOUT SPLICES UNLESS
- BUNDLING: CONDUCTORS NO. 10 AND SMALLER SHALL BE NEATLY AND SECURELY BUNDLED AND CONDUCTORS LARGER THAN NO. 10 SHALL BE NEATLY AND SECURELY CABLED IN INDIVIDUAL CIRCUITS, UTILIZING MARLIN TWINE, TWO PLY LACING OR NYLON STRAPS.
- CONDUCTOR PULL: CONDUCTORS SHALL NOT BE PULLED INTO CONDUITS UNTIL AFTER ALL PLASTERING OR CONCRETE WORK (WHERE APPLICABLE) IS COMPLETED AND ALL CONDUITS IN WHICH MOISTURE HAS COLLECTED HAVE BEEN SWABBED OUT.

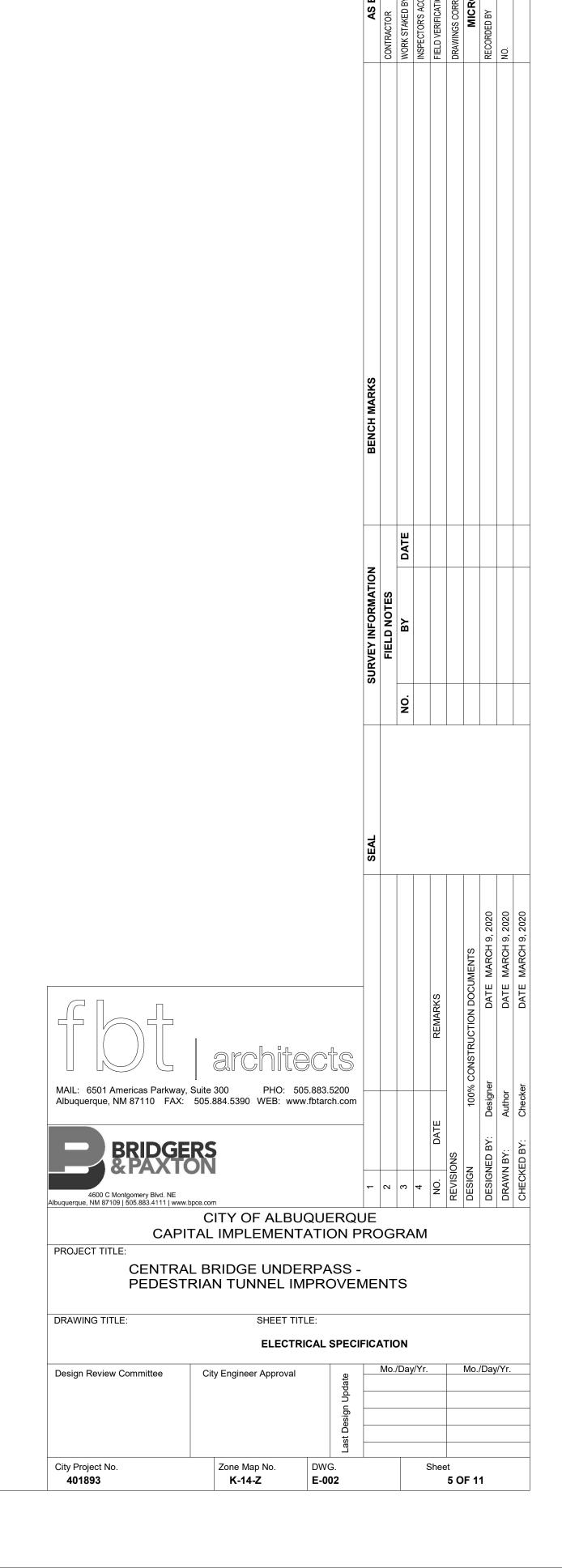
#### END OF SECTION

**CONDUCTORS** 

#### RACEWAYS, BOXES AND FITTINGS

- ELECTRICAL METALLIC TUBING (EMT): MILD STEEL, ZINC COATED ON THE OUTSIDE AND EITHER ZINC COATED OR COATED WITH AN APPROVED CORROSION RESISTANT COATING ON THE INSIDE. MAXIMUM, SIZE 2 INCH ELECTRICAL TRADE SIZE UNLESS NOTED ON THE DRAWINGS OR SPECIFICALLY APPROVED.
- FLEXIBLE CONDUIT: COMMERCIAL GREENFIELD, GALVANIZED STEEL, WITH A SEPARATE GROUNDING BOND WIRE INSTALLED IN THE CONDUIT IN ADDITION TO OTHER WIRES.
- LIQUID TIGHT FLEXIBLE CONDUIT: FLEXIBLE GALVANIZED STEEL TUBING WITH EXTRUDED LIQUID TIGHT PVC OUTER JACKET AND A CONTINUOUS COPPER BONDING CONDUCTOR WOUND SPIRALLY BETWEEN THE CONVOLUTIONS. WHERE A SEPARATE GROUNDING CONDUCTOR IS INSTALLED IN THE CONDUIT, BONDING CONDUCTOR IN THE CONVOLUTIONS MAY BE OMITTED.
- ARMOURED CABLE: MAY BE USED WHERE ALLOWED BY NEC AND WHERE APPROVED BY THE AUTHORITIES HAVING JURISDICTION. AC CABLE SHALL BE TWO, THREE, OR FOUR COPPER CONDUCTORS WITH XLPE INSULATION (RW90) AND BARE COPPER GROUND WIRE, WRAPPED AND COVERED WITH BARE INTERLOCKED ALUMINUM ARMOUR.
- CONDUIT SIZE: MINIMUM CONDUIT SIZE 3/4 INCH EXCEPT WHERE SPECIFICALLY APPROVED FOR EQUIPMENT CONNECTIONS. SIZES NOT NOTED ON DRAWINGS SHALL BE AS REQUIRED BY THE NEC. ALL HOME RUNS TO PANEL SHALL BE 3/4 INCH MINIMUM. CONDUITS FOR #12 THHN WIRE SHALL BE
- CONNECTORS AND COUPLINGS: EMT COUPLINGS AND CONNECTORS EITHER STEEL OR MALLEABLE IRON ONLY. "CONCRETE TIGHT" OR "RAIN TIGHT" AND EITHER THE GLAND AND RING COMPRESSION TYPE OR THE STAINLESS STEEL MULTIPLE POINT LOCKING TYPE. CONNECTORS TO HAVE INSULATED THROATS. EMT FITTINGS USING SET SCREWS OR INDENTATIONS AS A MEANS OF ATTACHMENT ARE NOT PERMITTED.
- BUSHINGS: INSULATED TYPE, DESIGNED TO PREVENT ABRASION OF WIRES WITHOUT IMPAIRING THE CONTINUITY OF THE CONDUIT GROUNDING SYSTEM, FOR RIGID STEEL CONDUIT, IMC AND RIGID ALUMINUM CONDUIT LARGER THAN 1/2 INCH SIZE AND CONNECTORS FOR EMT.
- LIQUID TIGHT FLEXIBLE CONDUIT FITTINGS: WITH THREADED GROUNDING CONE, A STEEL, NYLON OR EQUAL PLASTIC COMPRESSION RING AND A GLAND FOR TIGHTENING. EITHER STEEL OR MALLEABLE IRON ONLY WITH INSULATED THROATS AND MALE THREAD AND LOCKNUT OR MALE BUSHING WITH OR WITHOUT "O" RING SEAT. EACH CONNECTOR SHALL PROVIDE A LOW RESISTANCE GROUND CONNECTION BETWEEN THE FLEXIBLE CONDUIT AND THE OUTLET BOX, CONDUIT OR OTHER EQUIPMENT TO WHICH IT IS CONNECTED.
- FLEXIBLE CONDUIT FITTINGS (COMMERCIAL GREENFIELD): EITHER STEEL OR MALLEABLE IRON ONLY, WITH INSULATED THROATS
- CONDUIT SYSTEMS INSTALLATION:
  - BRANCH CIRCUITS AND FEEDERS WILL BE GALVANIZED RIGID STEEL WHERE EXPOSED (ABOVE GRADE). ALL CONDUIT AND RACEWAY PATHS FOR LIGHTING, POWER AND LIGHTING CONTROL DEVICES WITHIN BRIDGE / UNDERWAY PASS SHALL BE GALVANIZED RIGID STEEL (GRS).
  - LIQUID TIGHT FLEXIBLE CONDUIT IN EXTERIOR, WET OR DAMP LOCATIONS MAY BE CONSIDERED IN CERTAIN OCCASION WITH ENGINEER
  - CONDUIT INSTALLATION: INSTALL CONCEALED CONDUIT IN AS DIRECT LINES AS POSSIBLE. INSTALL EXPOSED CONDUITS PARALLEL TO OR AT RIGHT ANGLES TO THE LINES OF THE BUILDING. RIGHT ANGLE BENDS IN EXPOSED CONDUIT RUNS SHALL BE MADE WITH STANDARD ELBOWS, SCREW JOINTED CONDUIT FITTINGS OR CONDUIT BENT TO RADIUS NO LESS THAN THOSE OF STANDARD ELBOWS. PLASTIC ANCHORS FOR CONDUIT WILL NOT BE ALLOWED.
- LOCATION OF EQUIPMENT AND OTHER DEVICES SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
- THE CONDUIT RUNS, AS SHOWN ON PLANS, INDICATE APPROXIMATE ROUTING. EXACT LOCATION OF CONDUIT RUNS SHALL BE AS FIELD CONDITIONS
- CONTRACTOR SHALL INSTALL PULL AND JUNCTION BOXES WHEREVER REQUIRED BY N.E.C. OR JOB CONDITIONS. ALL NEW WIRING SHALL BE TAGGED AT ALL PULL BOXES, JUNCTION BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS. ACTION CRAFT, BRADY OR APPROVED
- INSTALL BLANK DEVICE PLATES ON ALL UNUSED JUNCTION BOXES IN FINISHED AREAS.
- REMOVE ALL CONDUIT AND WIRE TO DEVICES SHOWN TO BE REMOVED. REMOVE ALL EXPOSED OR ACCESSIBLE CONDUIT RUNS. ABANDON CONCEALED INACCESSIBLE CONDUIT (REMOVE WIRING). CONDUIT AND WIRING SHALL BE REMOVED BACK TO PANELBOARD OR NEAREST EXISTING DEVICE WHICH IS TO REMAIN.
- CONTRACTOR SHALL MAINTAIN ALL CIRCUIT AND CONDUIT CONTINUITY TO ALL EXISTING DEVICES WHICH ARE TO REMAIN. PROVIDE ALL FIELD CIRCUIT VERIFICATION AS REQUIRED TO ENSURE CONTINUITY IS MAINTAINED.
- CONDUIT SYSTEMS TO BE REUSED WHERE PRACTICAL, CONDUCTORS TO ALL NEW DEVICES SHALL BE NEW (HOME RUNS, SWITCHES, ETC.).
- BRANCH CIRCUIT AND FEEDER RUNS WILL BE GALVANIZED RIGID STEEL (GRS) FOR BEND AND EXPOSED (ABOVE GRADE).

