

#	Rv #	ELECTRICAL CRITERIA - GENERAL CONDITIONS	Check Off
EC-01		PERMITS & FEES: Secure & pay for all fees, licenses, permits, inspections. <u>Submit Copy Of Each Permit</u>	
EC-02		LICENSE(S)-BUSINESS: This Contractor Shall Be Properly Licensed Business Wise, In This Project State, In Accordance With All Applicable State Laws. <u>Submit Copies Of Business License(s)</u>	
EC-03		BONDING & INSURANCE(s): This Contractor Shall Be Properly Bonded And Insured In Accordance With The General & Supplements Requirement Of The Project Document. <u>Submit Copies Of All Such Documents.</u>	
EC-04		COORDINATION OF OTHER TRADES- This contractor is responsible for coordinating with all other trades for the proper installation of this work, maintaining required clearances, and confirming the electrical characteristics and requirement of electrical power equipment of other trades (prior to ordering equipment). <u>Submit Copies Of All Such Documents.</u>	
EC-05		MANUFACTURERS, ALTERNATES & SUBSTITUTIONS- Components & products are to be provided matching the prescribed characteristics, features, performance, types, etc. based on the Manufacturer & Series as given, <u>NO After-"Bid" Alternates, Changes Or Substitutions Accepted Or Allowed.</u> Prior-To-Bid Request For Acceptance Must Be Submitted To Architect & Engineer NO-LESS Than Two-Business-Weeks Prior To Bid Date, Request-For-Acceptance Must Include Complete & Marked Product Data Indicating Full Matching Compliance. Any Variations Must Be Marked & Noted. Acceptance Will Be At The Description Of The A/E Judgment.	
EC-06		SUBMITTALS- Provide complete submittals on all items. Mark & indicate specific items to be used. Submit prior to finalizing orders. Submit three sets min., or per General Conditions.	
EC-07		WARRANTY- This contractor shall warrant all materials, labor & installation for one full year from date of Substantial Completion. Any extended product warranties shall be passed onto the owner.	
-	-	End Of Electrical Criteria - General Conditions	

#	Rv #	ELECTRICAL CRITERIA - BASICS CRITERIA	Check Off
EB-01		GENERAL- Provide a complete electrical system, left in proper working order. Provide herein means installed completely, including labor & materials.	
EB-02		LICENSE(ELECTRICAL)- This Contractor Shall Be Fully Licensed To Perform Electrical Work, In This Project State, For The Type Of Work To Be Performed In Accordance With All Applicable State Laws. <u>Submit Copies Of Electrical License(s).</u>	
EB-03		CODES - Meet & comply with all prevailing Federal, State, County & City Codes including NEC (NFPA-70), ICC-BC & any Ga Amendments, ICC-EC & any Ga Amendments.	
EB-04		PERMITS & FEES: Secure & pay for all fees, licenses, permits, inspections. <u>Submit Copy Of Each Permit</u>	
EB-05		COORDINATION OF POWER UTILITY- Coordinate & verify, in writing, with the utility power company, confirming the electrical power arrangements, characteristics (Voltage, Phase, Transformer Type & KVA, Fault-Current, Etc.), metering arrangement and equipment locations. <u>Copy Ownr Archt/ Engr.</u>	
EB-06		COORDINATION OF LV COMMUNICATIONS UTILITY- Coordinate & verify, in writing, with the LV Communications Utility Company, confirming the LV Comm Service routing, conduit quantity & sizes, termination locations, and other related requirements.	
EB-07		PROVISIONS TO BE INCLUDED- Labor, supplies and materials, tools, equipment, etc.; installation of all electrical equipment & connections; coordination with other trades; material shipping, delivery, receiving, storage, & protection; excavation, backfilling, cutting, patching and cleaning; guarantee for one year, plus any extended manufacturer's warranties; as-built reproducible Mylar record documents.	
EB-08		MATERIALS- All materials shall be new, currently manufactured, U.L. labeled, and meet all industry standards. Label all equipment. Provide 3000 PSI class concrete for bases and backfill. Provide 3/4" thick A/D fire retardant grade backboards. Provide all support hardware and systems for electrical work. Fire/smoke seal each penetration of any rated barrier (floor, wall, etc.).	
EB-09		MOTORS & CONTROLS- Motors are furnished and installed under other specification sections. Control and interlock wiring is furnished and installed under other specification sections. Individually mounted starters are furnished under other sections, mounted and power wiring connections provided under this section.	
EB-10		ELECTRICAL CONNECTIONS- Provide power wiring complete to all items. Coordinate actual equipment characteristics with drawing. Provide backboards for equipment mounting. Label all equipment and over-current protective devices with equipment name, voltage, ratings, and O.C.P. ratings.	
EB-11		INSTALLATION STANDARDS: All electrical work shall be installed in accordance with the NEC, NEIS (Nat. Electrical Installation Stds.), related codes and the manufacturer's published requirements.	
-	-	End Of Electrical Criteria - Basic Materials & Methods	

#	Rv #	ELECTRICAL CRITERIA - BONDING & GROUNDING	Check Off
EG-01		BONDING & GROUNDING GENERAL- Provide components, conductors, fittings and hardware to provide for an electrical system that is completely bonded and grounded with the NEC and these requirements.	
EG-02		GENERAL REQUIREMENTS: Provide for the complete Bonding & Grounding of the entire electrical system, including bonding for communication systems.	
EG-03		BUILDING BONDING: Provide for the Bonding together of all metallic systems in the facility, including but not limited to, structural steel, slab rebar, water piping, fire-protection piping, gas piping, HVAC system piping.	
EG-04		SUBMITTALS- Provide complete submittals on all items. Mark & indicate specific items to be used. Submit prior to finalizing orders. Submit three sets min., or per General Conditions.	
EG-05		GROUNDING IN-GRADE CONDUCTORS: Bare, Tin-Plated Copper Of Size & Rating As Scheduled or Required.	
EG-06		BONDING & GROUNDING CONDUCTORS: #10 and smaller - solid copper THHN/THWN Green Jacket Color, #6 & 8 - stranded copper THHN/THWN black jacket, #4 & larger - stranded copper THHN/THWN identified with Green Tape.	
EG-07		CONNECTIONS, IN-GRADE TYPE: UL Labeled for the application, location & use. Heavy-Duty Pure Wrought Copper fitting & devices. Compression type connections. BURNDY HYGROUND Series or Equivalent.	
EG-08		CONNECTIONS, COPPER- Twist on type for #8 and smaller copper conductors. Set screw/bolted type for #4 and larger copper conductors. Completely insulate each connection, splice, termination.	
EG-09		GROUND RODS (ERITECH 683400 Rod): Provide 10 Foot Long, 0.75 In Diameter, Tin-On-Copper 10 Mil. Plated Steel Pointed Ground Rod, driven into earth with top 18 inches below finished grade with inspection/ test well cover, top flush with grade. ANSI/UL 467 & ANSI/ NEMA-GR1. Mechanical Direct-Burial Ground Connector or Exothermic-Weld all ground cables to rods.	
EG-10		GROUND ROD INSPECTION WELLS/ ERITECH Wells - Where indicated or required, provide Ground Rod Inspection/ Test Well & Cover, top flush with grade.	
EG-11		MASTER GROUND BAR (MGB) (BURNDY BBB or ERICO TGB/TMGB)- Provide bare solid Alloy 110 Cu bus bar, electro-finished, with pre-punched holes for two-bolt ground lugs, mounted on stainless steel brackets with insulated flame-resistant stand-offs. 0.25 Inch Thick, 4 Inch High, 20 Inch Long. UL 467 & C22.2 Listed. Anchor to structural wall at height as indicated or noted. Connection to this bar shall be by two-hole bolt lugs, exothermic welded or irreversible crimp connected to the respective cable. Locate at or near the electrical service main disconnect. Label MASTER GROUND BAR.	
EG-12		ISBT (Inter-System-Bonding-Termination) GROUND BAR (ISBT) (ILSCO PET or Equal): Provide dual-rated, 8-hole lug with 2-predrilled mounting holes. Attach to each TELCO backboard for bonding of LV systems by others. Label ISBT GRND.	
EG-13		INSTALLATION STANDARDS: All bonding & grounding shall be installed in accordance with the NEC, NEIS (Nat. Electrical Installation Stds.), related codes and the manufacturer's published requirements.	
-	-	End Of Electrical Criteria - Bonding & Grounding	