#### **END OF SECTION**



DATE DATE DATE

**END OF SECTION** 

**PANELBOARDS** 

#### GENERAL

A. DEAD FRONT, SAFETY TYPE WITH VOLTAGE RATINGS AS SCHEDULED. PANELBOARDS SHALL BE OF THE TYPE REQUIRED FOR THE SHORT CIRCUIT AND DUTY RATINGS INDICATED ON THE DRAWINGS OR SPECIFIED. ALL PANELBOARDS SHALL HAVE A NEUTRAL BUS AND A GROUND BUS. PANELBOARDS SHALL BE CIRCUIT BREAKER AS SCHEDULED, UNLESS OTHERWISE NOTED.

#### CABINETS

- A. EACH PANELBOARD SHALL BE ENCLOSED IN A SINGLE SHEET METAL CABINET WITH FRONT DOORS, CATCHES, LOCKS, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION.
- B. DOOR-IN-DOOR: BOTH SURFACE AND FLUSH PANELS SHALL BE DOOR-IN-DOOR. THE DOOR OVER THE INTERIOR OF THE PANEL SHALL BE PROVIDED WITH HINGES AND COMBINED LOCK AND LATCH. THE OUTSIDE DOOR OVER THE PANEL GUTTERS SHALL HAVE A HINGE ON ONE SIDE AND MACHINE SCREWS INTO THREADED HOLES IN THE PANELBOARD CABINET ON THE OTHER THREE SIDES. ALL LOCKS SHALL BE KEYED ALIKE.

#### BRANCH CIRCUIT PANELS

- ALL BRANCH CIRCUIT PANELS FOR LIGHTING AND SINGLE PHASE LOADS SHALL BE "QUICK-LAG" CIRCUIT BREAKERS WITH A MINIMUM INTERRUPTING CAPACITY, MAIN LUGS OR MAIN BREAKER AS INDICATED ON THE DRAWINGS, "DOOR-IN-DOOR" COVER. CIRCUIT BREAKERS PROVIDING MOTOR SHORT CIRCUIT PROTECTION SHALL HAVE TRIP ELEMENTS SIZED TO MEET NEC REQUIREMENTS OR EQUIPMENT MANUFACTURER'S RECOMMENDATIONS, WHICHEVER ARE SMALLER.
- B. BREAKERS: MOLDED CASE AS SCHEDULED OR REQUIRED. PROVIDE QUICK MAKE AND QUICK BREAK TOGGLE MECHANISM, INVERSE TIME TRIP CHARACTERISTICS AND TRIP FREE OPERATION ON OVERLOAD OR SHORT CIRCUIT. AUTOMATIC TRIPPING SHALL BE INDICATED BY A HANDLE POSITION BETWEEN THE MANUAL OFF AND ON POSITION. PROVIDE TRIP RATINGS AS INDICATED IN THE PANELBOARD SCHEDULES. ADJUSTABLE MAGNETIC TRIP DEVICES SHALL BE SET AT THE FACTORY TO THE LOW TRIP SETTING. PROVIDE BREAKER FRAME SIZES AS REQUIRED FOR THE CONTINUOUS RATING OR THE INTERRUPTING CAPACITY, WHICHEVER IS LARGER.
- BOLTED TYPE: CIRCUIT BREAKER CURRENT CARRYING CONNECTIONS TO THE BUS SHALL BE OF THE BOLTED TYPE, FACTORY ASSEMBLED. STAB IN TYPE NOT PERMITTED. PROVIDE BUS BARS FOR THREE PHASE PANELBOARDS OF THE SEQUENCE PHASED TYPE CONNECTION AND ARRANGED FOR 3 PHASE, 4 WIRE MAINS, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- SPACE ONLY: WHERE "SPACE ONLY" IS NOTED ON THE DRAWINGS, PROVIDE NECESSARY CONNECTORS, MOUNTING BRACKETS, ETC., FOR THE FUTURE INSERTION OF AN OVERCURRENT DEVICE. SPACES SHALL BE SIZED FOR 100 AMP STRAPS MINIMUM. THE WORD "SPACE" IS INTENDED TO MEAN A SPACE FOR A FUTURE BRANCH CIRCUIT BREAKER, AND WILL INCLUDE CONNECTION STRAPS RATED AT 100 AMPERES, MINIMUM, HOLDING BRACKETS, AND AN IDENTIFYING NUMBERING UNIT, SO THAT ALL THAT IS NECESSARY TO CONVERT IT TO AN ACTIVE CIRCUIT IS INSTALLATION OF THE CIRCUIT BREAKER.
- E. DIRECTORIES: PROVIDE TYPEWRITTEN CIRCUIT DESCRIPTIONS REFERENCING PERMANENT ROOM NUMBERING ASSIGNED IN LIEU OF THE ROOM NUMBERING SHOWN ON THE DRAWINGS.
- F. LABELS: LABELS FOR IDENTIFYING THE BREAKER SHALL BE ENGRAVED LAMINATED PLASTIC STRIPS ATTACHED BY SCREWS OR PHENOLIC BUTTONS OR SMALL WINDOW FRAME TYPE.
- G. SKIRTS: WHERE NOTED ON THE DRAWINGS PANELBOARDS SHALL BE SKIRTED WITH COMPLETE METAL ENCLOSURES AND BARRIERS SEPARATING THE PANEL INTERIOR
- H. ALL BUS BARS SHALL BE COPPER. USE OF ALUMINUM BUS BARS WILL NOT BE PERMITTED.

SWITCHES, CABINETS, ETC., WHICH HAVE NEUTRAL CONNECTIONS.

#### END OF SECTION

#### GROUNDING

- A. SYSTEMS: MATERIALS, EQUIPMENT AND DEVICES RELATED TO THE GROUNDING SYSTEM ARE SPECIFIED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS.
- B. INSTALL TWO SEPARATE GROUNDING SYSTEMS: A GROUNDING SYSTEM FOR SEPARATE STRUCTURES AND SEPARATELY DERIVED SYSTEMS AND AN EQUIPMENT GROUNDING SYSTEM. SEPARATELY DERIVED SYSTEMS, CONDUIT SYSTEMS, SUPPORTS, CABINETS, EQUIPMENT, AND NEUTRAL CONDUCTOR SHALL BE GROUNDED IN ACCORDANCE WITH THE MINIMUM CODE REQUIREMENTS AND AS FURTHER INDICATED ON THE DRAWINGS OR SPECIFIED.
- C. GENERAL: CURRENT RETURN CONDUCTORS, SUCH AS NEUTRALS OF THE SERVICE ENTRANCE, FEEDER CIRCUITS AND BRANCH CIRCUITS, SHALL NOT BE USED FOR EQUIPMENT GROUNDING. CARE MUST BE EXERCISED TO INSURE THAT NEUTRAL BARS ARE NOT BONDED TO THE ENCLOSURES OF PANELBOARDS, ETC., WHICH ARE NOT PART OF THE MAIN SERVICE EQUIPMENT.
- COMMON GROUND POINT: ESTABLISH ONE COMMON GROUND POINT IN THE EXISTING MAIN SERVICE EQUIPMENT BY INTERCONNECTING THE INSULATED NEUTRAL BUS (OR BAR), THE UNINSULATED EQUIPMENT GROUND BUS (OR BAR), AND SERVICE GROUNDING ELECTRODE CONDUCTOR.
- D. NEUTRAL DISCONNECTING MEANS: INSTALL A NEUTRAL DISCONNECTING MEANS IN THE MAIN EQUIPMENT FOR DISCONNECTING AND ISOLATING THE NEUTRAL BUS FROM THE COMMON GROUND. THE DISCONNECTING MEANS MAY BE DISCONNECTING LINKS IN THE INTERCONNECTION BETWEEN THE INSULATED NEUTRAL AND UNINSULATED EQUIPMENT GROUND.
- E. NEUTRAL BARS: PROVIDE AN INSULATED NEUTRAL BAR, SEPARATE FROM THE UNINSULATED EQUIPMENT GROUND BAR, IN ALL PANELBOARDS, DISCONNECT
- F. EQUIPMENT GROUNDING SYSTEM: PROVIDE A COMPLETE EQUIPMENT GROUNDING SYSTEM IN ACCORDANCE WITH THE MINIMUM CODE REQUIREMENTS AND AS FURTHER INDICATED ON THE DRAWINGS OR SPECIFIED. THE EQUIPMENT GROUND (GREEN CONDUCTOR) CONSISTS OF METALLIC CONDITIONS TO GROUND OF NON-CURRENT CARRYING METAL PARTS OF THE WIRING SYSTEM OR APPARATUS CONNECTED TO THE SYSTEM.
- G. CONDUITS: WHERE METALLIC CONDUITS TERMINATE WITHOUT MECHANICAL CONNECTION TO A METALLIC HOUSING OF ELECTRICAL EQUIPMENT BY MEANS OF LOCK NUT AND BUSHINGS, PROVIDE GROUND BUSHING CONNECTED WITH A BARE COPPER CONDUCTOR TO THE GROUND BAR IN THE ELECTRICAL FOLIPMENT
- G. FEEDERS AND BRANCH CIRCUITS: PROVIDE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR EACH SINGLE OR THREE-PHASE FEEDER AND EACH BRANCH CIRCUIT WITH A THREE-PHASE PROTECTIVE DEVICE. INSTALL THE REQUIRED GROUNDING CONDUCTOR IN THE COMMON CONDUIT OR RACEWAY WITH THE RELATED PHASE AND/OR NEUTRAL CONDUCTORS AND CONNECT TO THE BOX OR CABINET GROUNDING TERMINAL.
- DEVICES: INSTALL A MINIMUM NO. 12 GREEN INSULATED EQUIPMENT BONDING CONDUCTOR FROM A GROUNDING TERMINAL IN THE RESPECTIVE OUTLET OR JUNCTION BOX TO THE GREEN GROUND TERMINAL OF ALL RECEPTACLES AND THROUGH FLEXIBLE CONDUIT TO ALL LIGHT FIXTURE HOUSINGS.
- J. GROUNDING ELECTRODE: THE SERVICE GROUND ELECTRODES SHALL BE UTILIZED. PROVIDE A NEW GROUNDING ELECTRODE IN COMPLIANCE WITH N.M. N.E.C ART. 250.
- GROUNDING CONDUCTORS: THE GROUNDING CONDUCTORS FOR GROUND ELECTRODES SHALL BE INSULATED OR BARE COPPER, SIZED IN ACCORDANCE WITH N.M. NEC 250, INCLUDING THE CONDUCTOR FOR THE MADE ELECTRODE. THE CONDUCTORS SHALL BE CONTINUOUS WITHOUT JOINT OR SPLICE AND SHALL BE INSTALLED IN CONDUIT WITH THE CONDUIT BONDED TO THE CONDUCTOR AT EACH END. INSTALL THE CONDUCTOR TO PERMIT THE SHORTEST AND MOST DIRECT PATH AND TERMINATE IN THE MAIN SERVICE EQUIPMENT ON THE COMMON GROUND POINT. EQUIPMENT GROUNDING CONDUCTORS SHALL BE GREEN INSULATED CONDUCTORS EQUIVALENT TO THE INSULATION ON THE ASSOCIATED PHASE CONDUCTOR, BUT NOT LESS THAN TYPE TW. THE EQUIPMENT GROUNDING CONDUCTOR OR STRAPS SHALL BE SIZED IN ACCORDANCE WITH NEC. WHERE ONE FEEDER SERVES A SERIES OF PANELBOARDS OR TRANSFORMERS, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES. GROUNDING CONDUCTORS SHALL NOT BE INSTALLED THROUGH METAL-SHEATHED HOLES. ALL CONNECTIONS SHALL BE AVAILABLE FOR INSPECTION AND MAINTENANCE.
- L. GROUNDING CONNECTIONS: CLEAN SURFACES THOROUGHLY BEFORE APPLYING GROUND LUGS OR CLAMPS. IF SURFACE IS COATED THE COATING MUST BE REMOVED DOWN TO THE BARE METAL. AFTER THE COATING HAS BEEN REMOVED, APPLY A NON-CORROSIVE APPROVED COMPOUND TO CLEANED SURFACE AND INSTALL LUGS OR CLAMPS. WHERE GALVANIZING IS REMOVED FROM METAL, IT SHALL BE PAINTED OR TOUCHED UP WITH "GALVANOX", OR EQUAL.
- M. TESTS: TEST THE COMPLETED GROUNDING SYSTEM WITH A MEGGAR AT THE SERVICE GROUND BAR AND SUBMIT A WRITTEN REPORT TO THE ARCHITECT FOR APPROVAL. THE SERVICE SHALL NOT BE ENERGIZED IF THE TEST SHOWS MORE THAN 5 OHMS, UNLESS APPROVED BY THE ENGINEER.