#	Rv #	ELECTRICAL CRITERIA - CONDUITS, BOXES & FITTINGS	Chk Off
ER-01		GENERAL- All wiring for power and systems shall done in accordance with the applicable codes. All materials shall be U.L. labeled, matched for proper applications and installed in accordance with U.L. & manufacturer's requirements.	
ER-02		SUBMITTALS- Provide complete submittals on all items. Mark & indicate specific items to be used. Submit prior to finalizing orders. Submit three sets min., or per General Conditions.	
ER-03		GENERAL UNDERGROUND- All underground, in-slab, exterior and exposed or surface mounted wiring shall be in conduits, unless otherwise directed.	
ER-04		GENERAL CONCEALED- All wiring shall be concealed where possible (i.e. -above ceilings, in walls, in slabs, or underground).	
ER-05		GENERAL EXPOSED- Exposed conduits shall be routed as high as possible and parallel or perpendicular to structural elements.	
ER-06		GENERAL BOXES- Provide boxes for all connections, devices, system, etc. Coordinate box sizes with structure to which it will be secured. Coordinate the exact final box location with the architectural/interior drawings prior to rough-in of box.	
ER-07		CONDUITS, IMC- conduit & fittings shall be utilized for exterior exposed locations and interior exposed locations subject to damage.	
ER-08		CONDUITS, EMT- EMT conduit & fittings shall be utilized for in slabs not on grade, concealed dry interior locations, interior exposed locations above 10'0" A. F. F. with set screw fittings indoor concealed dry locations and compression raintight fittings in slabs, and damp locations.	
ER-09		CONDUITS, PVC- conduit & fittings shall be utilized in slabs on grade, conduits in earth. PVC fittings, boxes, etc. shall be of same manufacture with solvent bond. Depth per code.	
ER-10		CONDUITS, FLEXIBLE- Flexible metallic conduit & fittings shall be utilized where motion or vibrations are encountered. Liquid-tight type flex shall be used in damp or wet locations, (i.e. - outdoors, kitchens, areas subject to wash down, shops & industrial areas, etc.). Provide ground wire in all flex.	
ER-11		CONDUIT MISC. FITTINGS- Conduit expansion/deflection fittings shall be utilized where crossing expansion joints, floating slabs or isolated slabs. Conduit thru wall seals shall be utilized where crossing between interior/exterior or damp locations. Conduit fire seals shall be utilized where passing thru fire rated construction, U.L. fire and smoke seal to maintain the fire rating of the barrier.	
ER-12		CONDUIT BOXES- Utilize interior stamped steel for indoors dry flush mounted devices. Masonry/tilt for indoors dry flush mounted devices. Concrete boxes for damp/wet mounting in poured concrete. Cast metal boxes for surface mounted devices, or flush/wet locations. Junction & pull boxes as required or needed. Galvanized steel wire-ways with hinged front cover, only permitted where noted.	
ER-13		FLOOR BOXES - Utilize flush-in-floor type, adjustable post-pour, PVC base with brass flip-lid covers. Gang qty to match application & conduit entries., Covers to match device types. Hubbell, Steel City or Wiremold	
ER-14		SEISMIC BRACING & SUPPORT- All work shall be anchored, braced & supported in accordance with the Local Seismic Zone rating requirements.	
ER-15		INSTALLATION STANDARDS: Each item shall be installed in accordance with the NEIS (Nat. Electrical Installation Stds.), NEC & related codes and the manufacturer's published requirements.	
-	-	End Of Electrical Criteria - Conduits, Boxes & Fittings	

#	Rv #	ELECTRICAL CRITERIA - LOW VOLTAGE CONDUCTORS	Chk Off
EC-01		CONDUCTORS GENERAL: Provide conductors for all circuiting, wiring and systems.	
EC-02		SUBMITTALS- Provide complete submittals on all items. Mark & indicate specific items to be used. Submit prior to finalizing orders. Submit three sets min., or per General Conditions.	
EC-03		CONDUCTORS COLOR CODED: Each conductor shall be properly color coded to represent it's respective phase, neutral, ground, etc. Wire sizes #12 thru #8 shall have continuous color-coded jacket. Larger wire sizes shall have colored tape at each termination, pull-box, etc.	
EC-04		CONDUCTOR LABELING: Each circuit labeled on the conductor and at each box.	
EC-05		CONDUCTORS, COPPER- #12 & #10 - solid copper THHN/THWN color coded; #6 & 8 - stranded copper THHN/THWN black jacket, #4 & larger - stranded copper THHN/THWN. No conductors less than #12 Cu allowed, unless specifically noted or control wiring.	
EC-06		CONDUCTORS, ALUMINUM- Aluminum (AL) not permitted unless noted. Where noted, conductors shall be compact strand type, THHN/ THWN.	
EC-07		CONNECTIONS, COPPER- U.L. Listed, 600V, 90C rated: Twist on type for #8 and smaller copper conductors. Set-Screw, Bolted or Compression type for #4 and larger copper conductors. Completely insulate each connection, splice, termination.	
EC-08		CONNECTIONS, ALUMINUM- U.L. Listed, 600V, 90C rated, compression, split-bolt, or set-screw type(s) for Aluminum or Dual-Rated. Completely insulate each connection, splice, termination.	
EC-09		CONNECTIONS, DAMP & WET LOCATION- UL Listed 486D type connector for damp & wet locations, sealant filled type. IDEAL Model 66 or Equal	
EC-10		CONNECTIONS, IN-GRADE, UNDER-GROUND, SUBMERSIBLE, WATER-TIGHT- UL Listed 486D, 600V, 90C rated for In-Grade, Direct-Burial, Submersible.	
EC-11		GROUNDING CONNECTIONS, IN-GRADE, UNDER-GROUND, SUBMERSIBLE- UL 467 Listed, 90C rated, Compress Or Bolt Type With Inhibiting compound; For Use In Earth or Concrete.	
EC-12		METAL-CLAD (MC) CABLE (CONCEALED WIRING)- Contractor may utilize Metal-Clad (Type MC) for interior concealed branch circuit wiring in accordance with the code. All materials, fittings, hardware, etc. shall be U.L. labeled for use with MC cable and properly installed and supported. Type MC cable shall have an integral full length ground conductor, bonded to a ground lug or terminal at each end.	
EC-13		INSTALLATION STANDARDS: All wiring & connects shall be installed in accordance with the NEIS (Nat. Electrical Installation Stds.), NEC & related codes and the manufacturer's published requirements.	
-	-	End Of Electrical Criteria - Low Voltage Conductors	