#### LIGHTING EQUIPMENT

- A. REFER TO SHEETS LD0.01 & LD1.01 FOR LIGHTING FIXTURE/LIGHTING CONTROL SCOPE OF WORK.
- CLEANUP: AT FINAL INSPECTION ALL FIXTURES AND LIGHTING EQUIPMENT SHALL BE IN FIRST CLASS OPERATING ORDER, IN PERFECT CONDITION AS TO FINISH AND FREE FROM DEFECTS, COMPLETELY LAMPED, CLEAN AND FREE FROM DUST, PLASTER OR PAINT SPOTS AND COMPLETE WITH THE REQUIRED GLASSWARE, REFLECTORS, SIDE PANELS, LOUVERS OR OTHER COMPONENTS NECESSARY TO COMPLETE THE FIXTURES.
- C. PROVIDE NEMA 3R BOXES FOR ALL POWER SUPPLIES / DRIVERS AS DIRECTED BY LIGHTING CONSULTANT

### END OF SECTION

#### WIRING DEVICES

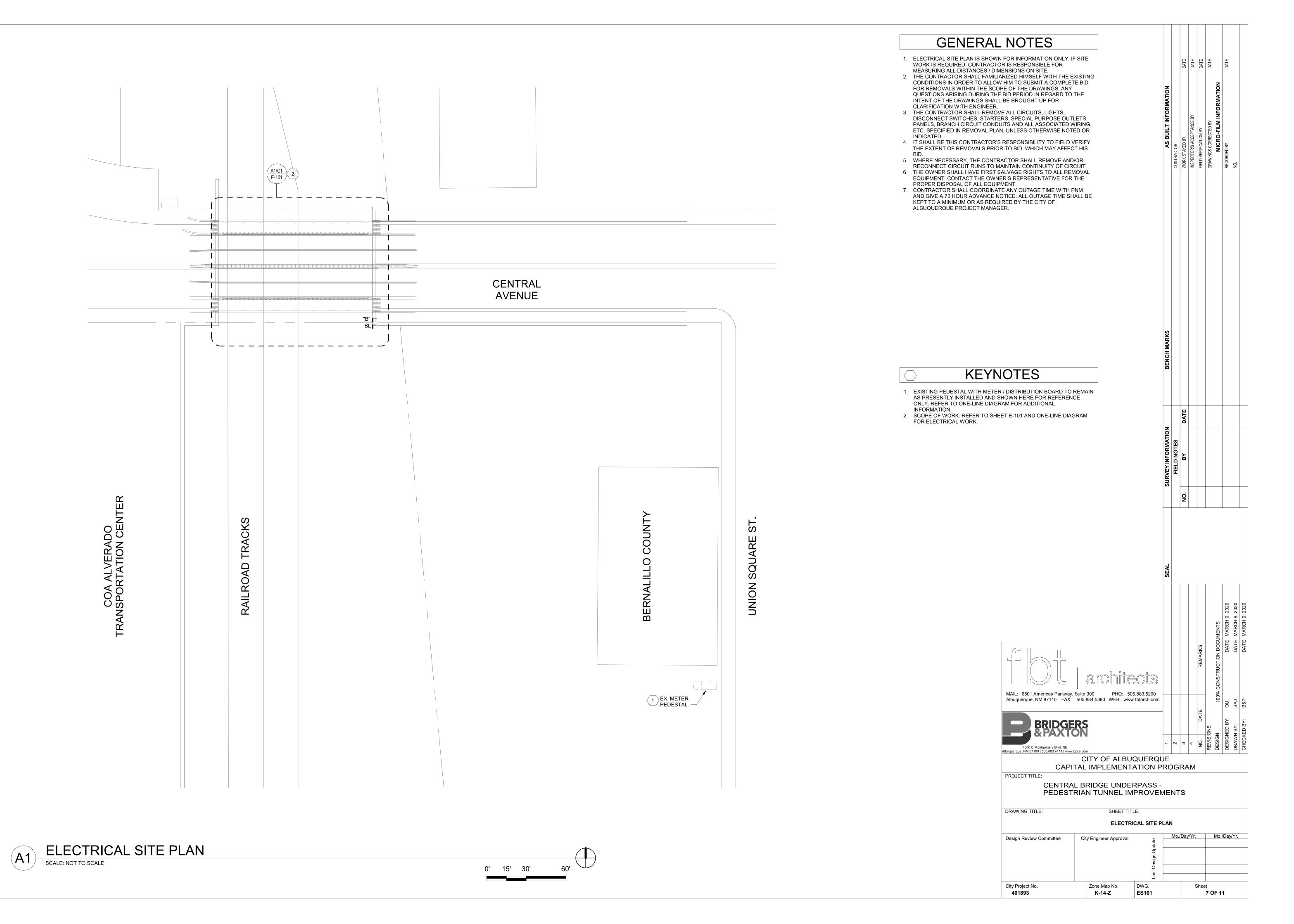
- A. COMPLY WITH NEMA STANDARD WD 1, "GENERAL PURPOSE WIRING DEVICES."
- B. ENCLOSURES: NEMA 3R EQUIVALENT, EXCEPT AS OTHERWISE INDICATED.
- C. RECEPTACLES, STRAIGHT-BLADE AND LOCKING TYPE: EXCEPT AS OTHERWISE INDICATED, COMPLY WITH FEDERAL SPECIFICATION W-C-596 AND HEAVY-DUTY GRADE OF UL STANDARD 498, "ELECTRICAL ATTACHMENT PLUGS AND RECEPTACLES." PROVIDE NRTL LABELING OF DEVICES TO VERIFY THESE COMPLIANCES. 20A UNLESS NOTED OTHERWISE.
- GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLES: UL STANDARD 943, "GROUND FAULT CIRCUIT INTERRUPTERS," FEED-THROUGH TYPE, WITH INTEGRAL NEMA 5-20R DUPLEX RECEPTACLE ARRANGED TO PROTECT CONNECTED DOWNSTREAM RECEPTACLES ON THE SAME CIRCUIT. DESIGN UNITS FOR INSTALLATION IN A 2-3/4-INCH DEEP OUTLET BOX WITHOUT AN ADAPTER.
- E. CORD AND PLUG SETS: MATCH VOLTAGE AND CURRENT RATINGS AND NUMBER OF CONDUCTORS TO REQUIREMENTS OF THE EQUIPMENT BEING CONNECTED. CORD: RUBBER-INSULATED, STRANDED COPPER CONDUCTORS, WITH TYPE SOW-A JACKET. GROUNDING CONDUCTOR HAS GREEN INSULATION. AMPACITY IS EQUIPMENT RATING PLUS 30 PERCENT MINIMUM. PLUG: MALE CONFIGURATION WITH NYLON BODY AND INTEGRAL CABLE-CLAMPING JAWS. MATCH TO CORD AND TO RECEPTACLE TYPE INTENDED FOR CONNECTION.
- F. WEATHERPROOF RECEPTACLES: DUPLEX RECEPTACLES, COMPLY WITH REQUIREMENTS ABOVE. CAST METAL BOX, COVER PLATE, AND COVER TO PROVIDE WEATHERPROOF CAPABILITY WITH PLUGS AND CORDS INSTALLED.
- SNAP SWITCHES: QUIET-TYPE AC SWITCHES, NRTL LISTED AND LABELED AS COMPLYING WITH UL STANDARD 20 "GENERAL USE SNAP SWITCHES," AND WITH FEDERAL SPECIFICATION W-S-896. SPECIFICATION GRADE 20A, 120-277V.
- SNAP SWITCHES IN HAZARDOUS (CLASSIFIED) LOCATIONS: COMPLY WITH UL STANDARD 894, "SWITCHES FOR USE IN HAZARDOUS (CLASSIFIED)
- DIMMER SWITCHES: MODULAR FULL-WAVE SOLID-STATE UNITS WITH INTEGRAL, QUIET ON-OFF SWITCHES, AND AUDIBLE AND ELECTROMAGNETIC NOISE FILTERS. WATTAGE RATING EXCEEDS CONNECTED LOAD BY 30 PERCENT MINIMUM, EXCEPT AS OTHERWISE INDICATED. CONTROL: CONTINUOUSLY ADJUSTABLE SLIDE, TOGGLE OR ROTARY KNOB. SINGLE-POLE OR 3-WAY SWITCH TO SUIT CONNECTIONS.
- J. WALL PLATES: SINGLE AND COMBINATION TYPES THAT MATE AND MATCH WITH CORRESPONDING WIRING DEVICES. FEATURES INCLUDE THE FOLLOWING:
- . COLOR: MATCHES WIRING DEVICE EXCEPT AS OTHERWISE INDICATED.
- PLATE-SECURING SCREWS: METAL WITH HEADS COLORED TO MATCH PLATE FINISH.
- 3. MATERIAL FOR FINISHED SPACES: HEAVY DUTY NYLON.
- 4. MATERIAL FOR UNFINISHED SPACES: GALVANIZED STEEL.
- 5. PROVIDE PERMANENT CIRCUIT LABELING INDICATING PANEL FED FROM AND CIRCUIT NUMBER ON EACH DEVICE COVER PLATE.