#	Rv #	ELECTRICAL CRITERIA - LOW VOLT. ELECT. DISTRIB. GEAR	Chk Off
GENERAL ITEMS			
ED-01		GENERAL- Provide Low-Voltage Electrical Distribution Gear as required to provide for a complete system to distribute electrical power.	
ED-02		ELECTRICAL RATINGS- Prior to ordering or submitting any electrical distribution equipment, verify all equipment ratings (Voltages, Phase, Short-Circuit With-Stand & Interrupting Ratings).	
ED-03		EQUIPM. DIMENSIONS, CLEARANCES & ACCESS- Prior to ordering or submitting any electrical distribution equipment, verify dimensions, space requirements, clearances, access and interference with work of other trades.	
ED-04		SUBMITTALS- Provide complete submittals on all items. Mark & indicate specific items to be used. Submit prior to finalizing orders. Submit three sets min., or per General Conditions.	
LABELING & INSTALLATION			
ED-10		EQUIPMENT LABELS: Provide Engraved Melamine Equipment Labels, Adhesive Attached To The Items Face Or Interior Cover. Label To Include Equipment Name, Voltage(s) And OCP Device Ratings If Applicable.	
ED-11		SAFETY & WARNING LABELS: Provide Clear & Legible Safety & Warning Labels On Each Item Of Electrical Distribution Gear As Required By The NEC, OSHA & Other Regulations.	
ED-12		ARC-FLASH LABELS: Provide Clear & Legible Arc-Flash Labels On Each Item Of Electrical Distribution Gear, Giving The Minimum Ratings, Arc-Flash Energy Level & Required PPE For Each Specific Location.	
ED-13		SEISMIC BRACING & SUPPORT- Equipment shall be anchored, braced & supported in accordance with the Local Seismic Zone rating requirements.	
ED-14		INSTALLATION STANDARDS: Each item shall be installed in accordance with the NEIS (Nat. Electrical Installation Stds.), NEC & related codes and the manufacturer's published requirements.	
LOW VOLTAGE OVER-CURRENT PROTECTIVE DEVICES			
ED-21		OCP GENERAL- Provide over-current-protective (O.C.P.) devices as required by code and/or otherwise prescribed. All lugs and terminals 60/75 deg. C rated.	
ED-22		MOLDED CASE (MC) CIRCUIT BREAKERS- Thermal-magnetic, bolt-in, quick-make/quick-break type, trip free operation with ON, OFF & TRIPPED position. Monolithic tie-handle common trip and common reset terminal-pole breakers. Trip rating molded on handle or face. Lugs to match cable type terminations. Single pole 15 and 20 ampere breakers to be "SWITCHING" rated.	
ED-23		DISCONNECT REQUIREMENTS - NEMA 1 enclosure indoors, NEMA 3R for damp/wet locations. Voltage, poles, amperage, fusible as required. Equipped with both isolated neutral and ground lugs. Class H, J, R or T fuse with rejection features. Provide switch label.	
ED-24		DISCONNECTS 30AMP. - 200AMP (240V Max) - Labeled per UL #98. NEMA KS1 general duty type, load make/break rated. Interrupting rating of 100,000 RMS amps (with R/ T fuse).	
ED-25		DISCONNECTS 400 & 600 AMPERES - Labeled per UL #98. NEMA KS-1 heavy duty type, load make/break rated. Interrupting rating of 200,000 RMS amps (with fuse).	
ED-26		DISCONNECT OVER 600 AMPERES- Labeled per UL #977, bolted pressure or high pressure contact type. NEMA heavy duty type, load make/break rated. Accept Class I fuses (as required). Interrupting rating of 200,000 RMS (with fusing). Manual close - manual/electric trip open. Load side phase under voltage detection/trip. Zero sequence GFCL on switches 1000A @ 277 and greater.	
ED-27		FUSES- Fuses shall be of same make, manufacturer, type & rating where providing two or three wire O.C.P. at a device. Provide Busman LOW-PEAK KRP-C, fuses (UL 198 C Class I) for protection over 600 amperes. Provide Busman LOW-PEAK LPN-RK (250V) or LPS-RK (600V) (U.L. 198E Class RK1) for protection up to 600 amperes.	
PANELBOARDS			
ED-30		PANELBOARDS GENERAL- Provide dead front design with hinged & locking front cover door, NEMA 1 cabinet unless otherwise noted and with devices as scheduled. Voltage, phase, ampacity and devices as scheduled. Service entrance rated as applicable. Series rated and labeled, unless indicated otherwise. Flush or surface mounted NEMA 1 enclosure. All lugs & terminals 60/75 deg. C rated.	
ED-31		PANELBOARD STANDARDS- Labeled UL 67 and 50 (Cabinets, Boxes & Trim); NEMA 250 and PB1; NFPA 70-384 and 373; Federal Specs. W-P-115c; Circuit Breakers- Type Class 1 & Fusible Switches- Type II, Class 1.	
ED-32		SHORT CIRCUIT RATING & ARC-FLASH LABELS: Match or exceed the Available Short Circuit Current available at the actual panel location; Properly label with Arc-Flash Energy Level & protective requirements (PPE).	
ED-33		PANELBOARD INTERIOR- Factory assembled, double row construction. Staggered numbering, sequence phased. Tin-plated copper or aluminum busing. Full ampacity phase & neutral bus, 50% ground bus.	
ED-34		OCP DEVICES, COMPONENTS, ETC: Provide all over-current-devices and other components and related as scheduled and / or required. Refer to panel schedule for details. Refer to Over-Current Protective (OCP) devices criteria.	
ED-35		PANEL DIRECTORIES - All Panel Directories Shall Be Current, Fully Detailed & Legible Per NEC-110.22 & 408.4(A)	
SWITCHBOARDS			
ED-40		SWITCH-BOARDS GENERAL- Provide equipment with dead front design and with devices as scheduled. Voltage, phase, ampacity and devices as scheduled. Service entrance rated as applicable. Free-Standing, NEMA 1 enclosure unless otherwise required. All lugs & terminals 60/75 deg. C rated.	
ED-41		SWITCH-BOARD STANDARDS- The equipment and all installed components shall be UL Listed & Labeled. Labeled UL 891; NEMA 250 and PB2; NFPA 70-384 and 373; Federal Specs. W-P-115c; Circuit Breakers- Type I Class 1 & Fusible Switches- Type II, Class 1.	
ED-42		SHORT CIRCUIT RATING & ARC-FLASH LABELS: Match or exceed the Available Short Circuit Current available at the actual panel location; Properly label with Arc-Flash Energy Level & protective requirements (PPE).	
ED-43		SWITCH-BOARD INTERIOR- Factory preassembled, sequence phased. Tin-plated copper or aluminum busing unless otherwise noted. Full ampacity phase & neutral bus, 50% ground bus.	
ED-44		OCP DEVICES, COMPONENTS, ETC: Provide all over-current-devices and other components and related as scheduled and / or required. Refer to panel schedule for details. Refer to Over-Current Protective (OCP) devices criteria.	
ED-45		CIRCUIT DIRECTORIES - All Circuit Directories Shall Be Current, Fully Detailed & Legible Per NEC-110.22 & 408.4(A)	
TRANSFORMERS			
ED-50		TRANSFORMERS GENERAL- Provide dead-front dry-type transformer. Labeled per UL #506, conform with NEMA #250, #5T20 and TR27. General purpose air-cooled dry-type construction. Size, capacity, primary and secondary voltage, as indicated. NEMA 1 enclosure for indoor dry locations, NEMA 3R enclosure for damp/wet locations. Dead-front construction with removable covers. Maximum temperature rise by resistance of 115 degrees C. in a 40 degrees C. ambient. 75 degrees C. maximum terminal compartment with 60/75 degree C. lugs to match the conductor types. Two 2-1/2% above normal and four 2-1/2% below normal full capacity winding taps.	
End Of Electrical Criteria - Low Voltage Electrical Distribution Gear			

#	Rv #	ELECTRICAL CRITERIA - LIGHTING FIXTURES	Chk Off
EL-01		GENERAL- Provide a complete system of lighting, including but not limited to, lighting fixtures, lamps, lighting controls, hardware, support and related wiring. The lighting system shall be installed complete & left in proper operation & function.	
EL-02		PRE-SUBMITTAL COORDINATION - Prior to issuing product submittals and / or ordering this contractor shall review & coordinate the specific construction each fixture is to be installed in, any Fire-Ratings, fixture mounting & support, & attachment methods, & ballast voltages. Dimmed fixtures shall be coordinated with their respective dimmer controls for comp ability. Fixtures that are to be fitted to Architectural features (i.e.-coves, slots, etc.) shall be coordinated with the respective trades prior to submitting.	
EL-03		SUBMITTALS - Prepare & submit project specific product documentation, including but not limited to, fixture cut-sheets with all model numbers, features & option indicated; specific lamps type(s). Custom type fixtures shall include the manufacturers shop fabrication drawings.	
EL-04		CODES & REQUIREMENTS- Each fixture shall be U.L. Labeled. Comply with the requirement of the NEC. Installation shall comply with the N.E.I.S. Emergency Lighting & Egress Signage shall comply with NFPA-101.	
EL-05		ENERGY EFFICIENCY CODES- Each fixture shall conform with energy code requirements.	
EL-06		MANUFACTURERS SERIES- The Lighting Fixture Schedule describes the fixture type, features, lamp(s), and other characteristics that is to be provided. The Manufacturer's Model Number are provided as a reference to the grade, quality, features & components required. It is the responsibility of this Contractor to verify with the Manufacturer the actual final correct fixture make & model number required and to be submitted.	
EL-07		MANUFACTURER(S) BASIS - The projects base quote shall be based on the prescribed Manufacturer(s) as identified in the Lighting Fixture Schedule.	
EL-08		ALTERNATE MANUFACTURER(S) - Alternate Manufacturer(s) products may be proposed as Add / Deduct Alternate to the Original Base Bid (Post Bid Proposals Not Accepted). The alternate proposal shall be supported with complete fixture and lamp data / cut-sheets with the specific model, features & characteristics indicated. Any variation from the Lighting Fixture Schedule shall be noted & indicated.	
EL-09		LAMPS- Lamps shall be a scheduled & Full Light Output, Energy Saving. Lamps shall be by General Electric, Philips, or Osram /Sylvania unless otherwise noted.	
EL-10		LAMPS COLOR & CRI- Lamps, unless otherwise noted, shall be a 30k-35k Color and CRI of 80+ for Fluorescents & 90+ for LEDs.	
EL-11		LED LAMPS- Shall be UL Labeled (#8750 & 15980), tested & performance rated per ANSI/ ANSLG, CIE, FTC, FCC, IES (LM-79, LM-80 & Related), NEMA	
EL-12		LINEAR FLUORESCENT BALLAST- Shall be rated & matched to the specific lamp type(s) it serves, High Power Factor, Full Light Output, Energy Saving Electronic Type. Ballast shall be Multi-Volt (120-480) or Universal Voltage (120/277) & 10% THD or less.	
EL-13		COMPACT FLUORESCENT LAMP (CFL) BALLAST- Shall be rated & matched to the specific lamp type(s) it serves, High Power Factor, Full Light Output, Energy Saving Electronic Type. Ballast shall be Multi-Volt (120-480) or Universal Voltage (120/277) & 10% THD or less.	
EL-14		HIGH INTENSITY DISCHARG (HID) BALLAST- Shall be rated & matched to the specific lamp type(s) it serves, High Power Factor, Full Light Output, Energy Saving Type. Ballast shall be Multi-Volt (120-480) or Universal Voltage (120/277) & 10% THD or less.	
EL-15		DIMMING BALLAST & CONTROLS- Provide fixtures with dimming type ballast as prescribed. The Ballast & Controls shall be fully coordinated & matched for proper system operation.	
EL-16		EBIS (EMERGENCY BATTERY/ INVERTER SYSTEMS) FOR FLUORESCENT LAMPS- Provide Battery/ Inverter units where shown or required for emergency egress lighting in accordance with NFPA-101 & NEC. 90 Minute operation (min.) unless otherwise noted. U.L. Listed & Labeled.	
EL-17		EBIS FEATURES- EBIS units shall be Self-Diagnostic, Automatic Testing with Audio & Visual alarm notification of trouble conditions. If the above feature is not available, provide Manual Test Switch w/ Indicator Lamp.	
EL-18		EBIS TEST FEATURES- units shall be Self-Diagnostic, Automatic Testing with Audio & Visual alarm notification of trouble conditions.	
EL-19		EBIS LINEAR LAMP PERFORMANCE - The EBIS shall provide the following minimum Lumen outputs. 48 Inch, 14-32 Watt lamps @ 1100-1400 Lumens. 48 Inch 15 20-55 Watt @ 1800-3000 Lumens	
EL-20		EBIS CFL LAMP PERFORMANCE - The EBIS shall provide the following minimum Lumen outputs. CFL 09-13 Watt, 2-Pin @ 350-650 Lumens. CFL 13-26 Watt, 2-Pin @ 500-950 Lumens. CFL 09-42 Watt 4-Pin @ 1100-1400 Lumens.	
EL-21		FIXTURE MOUNTINGS & SUPPORT- Each fixture shall be supported from the ceiling structure (verify ceiling structural capacity) or directly from building structure. Secure fixture to ceiling structure in accordance with code. Pendant supported fixtures shall be supported from building structure.	
EL-22		SEISMIC BRACING & SUPPORT- Fixtures shall be braced & supported in accordance with the Local Seismic Zone rating requirements.	
EL-23		INSTALLATION STANDARDS: Each item shall be installed in accordance with the NEIS (Nat. Electrical Installation Stds.), NEC & related codes and the manufacturer's published requirements.	
End Of Electrical Criteria - Lighting Fixtures			

#	Rv #	ELECTRICAL CRITERIA - TELCO V/D/B RACEWAYS	Chk Off
ET-01		TELCO RACEWAY SCOPE-OF-WORK: Providing raceways, backboards and wall boxes with conduit stub-ups & pull-strings only for devices, cabling & equipment installation by others (Telco, Voice, Data, Broadband, Etc.)	
ET-02		TELCO DEVICES, CABLING & EQUIPMENT: All cabling, jacks, devices, hardware, equipment & software & related installation is the responsibility of the owner or tenant.	
ET-03		TELCO UTILITY COORDINATION: Prior to any rough in, coordinate, in writing, with the Telco Service Provider all related requirements- route, conduit qty & sizes, grounding, etc.	
ET-04		TELCO SYSTEM PROVIDER COORDINATION: Prior to any rough in, coordinate, in writing, with the Telco Service Provider all related requirements- route, conduit qty & sizes, grounding, etc.	
ET-05		TELCO SERVICE CONDUITS: Quantity & size as required or shown, use long radius bends (10X) on all raceway bends & turns. Install Pull-Strings, tagged & tied-off at each end.	
ET-06		TELCO- VID BACKBOARDS: 3/ 4" Thick A/D Grade fire-retardant plywood, painted with two coats of fire-retardant gray paint, bottom 18 In AFF, secured to wall structure. Provide 4-Hole ground lug with #6 ground extended to main service ground & bonded.	
ET-07		VID WALL BACKBOXES & STUB-UPS: Provide double gang wall boxes with plaster ring with 1" C. stub-up & turn-out into an accessible plenum. Jacks, devices & covers by owner or tenants' vendor-installer. Install Pull-Strings, tagged & tied-off at each end.	
ET-08		VID WALL FLOOR BOXES & STUB-UPS: Provide flush-in-floor box(s) with 1" C. under floor, to a wall & stub-up & turn-out into an accessible plenum. Jacks, devices & covers by owner or tenants' vendor-installer. Install Pull-Strings, tagged & tied-off at each end.	
End Of Electrical Criteria - TELCO V/D/B Raceways			

18.09.27 Fayette Co Fire Station 02			
DN-	Rv	ELECTRICAL DISCLAIMERS & PROJECT NOTES	CO
01	-	CONSTRUCTION NEW- This Project Is All New Work.	
02	-	UTILITY POWER- Utility Power Is To Be Field Verified & Documented By The Contractor Prior To The Start Of Any Work. Confirm Voltages, Phase, & Available Fault Current.	
03	-	GENERATOR POWER SYSTEM- The Generator Power System Being Installed For This Facility Is Classified As An: OPTIONAL STANDBY SYSTEM (i.e.-Non-Life-Safety Functions Per NFPA-101).	
04	-	EMERGENCY EGRESS & EXIT LIGHTING Is Provided Via Battery Backup Units. Refer To The Lighting Fixture Schedule.	
05	-	LIGHTING - Refer To The Architectural-Interiors (A/I) For The Complete Lighting Design (Ceiling Types & Layouts, Fixture Selections & Lamping, Mounting Heights, Etc.)	
06	-	EQUIPMENT VERIFICATION - Contractor Is To Verify The Electrical Characteristics & Ratings Of Electrical Equipment Provided By Other Trades, Etc. Prior To Ordering Materials & Any Rough-Ins.	
06	-	EQUIPMENT ON GEN. PWR SYSTEM: - Contractor Is To Coordinate Early With Other Trades, Owner, Etc. Regarding The Electrical Characteristics, Ratings & Motor Starter Types Of Electrical Equipment Provided By Other Trades, Etc. To Ensure Proper Generator Operation.	
07	-	GEN. PWR SYSTEM LOAD SEQUENCE STARTING: Selected Loads Are Noted As Delayed Restart Or Delayed Start To Avoid All Loads Being Connecte To The Generator Source At The Same Time.	
08	-	FIRE ALARM - Not Included In This Work-Scope.	
09	-	TELCO-VOICE-DATA SYSTEM(s)- Not Included In This Work-Scope.	
10	-	TV-BROADBAND SYSTEM(s)- Not Included In This Work-Scope.	
11	-	ACCESS CONTROL & SECURITY- Not Included In This Work-Scope.	
12	-	OWNER-TENANT-USER RESPONSIBILITIES- To Review & Train In Proper Operations & Maintenance Of The Electrical Components & System.	
13	-	OWNER-TENANT-USER RESPONSIBILITIES- Regularly Test (Every 3 Months) GFCI & AFCI Devices To Ensure Proper Operation.	
14	-	OWNER-TENANT-USER RESPONSIBILITIES- To Regularly Check, Test & Document The Proper Operation Of The Emergency Lighting System. Refer To NFPA-101 & OSHA Regulations. Documentation & Forms Are Available From NFPA & OSHA	
15	-	GENERATOR POWER SYSTEM MAINTANCE- The Owner Is Responsible For The Maintaining The Generator Power System In Proper Working Order And Conducting & Documenting Regular Operational Testing Per Codes & Other Agency Requirements.	
18-127 End Of Disclaimer & Project Notes			

architecture interiors town planning

KAOD

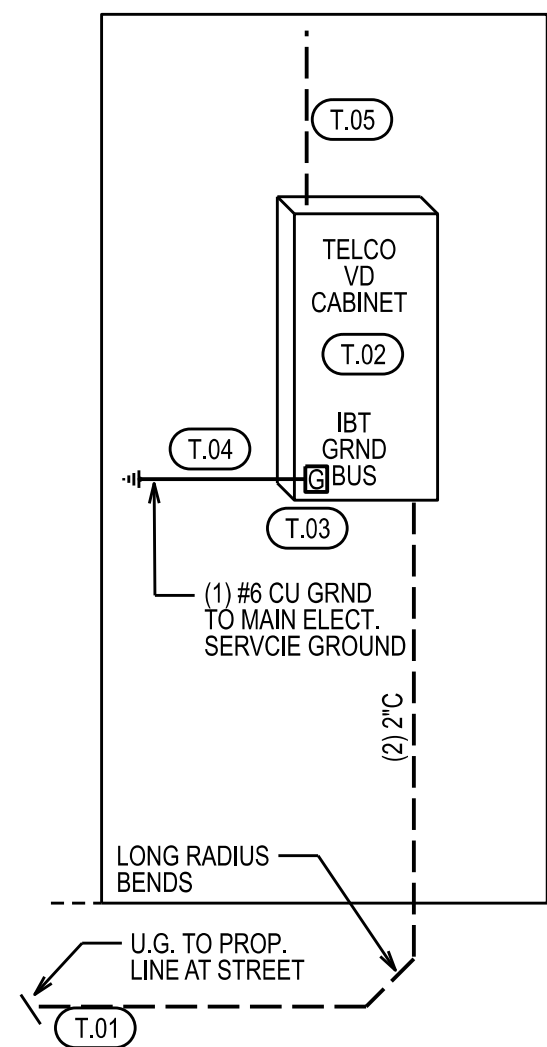
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DATE	ACTION	COMMENTS
18.09.27	Issued	Price, Permit & Construction