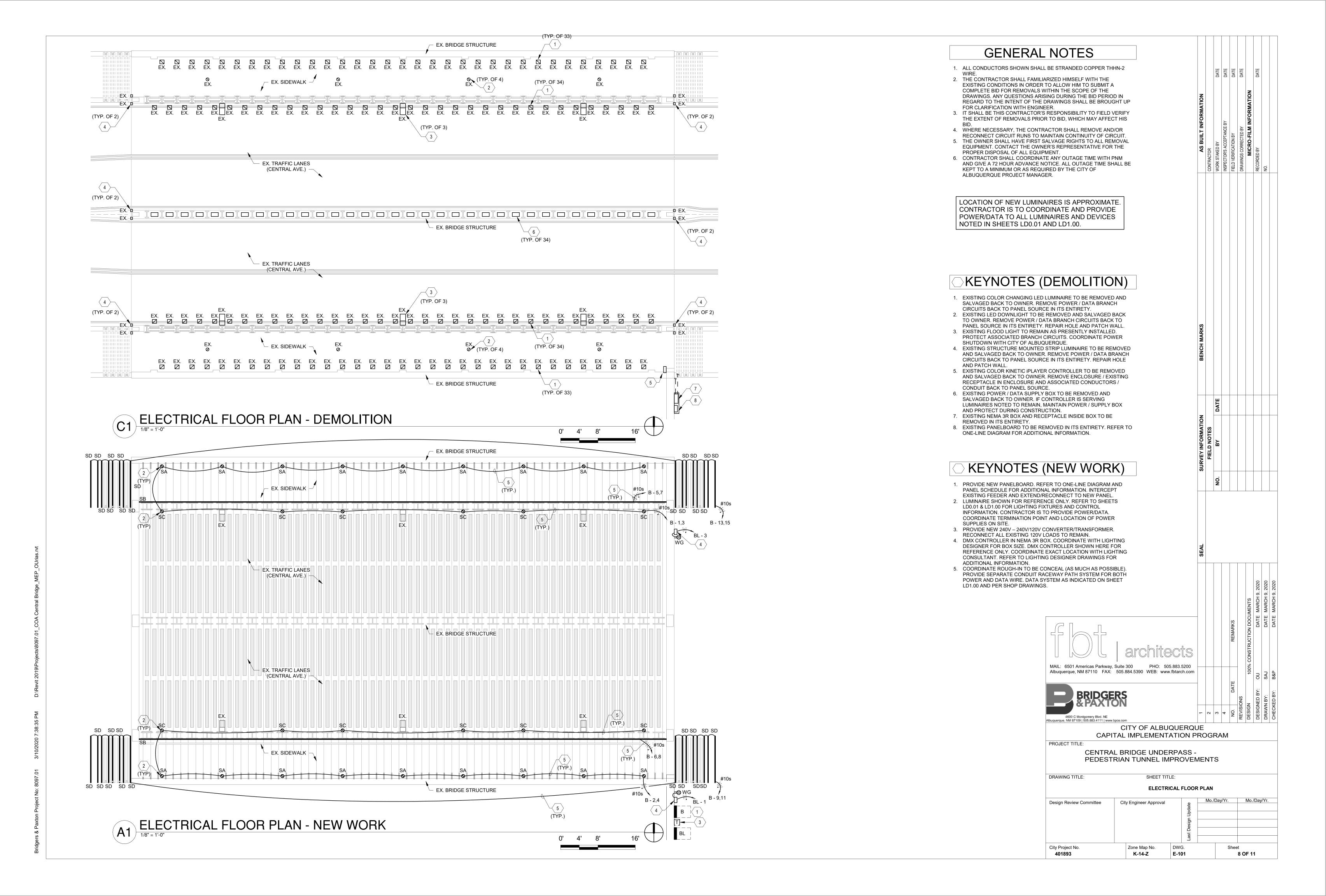
#### END OF SECTION

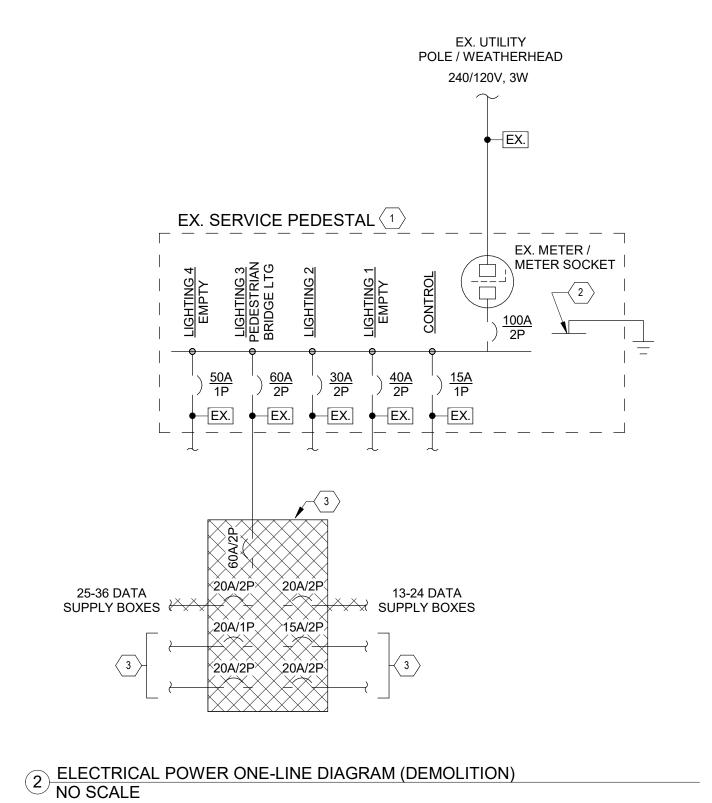
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			BENCH MARKS									
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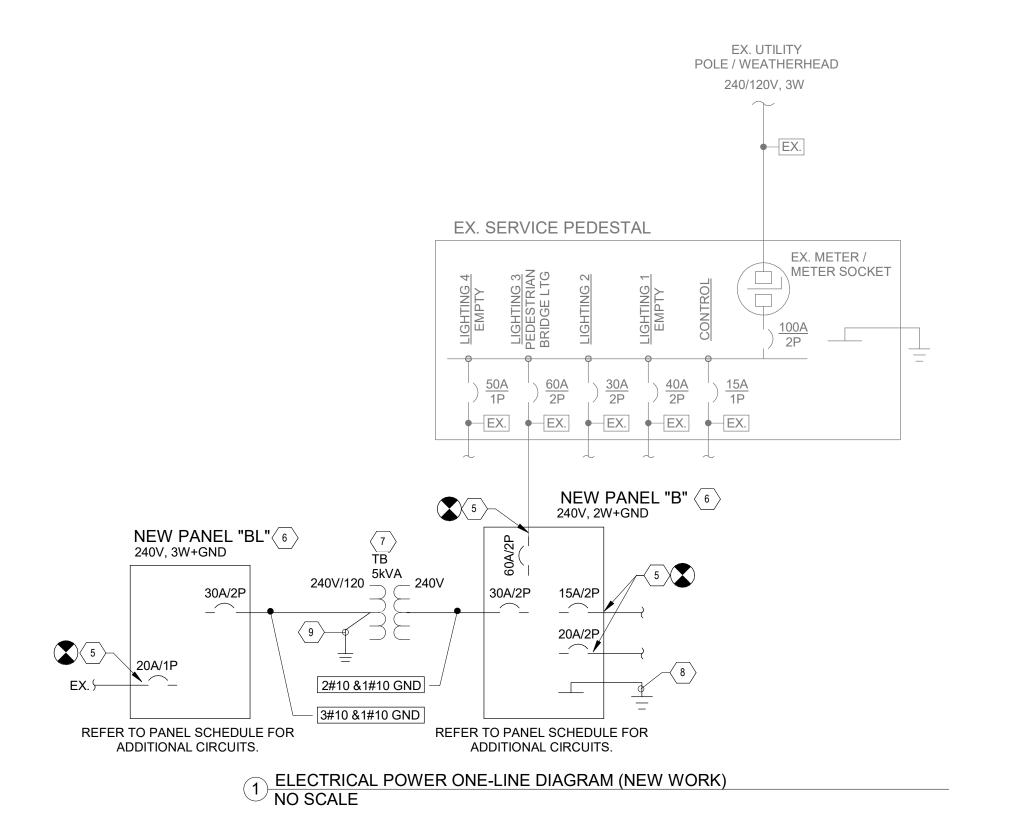
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#### **Branch Panel: BL** Location: See Sheet E-101 Volts: 120/240 Single **A.I.C. Rating:** 10000 Supply From: Panel "B" Mains Type: MCB Mounting: Surface Wires: 3W + Gnd Mains Rating: 30 A Enclosure: 4X (Stainless Steel) Spaces: 30 CKT **Circuit Description** Circuit Description 1 NC DMX CONTROLER 20 A 1 180 VA 180 VA 1 20 A **EXISTING LOAD** 2 3 NC DMX CONTROLER 20 A 1 180 VA 0 VA 1 20 A 4 Spare 5 Spare 20 A 1 0 VA 0 VA 1 20 A Spare 6 7 Spare 20 A 1 Spare 8 10 9 Spare 20 A 1 0 VA 0 VA 11 Spare 20 A 1 0 VA 0 VA 1 20 A Spare 12 13 Spare 14 20 A 1 0 VA 0 VA 1 20 A Spare 16 15 Space 0 VA | 0 VA | -- | ---- | --Space 17 Space 18 19 Space Space 20 0 VA | 0 VA | -- | ---- | -- | 21 Space -- 0 VA 0 VA Space 22 23 Space 24 0 VA | 0 VA | -- | --Space -- | --25 Space 26 27 Space 28 0 VA | 0 VA | -- | --Space -- --30 29 Space Space Total Load: 360 VA 180 VA Total Amps: 2 A Legend: Load Classification Connected Load **Demand Factor** Estimated Demand Panel Totals 360 VA 100.00% 360 VA Total Conn. Load: 540 VA Total Est. Demand: 540 VA Total Conn. Current: 2 A Total Est. Demand Current: 2 A

	Location: See S Supply From: Ex. Se Mounting: Surfac Enclosure: 4X (St	ervice Pedesta e				Phases:	1 2W + Gn	gle Phase d		A.I.C. Rating: 10000 Mains Type: MCB Mains Rating: 60 A			
Notes:													
CIZT	Circuit Description	Notes	Tuin	Dalas				_	Doloo	Tuin	Notes	Civavit Decembring	CIVI
<b>CKT</b> 1	Circuit Description  LTG SA & SC (WEST BOUND)	Notes	Trip 20 A	Poles 2		1050 VA		3	Poles 2	Trip 20 A	Notes	Circuit Description  LTG SA &SC (EAST BOUND)	2 CKT
3					1000 VA	1000 VA	0 VA	0 VA					4
	LTG SB (WEST BOUND)		20 A	2	961 VA	961 VA	J VA	- VA	2	20 A		LTG SB (EAST BOUND)	6
7					001 771	301 771	961 VA	961 VA					8
9	LTD SD (WEST BOUND)		20 A	2	368 VA	368 VA	001 171	301 171	2	20 A		LTG SD (EAST BOUND)	10
11							368 VA	368 VA					12
13	Spare		30 A	2	0 VA	0 VA			2	20 A		Spare	14
15							0 VA	0 VA					16
17	Spare		20 A	2	0 VA	0 VA						Space	18
19							0 VA	0 VA				Space	20
21	Space				0 VA	0 VA						Space	22
23	Space						0 VA	200 VA	2	15 A		EXISTING LOAD	24
25	Space				0 VA	200 VA							26
27	NEW CONVERTER / XFMR		30 A	2			1000 VA	200 VA	2	20 A		EXISTING LOAD	28
29					1000 VA	200 VA							30
				tal Load:		7 VA		7 VA					
			Tot	al Amps:	51	Α	34	A					
Legend													
Load CI	assification		Connect	ed Load	De	mand Fa	ctor	Estimat	ed Demar	nd		Panel Totals	
Other			5314			100.00%			14 VA				
LTG			2100	) VA		125.00%	)	26	25 VA			Total Conn. Load: 10130 VA  Total Est. Demand: 10639 VA	
												otal Conn. Current: 42 A	
											Total Est	. Demand Current: 44 A	
Notes:													

	GENEF	AL NOTES									
REPRESEI CONNECT	NT PHYSICAL AR IONS. PHYSICAL	GRAMMATIC AND IS NOT INTENDED TO ANGEMENTS, LOCATIONS, ROUTING OR AYOUTS ARE TO BE PER FIELD TED ELSEWHERE IN THE ELECTRICAL				DATE	DATE	DATE	7	DATE	
B. CONTRAC FEEDERS, WRITTEN I C. PROVIDE	MEASURE RESIS DOCUMENTATIO TYPED PANEL DI	R TEST AND TORQUE ALL PANEL TANCE TO GROUND AND PROVIDE OF TEST RESULTS. ECTORIES FOR PANELBOARD. E COMPRESSION TYPE FITTINGS.		BUILT INFORMATION		EDTANCE RY	NBY	CTED BY	MICRO-FILM INFORMATION		
COL	OR OR LABE	ENT / DEVICES "LIGHT" IN ED "EX" ARE EXISTING TO S NOTED OTHERWISE.		AS B	CONTRACTOR	WORK STAKED BY INSPECTOR'S ACCEPTANCE RY	FIELD VERIFICATION BY	DRAWINGS CORRECTED	MICRO	RECORDED BY	NO.
	KE	YNOTES									
413335 TO LABELS SH EXAMINE A ADEQUATI 2. EXISTING O EQUIPMEN TERMINAT PEDESTAL ACCORDA EXISTING O RECONNE 3. INVESTIGA PANELBOA RECONNE 4. EXISTING O DISCONEN 5. EXTEND A OVERCUR RESPONSI ARRANGE EXISTING O OWNER AI STAINLESS NAMEPLAT INFORMAT 7. PROVIDE O ENCLOSUI BRACKETS	PANELBOARD. IF NOT BEING DEMO, CIRCUIT SHALL BE RECONNECTED TO NEW PANELBOARD.  4. EXISTING PANELBOARD TO BE REMOVED IN ITS ENTIRETY. DISCONENCT EXISTING CONDUCTORS FROM PANELBOARD.  5. EXTEND AND CONNECT EXISTING CONDUCTORS TO NEW OVERCURRENT PROTECTION DEVICE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE CIRCUIT BREAKER ARRANGEMENTS AND INSTALLATION REQUIREMENTS TO CONNECT EXISTING CONDUCTORS.  6. PROVIDE NEW SURFACE MOUNT, SQUARE D PANELBOARD OR OWNER APPROVED BRAND. CONSTRUCTION SHALL BE NEMA 4X STAINLESS STEEL AND UL LISTED. PROVIDE ENGRAVED EQUIPMENT NAMEPLATE WITH EQUIPMENT NAME, SYSTEM VOLTAGE, FED FROM INFORMATION, ETC.  7. PROVIDE NEW TRANSFORMER / CONVERTER IN NEMA 3R ENCLOSURE OR RATED FOR OUTDOOR ENVIRONMENT. PROVIDE BRACKETS TO SUPPORT FROM WALL AS REQUIRED.  8. PROVIDE #6 GROUND CONDUCTORS AND NEW GROUNDING		BENCH MARKS								
9. PROVIDE # CONDUCT	#8 BONDING JUN	ER AND GROUNDING ELECTRODE CT TO THE SYSTEM GROUNDING		NC		DATE					
				SURVEY INFORMATION	FIELD	NO.					
scription	СКТ										
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CAPITAL IMPLEMENTATION PROGRAM