Project: Fayette Co Fire Station 02										LT		Schd	Fayetteville, GA. 30241 City, St.									
Gen Nt 1: Bkr Ties On Multi-Wire Ckts NEC 210.4B										Vol- LL 208			Enclosure-Mtg: NEMA 1 Wall Surf.Mtd.									
Gen Nt 2: Seismic Certified & Seismic Rated Anchors & Supports Reqd.										Vol- LN 120			Cover & Door: Door-In-Door, With Locks									
Gen Nt 3: Serves Truck Bays & Related										Phs. 3 W/ 4			OCP Types: Main - MCCB-60C/75C Branch- MCCB, 60C/75C Lugs									
Gen Nt 4: Matching Pnl. Wire Gutter & Sectional Covers, Pnl To Clg. With Trim										Buss Amps 225			All Busing: CU or AL 100% N & G Busing									
Gen Nt 5: ---										Main OCP MLO			Arc-Flash: Labeled Per NEC & OSHA									
18-127 MADDOX GROUP INC.										KA-AC SC 42			18.10.31 Date:									
										Spare % = 0%			Const Status									
Rv	Nt	Description	Wiring	ID	W/VA	OCF	P	#	P	#	OCF	P	W/VA	ID	Wiring	Description	Nt	Rv				
		Clothes Dry- Resd	See Connect Data	R	2,500	30	-	01	A	02	20	-	1,500	G	See Connect Data	M.EWH.02		1				
		208V, 1Phs	---		2,500	-	1	03	B	04	-	2	1,500	G	= = =	3.0 kW, 208V, 1Phs						
		Clothes Wash- Resd	See Connect Data	R	1,500	20	1	05	C	06	20	-	1,000	G	See Connect Data	M.EWH.03		1				
		< Space Only >	---		0	Sp	1	07	A	08	-	2	1,000	G	= = =	2.0 kW, 208V, 1Phs						
		< Space Only >	---		0	Sp	1	09	B	10	20	-	1,500	G	See Connect Data	M.EWH.04		1				
		< Space Only >	---		0	Sp	1	11	C	12	-	2	1,500	G	= = =	3.0 kW, 208V, 1Phs						
1		M.AFU.01	See Connect Data	H	555	20	-	13	A	14	20	1	900	E	See Connect Data	Fir Prot Cntrl Pnl						
		1.0 HP, 208V, 3Phs Ea	= = =	H	555	-	-	15	B	16	20	1	700	H	See Connect Data	M.F.09, 0.25 HP		1				
		AirVac 911	= = =	H	555	-	3	17	C	18	20	1	700	H	See Connect Data	M.F.10, 0.25 HP		1				
1		M.AFU.02	See Connect Data	H	555	20	-	19	A	20	20	1	700	H	See Connect Data	M.F.11, 0.25 HP		1				
		1.0 HP, 208V, 3Phs Ea	= = =	H	555	-	-	21	B	22	20	1	1,600	H	See Connect Data	M.GRH.xx Htr & Louver		1				
		AirVac 911	= = =	H	555	-	3	23	C	24	20	1	1,600	H	See Connect Data	M.GRH.xx Htr & Louver		1				
1		M.F.02	See Connect Data	H	900	20	-	25	A	26	20	1	1,600	E	See Connect Data	Truck Pwr Reel						
		2.0 HP, 208V, 3Phs Ea	= = =	H	900	-	-	27	B	28	20	1	1,600	E	See Connect Data	Truck Pwr Reel						
		Ex Fan	= = =	T	900	-	3	29	C	30	Sp	1	0		---	< Space Only >						
1		Doors 4-Fold Truck Bay	See Connect Data	T	1,105	20	-	31	A	32	Sp	1	0		---	< Space Only >						
		208V, 3Phs Ea	= = =	T	1,105	-	-	33	B	34	20	1	1,600	E	See Connect Data	Truck Pwr Reel						
		1.0 HP Each Of 2	= = =	T	1,105	-	3	35	C	36	20	1	1,600	E	See Connect Data	Truck Pwr Reel						
1		Doors 4-Fold Truck Bay	See Connect Data	T	1,105	20	-	37	A	38	20	1	1,000	R	2# 10+ 10G- MC	Rqpts- Truck Bay Extr						
		208V, 3Phs Ea	= = =	T	1,105	-	-	39	B	40	20	1	1,000	R	2# 10+ 10G- MC	Rqpts- Truck Bay Extr						
		1.0 HP Each Of 2	= = =	T	1,105	-	3	41	C	42	20	1	800	R	2# 10+ 10G- MC	Rqpts- Truck Bay Intr						
		Gen Set Block Htg	2# 8+10G-1.25°C	T	3,000	40	-	43	A	44	20	1	1,000	R	2# 10+ 10G- MC	Rqpts- Truck Bay Intr						
		208V, 1Phs	---	T	3,000	-	2	45	B	46	20	1	800	R	2# 10+ 10G- MC	Rqpts- Truck Bay Intr						
		> Spare MCCB <	---		0	20	1	47	C	48	20	1	900	R	2# 10+ 10G- MC	Rqpts- Truck Bay Wtr Ft						
		< Space Only >	---		0	Sp	1	49	A	50	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	51	B	52	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	53	C	54	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	55	A	56	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	57	B	58	Sp	1	0		---	< Space Only >						
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		< Space Only >	---		0	Sp	1	61	A	62	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	63	B	64	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	65	C	66	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	67	A	68	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	69	B	70	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	71	C	72	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	73	A	74	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	75	B	76	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	77	C	78	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	79	A	80	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	81	B	82	Sp	1	0		---	< Space Only >						
		< Space Only >	---		0	Sp	1	83	C	84	Sp	1	0		---	< Space Only >						
		---	---		0	na	-	Sub	A	Sub	na	-	0		---	---						
		Not Used	---		0	-	-	Feed	B	Feed	-	-	0		---	---						
		---	---		0	-	3	Load	C	Load	-	3	0		---	---						
N# 01-	HACR Listed & Labeled MCCB					Phs-A = 34.0 %		145	A	17,420 VA		52.8 KVA Facored End Use		147	A							
N# 02-	Not Used					Phs-B = 39.1 %		167	A	20,020 VA		0.0 KVA Pass Thru Load		0	A							
N# 03-	Not Used					Phs-C = 27.0 %		115	A	13,820 VA		0.0 KVA Spare		0	A							
N# 04-	Not Used					Summary =		142	A	51,260 VA		52.8 KVA Total		147	A							



TELCO RISER
NO SCALE

XXXX				TELCO (V-D-TV) SCHEDULE				XXXX	
Fayette Co Fire Station 02				Broadband-Data-Telco Distribution-Riser Schedule				18.09.27 Date	
Fayetteville, GA. 30241				KAOB				Const Status	
Rv#	ID #	Comments / Descriptions	(Qty) Size, Etc	Description	Nt #	Run Ft			
-	T01	Service Conduit	(2) 4.0" C	Empty Conduits With Long-Radius Bends, From Attic To Main Telco Board / Cabinet Per Utility- Field Verify In Writing		-			
-	T02	Main Telco Backboard	4 Ftx 8 Ft Btm 18" AFF	0.75" A/D Grade Plywood, 2-Coats Of Fire-Retardant Paint					
-	T03	Main Telco Backboard ITSB	Grnd Bar	Dual-Rated, 8-Hole Lug With 2-Mtg Holes. ILSCO PET or Equal					
-	T04	ITSB Bond/Grnd To Main	(1) #2G- 1" PVC	na					
-	T05	Conduits To Attic / Plenum	(5) 2.0"	From Top Of Bkdb Up & Into Plenum With 90 Degree Elbow(s)					
-	-	- - - - -	-	- - - - -	-	-			
Rv#	Nt #	General Notes Applicable To All							
-	GN-01	Field Coordinate With Each Utility Service (Broadband / Voice / Data / Telco / Etc) The Specific Service Point(s), Service Route(s), Conduit Size(s) And All Related Details & Document In Writing With Each And To The Owner, G.C., Architect & Engineer.							
-	GN-02	Each Conduit Bend Shall Be Long-Radius Type Bend, Conduits 2.0 Inch And Smaller, Trade Size, Shall Have Bends Of No Less Than 6X Times The Conduit Trade-Size, All Larger Conduits Shall Have A Minimum Bend Radius Of No Less Than 10X Times The Trade-Size.							
-	GN-03	All In-Slab Conduit(s) Stub-Up(s) Shall Extend A Minimum Of 4 Inches Above The Slab.							
-	GN-04	Each Conduit Shall Be, At Each End, Terminated With A Smooth Bushing; Left With A Pull-Line Tied Off At Each End, & Labeled / Tagged. Metallic Conduits Shall Have Grounding Type Bushing Bonded To The Ground System. Mark Each Conduits Location & Route On The As-Built.							
-	GN-05	Properly Fire / Smoke Seal Each Penetration Of Rated Barriers In Accordance With The Code(s).							
-	GN-06	Backboards & Cabinets Shall Be Secured To The Building Structural Members, Not To Wall Surfaces.							
18-127		End Of B-D-T Schedule							

Project: Fayette Co Fire Station 02										LA		Schd	Fayetteville, GA. 30241 City, St.									
Gen Nt 1: Bkr Ties On Multi-Wire Ckts NEC 210.4B										Vol- LL 208			Enclosure-Mtg: NEMA 1 Wall Surf.Mtd.									
Gen Nt 2: Seismic Certified & Seismic Rated Anchors & Supports Reqd.										Vol- LN 120			Cover & Door: Door-In-Door, With Locks									
Gen Nt 3: Matching Pnl. Wire Gutter & Sectional Covers, Pnl To Clg. With Trim										Phs. 3 W/ 4			OCP Types: Main - MCCB-60C/75C Branch- MCCB, 60C/75C Lugs									
Gen Nt 4: ---										Buss Amps 200A			All Busing: CU or AL 100% N & G Busing									
Gen Nt 5: All 240 V 1P MCCB To Have AFCI Protection (NEC-210.12)										Main OCP MLOA			Arc-Flash: Labeled Per NEC & OSHA									
18-127 MADDOX GROUP INC.										KA-IC/A SC 25			18.0/10.5 Date:									
Rv	Nt	Description	Wiring	ID	WVA	OCP P	#	P	#	OCP P	WVA	ID	Wiring	Description	Status	Nt	Rv					
		M.C.U.01, 2.0T	See Connect Data	C	1,186	20	-	01	A	02	20	1	1,500 A	See Connect Data	Appl- Iso Maker							
		208V, 1Ph	= = =		C	1,186	-	2	03	B	04	20	1	1,500 A	See Connect Data	Appl- K-Range Hood						
		M.C.U.02, 2.5T	See Connect Data	C	1,410	25	-	05	C	06	20	1	1,500 A	See Connect Data	Appl- K-Refz							
		208V, 1Ph	= = =		C	1,410	-	2	07	A	08	20	1	1,500 A	See Connect Data	Appl- K-Freetz						
		M.C.U.03, 4.0T	See Connect Data	C	1,768	35	-	09	B	10	20	1	1,500 A	See Connect Data	Appl- Kitch Island							
		208V, 1Ph	= = =		C	1,768	-	2	11	C	12	20	1	1,500 A	See Connect Data	Appl- K-Microwave						
		M.C.U.04, 2.5T	See Connect Data	C	1,410	25	-	13	A	14	20	1	1,500 A	See Connect Data	Appl- K Dishwash UC							
		208V, 1Ph	= = =		C	1,410	-	2	15	B	16	20	1	1,500 A	See Connect Data	Appl- K-Diposal						
		C-Dryer Resd	See Connect Data	A	2,500	30	-	17	C	18	20	1	400 A	See Connect Data	Appl- Kitch							
		208V, 1Ph	= = =		A	2,500	-	2	19	A	20	1	400 A	See Connect Data	Appl- Kitch							
		M.E.W.H.01, 2.0kW	See Connect Data	G	1,000	20	-	21	B	22	20	1	400 A	See Connect Data	Appl- Laundry							
		208V, 1Ph	= = =		G	1,000	-	2	23	C	24	20	1	1,500 A	See Connect Data	Appl- Kitch						
		M.G.F.01, 0.50 HP	See Connect Data	H	750	20	1	25	A	26	20	1	200 R	See Connect Data	Rcpt- Ded- Shwr							
		M.G.F.02, 0.50 HP	See Connect Data	H	750	20	1	27	B	28	20	1	200 R	See Connect Data	Rcpt- Ded- Shwr							
		M.G.F.03, 0.75 HP	See Connect Data	H	1,060	20	1	29	C	30	20	1	200 R	See Connect Data	Rcpt- Ded- Shwr							
		M.G.F.04, 0.50 HP	See Connect Data	H	750	20	1	31	A	32	20	1	800 R	See Connect Data	Rcpt- Sleep Area							
		C_Washer Resd	See Connect Data	R	1,500	20	1	33	B	34	20	1	1,200 R	See Connect Data	Rcpt- Sleep Area							
		M.W.H.01 Ignitor	See Connect Data	E	900	20	1	35	C	36	20	1	1,200 R	See Connect Data	Rcpt- Sleep Area							
		M.F.08.03,13	See Connect Data	R	1,500	20	1	37	A	38	20	1	1,200 R	See Connect Data	Rcpt- Misc							
		M.F.14 + KH.01(Hood)	See Connect Data	R	1,500	20	1	39	B	40	20	-	1,500 G	See Connect Data	M.E.W.H.01	1						
		M.F.05.06	See Connect Data	R	1,500	20	1	41	C	42	-	2	1,500 G	= = =	3.0 kW, 208V, 1Phs							
		M.G.F.05, 0.50 HP	See Connect Data	H	750	20	1	43	A	44	20	1	400 A	See Connect Data	Appl- Kitch							
		> Spare MCCB >	- - -		0	20	1	45	B	46	Sp	1	0	- - -	< Space Only >							
		> Spare MCCB <	- - -		0	20	1	47	C	48	Sp	1	0	- - -	< Space Only >							
		< Space Only >	- - -		0	Sp	1	49	A	50	Sp	1	0	- - -	< Space Only >							
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		< Space Only >	- - -		0	Sp	1	53	C	54	Sp	1	0	- - -	< Space Only >							
N# 01-		HACR Listed & Labeled MCCB				Phs-A =	33.8 %	148	A		17,756 VA			50.8 KVA Factored End Use		141 A						
N# 02-		Not Used				Phs-B =	32.2 %	141	A		16,914 VA			0.0 KVA Pass Thru Load		0 A						
N# 03-		Not Used				Phs-C =	34.1 %	149	A		17,938 VA			7.6 KVA Spare		21 A						
N# 04-		Not Used				Summary =	146 A				52,608 VA			58.4 KVA Total		162 A						

Verify Gas Line Size & Route & Place Before Slab Pour.

Access Steps For Walk-In Enclosures (Only If Required)

Provide A Security Fence With A Minimum Of 3-Locking Gates Around Perimeter Of Pad.

Provide 8" Dia. Concrete-Filled Bollard if Required For Protection.

3000 PSI Concrete Pad, 08 Inches Thick, 42 Rebars, 12 Inches OC, Both Directions Chamfered Edges

Pad 24" Longer Each End Than Gen. Set Unit

Pad 24" Wider Each Side Than Gen. Set Unit

Muffler Mounted On Top (If Not In Enclosure With Rain Cap)

Engine Generator Set In Weather-Proof Outdoor Enclosure, Per Criteria/Specs.

Provide #4 CU Ground To Pad Rebar & Bond To Gen Set Frame At Each End.

Anchor Unit To Concrete Base Per Manufacturer And Seismic Requirements

Conduits For Feeder, Controls & Misc. Power Coordinate & Verify Routes, Locations, Etc.

NOTE- THIS DETAIL IS GENERIC, NOT SITE SPECIFIC.
PRIOR TO ANY ROUGH-IN, FIELD VERIFY LOCATION & ORIENTATION OF GENERATOR SET
MAINTAIN ACCESS CLEARANCES AROUND GENERATOR SET, FOR MAINTENANCE, SERVICING & FUELING.
ALL GEN. SET CONNECTIONS SHALL BE MADE WITH LIQUID-TITE FLEXIBLE CONNECTORS.

TYP. NAT-GAS GEN. SET- OUTDOOR MTG. DETAIL

DETAIL # - MG

NOT TO SCALE

Generator Set, See Manual Data For Exact Details & Installation Requirements

ASCO Solenoid Shut-Off Valve & Control Wiring

Power Fuel Mixture Adjustment Valve

Certified Vent Limiting Device

Balance Connection

Water Column Gauge

Engine Carburetor/ Fuel-Injection Unit

Outdoor, Vibration Resistant, Certified & Listed Final Regulator, ANSI-Z21.80 & Z21.18 With Vent-Limiting Device, Installed Vertically Per Manuf.

Normal Position Is Closed

Typ. Tee Fitting With Plugged Port For Press. Testing

Typ. Gas Supply Piping, Length As Needed

Typ. Gas Strainer & Clean-Out

Typ. WP Flex. Connection

Gas Pressure Monitor Switch (N.O.) Contacts Close On Loss Of Press. Ctrl. Wired To Alarm & Gen Set Shut-Down

Typ. Quater-Turn, Ball-Type Shut-Off Valve

Typ. 4-Way Fitting With Plugged Test Port

Typ. "Drip-Leg" 6 Inches Long Minimum

Threaded Removable Pipe Cap For Clean-Out Use

Certified Vent Limiting Device Per Manuf.

Outdoor, Vibration Resistant, Certified & Listed Line Pressure Regulator, ANSI-Z21.80 & Z21.18 With Vent-Limiting Device, Installed Vertically Per Manuf. (Maxitrol 210 Series Or Equal)

At Or Near Gen. Set, Double The Gas Pipe Diameter For At Least The Approx. Length Of The Generator Set, But No Less Than 10 Feet (Serves As Gas Reservoir For Surges)

Typ. Gas Supply Piping From Meter & Service Pressure Regulator (5 To 30 PSI)

This Is A Generic Detail & Field Conditions May Vary.
Med. Pressure > Greater Than 2.00 PSIG To 5.00 PSIG.

Provide Support For All Components
Verify Final Equip. Press & Flow Prior To Rough-Ins

ENGINE-GENERATOR SET - NAT-GAS PIPING DETAIL

Detail #:

Not To Scale



18127_E04.dgn 11/1/2018 10:18:30 AM TMG








18.09.27	Fayette Co Fire Station 02										Const
ID #	Rv #	LOW-VOLTAGE RELAY SWITCHING (LVRS) CX-HARDWIRED SYSTEM									Check Off
7.01	-	GENERAL - Providing complete Low-Voltage Switching System, consisting of LV Switching Panels with LV switching relays, completely pre-assembled & pre-wired with relays, power supply, controls and all components for a complete and properly operating system. Provide matching Hard-Wired LV switching devices, and controls.									
7.02	-	MANUFACTURER - The design is based on the products of Hubbell CX Lighting & Building Automation and shall be the manufacturer for the LV Relay Switching System.									
7.03	-	ALTERNATE MANUFACTURERS - Products of other manufacturers, providing the equivalent level of product quality, operation, functionality and features, shall be submitted as add / deduct to this manufacture for owner's considerations, complete with full product documentation and literature indicating complete compliance and performance.									
7.04	-	CODES & CERTIFICATIONS - All products shall be UL Listed, CSA approved, and comply with EEMAC / NEMA standards & NEC.									
7.05	-	WARRANTY - The system manufacturer shall warrant the complete system with a Full-Service-Warranty on all parts and labor for a minimum of 10 Years.									
7.06	-	SUBMITTALS - Prepare & submit project specific product documentation, including but not limited to, manufacturer's qualifications & personnel contact information, component product data, complete relay & component schedules and matching wiring diagrams for field use in the proper installation of the system.									
7.07	-	RELAY PANELS - Provide pre-assembled 16 or 24 Pole relay panels, pre-finished steel with hinged & locking cover / door for surface of flush mounting. The interior shall divider for LV string per code, control power transformer sized for 125% of the load, LV devices and controls as required.									
7.08	-	RELAYS - Provide relays as scheduled and required for proper operation. Relays shall be Heavy-Duty, Full Load Rated, UL-508 Labeled, HID, breaker snap-in style, mechanically latching type with a manual ON/OFF switch that display the switches' ON/OFF state. 1-Pole, 20 Amp relays rated at 120 & 277 VAC. 1-Pole, 30 Amp relays rated at 120, 277 & 347 VAC. 2-Pole 20-Amp relays shall be rate for up to 480 VAC. UL 508 short-circuit rating of 14,000 Amps. Rated for switching of incandescent, fluorescent, electronic ballast & HID loads. 3,000 Amps inrush capability. Relays shall have a 5 year warranty.									
7.09	-	CONTROLLER- Solid-state, programmable relay controller to receive all control inputs and control all outputs to relays. Controller shall include Astronomical Schedule 365-Day Time Clock-Scheduler, Automatic Daylight Saving Time & Leap-Year Compensation. Controller to have built-in keypad for programming & non-volatile memory.									
7.10	-	LCD USER INTERFACE- Provide front-mounted LCD display with touch-button interface device with instructions.									
7.11	-	CONTROL WIRING- Hard-Wired LV Two-Wire Per Switch Or Input Control Device									
7.12	-	SWITCHING STATIONS- Provide switching devices where shown and / or required. Devices shall be matching two-wire type. Each Switch Station shall provide for up to 6 Pilot-Light buttons. Devices located in wet locations shall be Wet-Location listed & labeled. Devices shall be of same manufacturer as the LV system manufacturer U.N.O.									
7.13	-	WALL SWITCH / LOCAL USE VANDAL RESISTANT - Provide where shown or required heavy-duty, vandal resistant wet-location labeled switch & cover plate with tamper resistant screws. Engrave cover plate with switch function (i.e. lights). Douglas WR-8321 Series									
7.14	-	WALL SWITCH / KEY OPERATED - Provide where shown or required heavy-duty, key-operated switch & cover plate. Engrave cover plate with switch function (i.e. lights).									
7.15	-	WALL MASTER / GROUP SWITCHES - Provide where shown or required heavy-duty, multi-gang group mounted rocker type switches, complete with all switches, mounting hardware & cover plates. Label switches with their function (i.e. lights).									
7.16	-	INSTALLATION PER MANUFACTURER, NEC, NEIS - The LVRS shall be installed in accordance with the manufacturer's written documentation, NEC & NEIS. The manufacturer's factory authorized & trained agent shall provide installation guidance and assistance and system start-up.									
7.17	-	INSTALLATION CABLING - All wiring shall be CU in conduit or Type MC cable unless otherwise noted. The wire size shall be per the manufacturer. Wire size shall be increased to the next larger standard size for runs over 100 Feet.									
7.18	-	INSTALLED MANUFACTURERS CHECK-OUT & CERTIFICATION: Prior to energizing the system, the Manufacturers Authorized Agent, shall perform and On-Site Check-Out of the completed system and provide written certification that the components and installation are acceptable, that the system is fully programmed / scheduled and fully functional & properly operating.									
7.19	-	INSTALLED DOCUMENTATION - Provide three sets of As-Installed Field Record document of the completed system, showing all equipment, components & wiring. Include complete manufacturer & product documentation and warranty forms.									
7.20	-	INSTALLATION DEMONSTRATION & TRAINING - The complete system(s) shall be fully demonstrated to the Owners Representative(s) to show full compliance and proper operation. Train the Owner's Personnel in the proper operation, programming and maintenance of the system.									
End Of Low Voltage Relay Switching Systems											

LOW-VOLTAGE RELAY PANEL (LVRP) SCHEDULE															
Proj	Fayette Co Fire Station 02					LV Relay System Basis Of Design					Pnl ID: LVRP-A				
Place	Fayetteville, GA 30241					Hubbell Relay System: CX Series					Issued: 18.10.11				
For	KA Oldham Design, Inc.					Enclosure Type: NEMA-1					Status: Const				
LV Relay Schedule - Devices, Controls, Etc.															
Rv#	Rly #	Rly Type	Rly Amps	Rly Pole	PNL	CKT #	Circuit Load Description	LV Ctrl LCA	LV Ctrl Sta:	LV Ctrl LCB	LV Ctrl LCC	LV Ctrl LCD	LV Ctrl LCE	LV Ctrl Function Abbrev.	Specific Item Nt#
-	01	L	20	1	LB	01	Ltg- Truck Hi-Bay (a)	a	a	a	a	a	a	LLG, LSD	1.2
-	02	L	20	1	LB	03	Ltg- Truck Hi-Bay (b)	b	b	b	b	b	b	LLG	1
-	03	L	20	1	LB	05	Ltg- Truck Hi-Bay (c)	c	c	c	c	c	c	LL1	3
-	04	L	20	1	LB	05	Ltg- Truck Hi-Bay (d)	d	d	d	d	d	d	LL1	3
-	05	L	20	1	LB	07	Ltg- Extr	e	e	e	e	e	e	LASa, LLG	4.5
-	06	L	20	1	LB	09	Ltg- Extr	e	e	e	e	e	e	LASa, LLG	4.5
-	07	L	20	1	LB	11	Ltg- Extr	e	e	e	e	e	e	LASa, LLG	4.5
-	08	L	20	1	LB	13	Ltg- Step Lts	--	--	--	--	--	--	LASb	4
-	09	-	-	1	-	-	< Space Only >	--	--	--	--	--	--	-	-
-	10	-	-	1	-	-	< Space Only >	--	--	--	--	--	--	-	-
-	11	-	-	1	-	-	< Space Only >	--	--	--	--	--	--	-	-
-	12	-	-	1	-	-	< Space Only >	--	--	--	--	--	--	-	-
Specific Item Notes #															
N01- Local On / Off Switching From Multiple Locations (Truck-Bay Normal Hi-Bay Lts)															
N02- Day-Light Sensor & Dimming For Fixtures Adjacent Truck-Bay Doors.															
N03- Local On / Off Switching From Multiple Locations (Truck-Bay "Red Night Vision" Hi-Bay Lts)															
N04- Astronomic Schedule On / Off a & b represent different schedules per owner.															
N05- "e" Switch Provides A Timed (Verify 1-Hr) Over-Ride To Turn Lights On If They Are Off.															
Control Function & Device Type															
Rv#	Hubbell Device Series	Mtg	LV Ctrl Function Abbrev.	LV Ctrl Function Description				Comments & Notes							
-	LV-Pnl	Ctrl Pnl	LASx	Astro-Time-Control, Sched-x				Built-In Feature Of LV Relay Panel Controller							
-	LVSD	Wall	LDW	0-10V Dimmer- Manual				Verify Matching Dimming Type Ballast / Driver							
-	CXSW	Wall	LDP	0-10V Dimm. 6-Button PreSet				-	-	-	-				
-	LVSKEY	Wall	LK	1-Gang 3-Pos Key-Switch				-	-	-	-				
-	LVS-x-PL	Wall	LL1	Local Control Push-Button				-	-	-	-				
-	LVS-x-PL	Wall	LLG	Local Group Ctrl Push-Button				-	-	-	-				
-	LVS-x-PL	Wall	LLM	Local Master Ctrl Push-Button				-	-	-	-				
-	LVS-x-PL	Wall	LPB	LV Push-Button				-	-	-	-				
-	-	Wall / Cig	LOA	Occ. Sensor Type-A (On-Off)				Verify Exact Mtg Location Per Manuf For Proper Operation							
-	-	Wall / Cig	LSD	Sun Day Lt Sensor				Verify Exact Mtg Location Per Manuf For Proper Operation							
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Notes Applicable To All															
G01 Provide A Complete & Properly Functioning System.															
G02 The Complete System(s) With All Components, Design, Etc. Shall Be Of Single Manufacturer Responsibility.															
G03 Provide Complete Product & Wiring Submittals For Review															
G04 Verify Final Device Color(s) With Archt-Owner Before Ordering & Submittals															
G05 LV Switch Devices To Be Labeled Or Color-Coded. Coordinate With Archt-Owner Before Ordering & Submittals															
G06 Provide All Environmental Return Air Cabling & Wiring Per Manufacturer.															
G07 Program System & Insult User On Proper Operation.															