SHEET TITLE:

**ELECTRICAL DIAGRAMS** 

DWG. **E-601**  Mo./Day/Yr. Mo./Day/Yr.

9 OF 11

CENTRAL BRIDGE UNDERPASS -

City Engineer Approval

Zone Map No.

K-14-Z

PEDESTRIAN TUNNEL IMPROVEMENTS

PROJECT TITLE:

DRAWING TITLE:

City Project No.

401893

Design Review Committee

### CENTRAL BRIDGE

ALBUQUERQUE, NM

## LIGHTING INSTRUMENT SCHEDULE 2019.10.11 ISSUE TO EE

Provide bid for specified package.

Substitutions will not be accepted without prior specified base bid per bidding and substitution notes at bottom of page.

<u>TYPE</u>	DESCRIPTION	<u>DIM</u>	MANUFACTURER / CAT. NUMBER	SOURCE	<u>VOLTS</u>
SA	SURFACE MOUNT DOWNLIGHT	DMX	INSIGHT 9 SPOT	INCLUDED 50W	240
			9SP-50-40K-40-exa-x-240-dmx-TBL-		

SB	SURFACE MOUNT LINEAR	DMX	INSIGHT MEDLEY VIEW II MVWII-17-40K15X6048"-120-Dmx- LENGTH 116FT	INCLUDED 17W/FT	240
ALT	ERNATE				
ALT3 SA	SURFACE MOUNT DOWNLIGHT	DMX	INSIGHT 9 SPOT 9SP2-50-RGBWq-40-exa-x-240-dmx-TBL-	INCLUDED 50W	240
ALT4 SC	SURFACE MOUNT DOWNLIGHT	DMX	INSIGHT 17 SPOT 17SP2-100-RGBWq-40-exa-x-240-dmx-TBL-	INCLUDED 100W	240
ALT2 SD	LINEAR FLEX ARCHES	DMX	LED LINEAR VARIOLEDFLEX-RGB-W8-20FT-TV-IP67 LENGTH 30FT	INCLUDED 4.6W/FT	24

Notes

1. Field verify exact lengths. Provide fixture as a continuous straight run with no interruptions and a maximum length that will fit in the designed space.

2. Refer to shop drawings to verify exact sizes. Provide fixture as a continuous piece with no interruptions and a maximum size that will fit in the designed space.

3. Contractor to cordinate site visit from Lutron and inform Light Designer of appointment.

#### Bidding and Substitution Notes

Lighting packages will only be reviewed for approval if ALL fixtures are provided in one package. Incomplete packages will not be reviewed.

1.4 C. Provide a bid for the specified equipment. In addition to the base bid specified product(s) listed on the Lighting Instrument Schedule, the contractor may supply deduct pricing for alternates. Bids for deduct alternates must include unit pricing and a deduct amount per fixture type. The base bid must include the specified products. Failure to do so will invalidate the lighting bid submittal and, at the discretion of the owner, may eliminate the contractor's bid from further

consideration.1.6 1. Substitutions for the specified lighting products are not acceptable and will not be considered without a bid for the specified package. Failure to include one of the specified products as a part of the base bid may, at the discretion of the

owner, invalidate the entire lighting product bid and exclude the contractor from further consideration.

1.6 2. Should the contractor wish to have considered products other than those specified, the items must be submitted fourteen (14) days in advance of the bid. Failure to submit within that deadline constitutes a guarantee that the specified products will be supplied. The lighting designer will invoice the contractor, at senior designer hourly rates, to review any product not listed in the specification. Submittal of a bid for this project shall include a written acknowledgement of these 1.6 3. Voluntary product substitutions from the contractor will not be considered without prior approval to submit from the lighting designer.

1.6 4. Submit substitution cut sheets as described above with photometrics attached to the specified fixture cut sheets with

**1.6 5.** Substitutions will only be accepted as a deduct alternate to the specified fixture and only if the specified fixture is priced. Provide deduct amount with submittal per fixture type.

**1.6 6.** Refer to Section 01630 for additional requirements.

### **CENTRAL BRIDGE**

ALBUQUERQUE, NM

#### DIMMING SCHEDULE

2019.10.11 ISSUE TO EE

Coordinate dimmer type with dimming driver. Ensure compatibility. Provide necessary wiring.

LOAD (#)	LOAD (VA)	LOAD (TY	AREA AREA	DESCRIPTION	POWER
B-01	1472	DMX	ARCHES	LINEAR FLEX	N
B-02	400	DMX	ABUTMENT SIDE	SURFACE MOUNT DOWNLIGHT	N
B-03	800	DMX	<b>OUTER PEDESTRIAN TUNNE</b>	SURFACE MOUNT DOWNLIGHT	N
B-04	1921	DMX	PEDESTRIAN TUNNEL	SURFACE MOUNT LINEAR	N

4593 TOTAL LOADS

LOAD TYPES:

INC = Incandescent ND = Non-dimmed

FDB = Fluorescent Dimming Ballast 3-wire dimming
NCC = Neon/Cold Cathode - 3-wire dimming

MLV = Magnetic Low Voltage

ELV = Electronic Low Voltage

LED0 = 0-10v LED (4 WIRE DIMMING)

LEDD = dmx LED (confirm per fixture type)
LEDE = Electronic Low Voltage LED (2wire dimmable)

DM = Magnetic Low Voltage LED (2wire dimmable)

POWER TYPES:

N = Normal EM = Emergency

### **CENTRAL BRIDGE**

ALBUQUERQUE, NM

### CONTROL DEVICE SCHEDULE

2019.10.11 ISSUE TO EE

Provide single coverplate for each location.

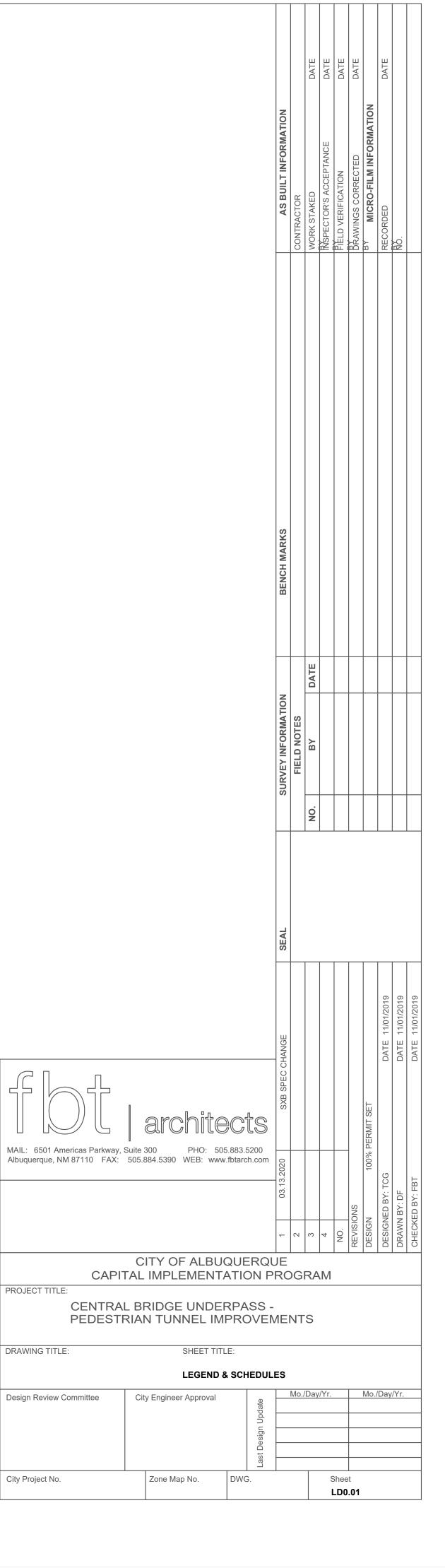
Coordinate control devices with dimming system. Ensure compatibility.

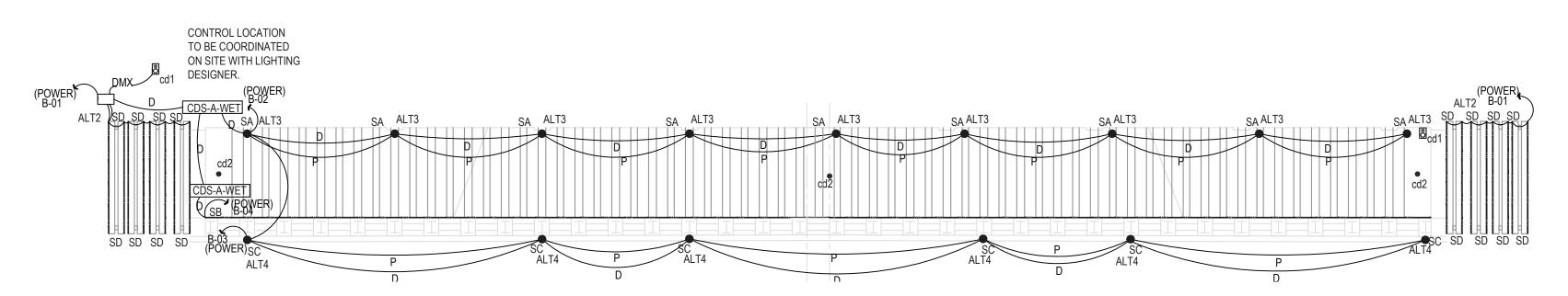
<u>DEVICE</u>	DESCRIPTION	CATALOG NUMBER	QTY
cd1	DMX CONTROLLER	NICOLAUDIE STICK DE3	1
ALTER	NATE		
cd2	MOTION SENSOR	EXTERIOR RATED	3

MOTION SENSOR

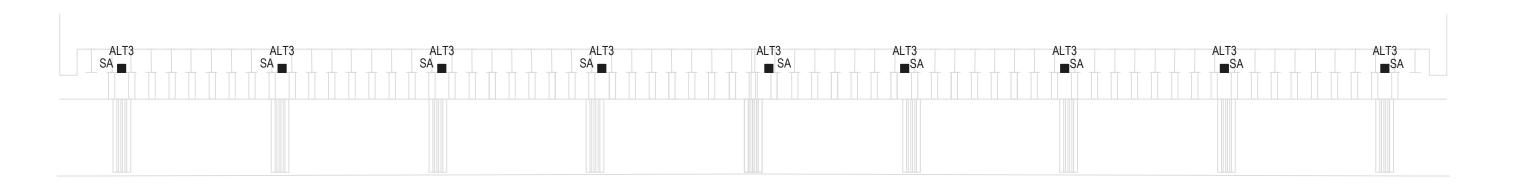
## LIGHTING LEGEND

<b>⊦</b> ♦→	WALL MOUNTED ADJUSTABLE FIXTURE
<del>&lt;  </del>	SURFACE MOUNTED ADJUSTABLE FIXTURE
•>	RECESSED ADJUSTABLE FIXTURE (ROUND)
<b>-&gt;</b>	RECESSED ADJUSTABLE FIXTURE (SQUARE)
•	RECESSED FIXTURE (ROUND)
	RECESSED FIXTURE (SQUARE)
•>	RECESSED WALL WASHER
<b>+</b>	SURFACE MOUNTED FIXTURE
<del>-ф</del> -	WALL SCONCE
$\Diamond$	PENDANT OR CHANDELIER
	LINEAR LIGHTING (HORIZONTAL)
• • • • • • •	FESTOON LIGHTING (HORIZONTAL)
<b>m</b>	LINEAR LIGHTING (VERTICAL)
<del>-</del>	TRACK FIXTURE
•	DIMMED FLOOR RECEPTACLE (NEMA 6-20R NOTE 2)
θ-	DIMMED SIMPLEX RECEPTACLE (NEMA 6-20R,NOTE2)
<b>e</b> =	DIMMED DUPLEX RECEPTACLE (NEMA 6-20R,NOTE2)
⊦⊚	CLOCK RECEPTACLE
	RECESSED FLUORESCENT FIXTURE
₽•	SURFACE MOUNTED WALL WASHER
۵	FLOOR LAMP
۵	TABLE LAMP
	FIXED STEPLIGHT
•	DIRECTIONAL STEPLIGHT



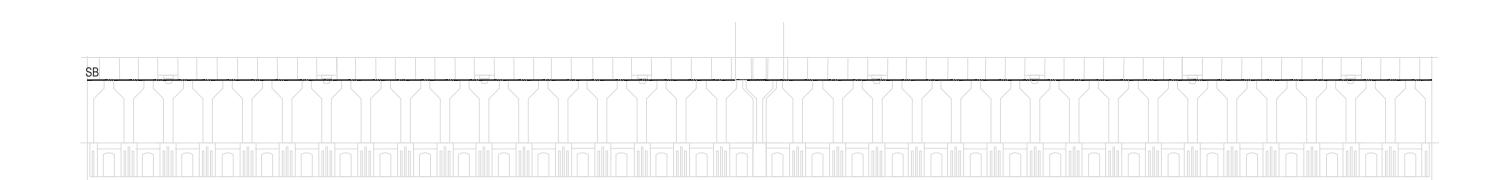


01 LIGHTING PLAN AT PEDESTRIAN LEVEL
SCALE: 1/8" = 1'-0"



ABUTMENT SIDE LIGHTING ELEVATION AT PEDESTRIAN LEVEL

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



ROADWAY SIDE LIGHTING ELEVATION AT PEDESTRIAN LEVEL

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

## LIGHTING NOTES

ALT2- ALTERNATE LIGHTING DESIGN WITH FIXTURE TYPE SD, COLOR-RGB.

ALT3- ALTERNATE LIGHTING DESIGN WITH FIXTURE TYPE SA, COLOR-RGB.

ALT4- ALTERNATE LIGHTING DESIGN WITH FIXTURE TYPE SC, COLOR-RGB

THIS PLAN IS REPRESENTING THE NORTH SIDE SECTION OF THE PEDESTRIAN TUNNEL, THE SOUTH SIDE IS MIRRORED OF THE NORTH.

MAIL: 6501 Americas Parkway.		archite							REMARKS		100% PERMIT SET	DATE 11/01/2019	DATE 11/01/2019	DATE 11/01/2019
MAIL: 6501 Americas Parkway, Suite 300 PHO: 505.883.5200 - Albuquerque, NM 87110 FAX: 505.884.5390 WEB: www.fbtarch.com									DATE	SNC		DESIGNED BY: TCG	DRAWN BY: DF	CHECKED BY: FBT
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		LIGHTIN	G PLAN	I AND	ELE	EVΑ	TIC	NS	i					
Design Review Committee		y Engineer Approval		Last Design Update		Mo.		//Yr.			Mo.		/Yr.	
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