MADDOX GROUP INC. End Of LV Relay Schedule															
											18-127				

















Proj:	Fayette Co Fire Station 02										18.10.31		Date
Place:	Fayetteville, GA. 30241										Status		
Rv #	ID / TAG	Qty #	N.E.R. X	Equipment / Description	Power Data- HP/ kW/ Etc	Volts	Phs	OCF A/P	Fed From	Wiring Data	Connection Data & Misc	Item Note #	
Archit. Items													
-	A-100	6	N	Doors 4-Fold	1.0 HP Each	208	3	--	LT	#10 + 10G- MC	Direct Conn Per Manuf		
-	A-200	1	N	C-Washer	Typ Resd	120	1	20/1	LA	#12+ 12G-MC	Rcpt- Ded, GFCI		
-	A-201	1	N	C-Dryer	Typ Resd	208	1	30/1	LA	#10 + 10G- MC	Rcpt- NEMA 13-30R		
-	A-300	1	N	Ice Maker		120	1	20/1	LA	#12+ 12G-MC	Rcpt- Ded, GFCI		
-	A-301a	1	N	Kitchen Hood- Ex Fan	See Mech								
-	A-302	1	N	Kitch- Refg	Typ Resd	120	1	20/1	LA	#12+ 12G-MC	Rcpt- Ded, GFCI		
-	A-303	1	N	Kitch-Freeze	Typ Resd	120	1	20/1	LA	#12+ 12G-MC	Rcpt- Ded, GFCI		
-	A-304	1	N	Kitch- Microwave	Typ Resd	120	1	20/1	LA	#12+ 12G-MC	Rcpt- Ded, GFCI		
-	A-305	1	N	Kitch- Dishwasher	Typ Resd	120	1	20/1	LA	#12+ 12G-MC	Rcpt- Ded, GFCI		
-	A-306	1	N	Kitch- Disposal	Typ Resd	120	1	20/1	LA	#12+ 12G-MC	WP Toggle Switch & Rcpt- Ded, GFCI		
-	A-400-d	4	N	Exercise Equipment	Typ Resd	120	1	20/1	LB	#12+ 12G-MC	Rcpt- Ded		
-	A-501	1	N	Clothes Wash-Resd	Typ Resd	120	1	20/1	LT	#12+ 12G-MC	Rcpt- Ded, GFCI		
-	A-502	1	N	Clothes Dryer-Resd	Typ Resd - 5.0 kW	208	1	30/2	LT	#10+ 10G-MC	Rcpt- NEMA 14-30R (Verify)		
Building System Items													
-	B-100	1	N	Fire Prot. Sprinkler Control Pnl	- - -	120	1	20/1	LA	#12+ 12G-MC	Rcpt- Ded, TVSS		
-	B-200	1	N	Security Equipment	- - -	120	1	20/1	LB	#12+ 12G-MC	Rcpt- Ded, TVSS		
-	B-300	1	N	Voice-Data-Telco Equipment	- - -	120	1	20/1	LB	#12+ 12G-MC	Rcpt- Ded, TVSS		
-	B-300	1	N	Voice-Data-Telco Equipment	- - -	120	1	20/1	LB	#12+ 12G-MC	Rcpt- Ded, TVSS		
EEE Items													
-	E-110	1	N	Air Compressor- Gen Use	7.5 HP	208	3	50	MDP	3# 8+ 10G- 0.75°C	DS- 60A,3P,NF,G,N-1R		
-	D-201	1	N	Truck Pwr	Charge Pwr	120	1	20/1	LT	#12+ 12G-MC	Via Ctg Pwr Reel		
-	D-202	1	N	Truck Pwr	Charge Pwr	120	1	20/1	LT	#12+ 12G-MC	Via Ctg Pwr Reel		
-	D-203	1	N	Truck Pwr	Charge Pwr	120	1	20/1	LT	#12+ 12G-MC	Via Ctg Pwr Reel		
-	D-204	1	N	Truck Pwr	Charge Pwr	120	1	20/1	LT	#12+ 12G-MC	Via Ctg Pwr Reel		
-	D-205	1	N	Truck Pwr	Charge Pwr	120	1	20/1	LT	#12+ 12G-MC	Via Ctg Pwr Reel		
-	D-206	1	N	Truck Pwr	Charge Pwr	120	1	20/1	LT	#12+ 12G-MC	Via Ctg Pwr Reel		
Notes - Item Specific													
01- With Time-Delay (5-10 Min) On Restart After Power Loss						02- With "Soft-Start" Motor Starter							
03- - - -						04- - - -							
Notes - Applicable To All													
G1- Coordinate & Verify Data w/ Other Trades Prior To Orders, Rough-Ins						G2- Make Final Connections To Equipment Per Equip. Manuf. Data							
G3- - -						G4- - - -							
ABBREVIATIONS & TERMS										ABBREVIATIONS			
DC Direct Connect Per Manuf									MCCB		Molded Case Circuit Breaker		
DB Disconnect MCCB in NEMA End., A&P As Shown, Flex & Conn.									F		Fuse		
DF Disconnect Fused in NEMA End., A&P As Shown, Flex & Conn.									FHMS		Fractional HP Mtr Rated Toggle Switch		
DS Disconnect Non-Fused in NEMA End., A&P As Shown, Flex & Conn.									HACR		Heating Air Conditioner Rated (Breaker)		
DTS Disconnect Toggle Switch, 120V-277V, 20A, 1P.									MCP		Motor Ckt Protector		
									Px		Bus Plug- B/F/N		
									WP		Weather Proof (NEMA-3R)		
N-# NEMA Ends Type (1, 3R, 4X, Etc)									N		New		
PR Power Receptacle, Type As Req'd Or Shown									E		Existing, Remains In-Place		
Rcpt Receptacle: NEMA= NEMA Config. Type: GFC= Ground Fault Interrupter.									R		Relocate Existing		
TS Toggle Switch, Motor Rated, 30 Amp, 1.0 HP, 120-Volt, 1-2-3 Pole Rated.									X		Demo- Remove		
MADDOX GROUP INC.													
End Of Elect. Connection Data										18-127			

LOW-VOLTAGE DEVICE - ROUGH-INS

SYMBOLS	MTG/UNO	DESCRIPTIONS
	FLR MTD	VOICE-DATA EQUIPMENT RACK/ CABINET, FREE STANDING (BY OTHERS)
	TOP 60" AFF	VOICE-DATA EQUIPMENT PANEL, WALL MOUNTED (BY OTHERS)
	BTM 18" AFF	VOICE-DATA EQUIP. - PROVIDE WALL MTD. BACKWARD 0.75" THICK, A4 GRADE PLY-WOOD, SIZE AS PRESCRIBED
	18" AFF	VOICE JACK WALL MTD QTY. JACKS AS SHOWN
	18" AFF	DATA JACK WALL MTD QTY. OF JACKS AS SHOWN
	18" AFF	COMBO VOICE-DATA JACKS QTY. JACK DEVICES AS SHOWN
	18" AFF	TV / BROADBAND JACK(S) DUPLEX PLATE WALL MTD

- | | |
|-------|--|
| NOTES | 1- This Contractor Is to Provide For Wiring Pathways for All Low-Voltage Device Shown Consisting Of/ "Ring and String" And / Or Wall-Box & Conduit Stub-Ups. The Low-Voltage Cabling & Systems Is "By Others". |
| | 2- Ring & String- 2-Gang Wall Plaster Ring & String to Accessible Plenum. |
| | 3- Wall-Box & Stub Up- 2-Gang (4" Square) Box With 1-Gang Plaster-Ring With 1.25" Conduit Stub-Up to Accessible Plenum With A Pull-String From Box to Conduit End and Tie-Off. |
| | 4- Floor Box Mounted Devices- Provide A Floor Box Of Type As Prescribed With Low-Voltage Device Mounting Plates and 1.25" E.C. Under-Floor & Extended To The Tenants Accessible Plenum With Pull-String. |
| | 5- Products, Set-Ups, Programming, & Related. |
| | 6- All Conduit Raceways- 1/2" Rigid PVC, 1/2" Rigid PVC Bends (10X Diameter). |
| | 6- The Owner / Tenant Provides All The Remaining Materials, Installation, Products, Set-Ups, Programming, & Related. |

WIRING & EQUIPMENT

SYMBOLS	DESCRIPTIONS
	J-Box Cfg / Wall Mtd. @ 24" AF4 UNO
	Flexible Conduit, LT Damp-Wet Areas
	Solid Curved-Concealed Wiring
	Solid Straight-Exposed Wiring
	Dashed-In-Slab or O.U. Wiring
	Arrowhead- Home Run As Shown
	Surt. Mtd Multi-Channel Raceway
	Grounding Symbol / Grnd Rod
	Plywood Bkhd, Size As Noted
	Motor, F- Fract, HP, P, HP
	Manual Motor Rated Switch, 30A, 3P, 600V, NEMA 3R Ends
	Magnetics Motor Combo Starter / Switch, Ratings As Noted Or Scheduled
	Electric Heat Unit
	Disc, Switch, Ratings As Noted Panel / Distb. Panel & Clearances
	Distrib. Equip. & Clearances
	Transformer & Clearances

NOTES & COMMENTS

- 1- Single Branch Circuit Homeruns (#12) To The Same Panel May Be Combined Into Multi-Circuit Homeruns Of No More Than (2) 3-Ckt/ 4-Wire Homeruns. Note Multi-Pole OCP Required At Panel.
- 2- Every Ckt., Regardless Of Conduit Type, Shall Be Provided With A Green Ground Wire (#12 Min), Size Per Code U.N.C.
- 3- Where IG CKTs. Are Required, Each IG Ckt. Shall Have A Separate (Non-Shared) Neutral & A Shared Insulated Ground (IG) Conductor.
- 4-Grouping Of Controls / Switching May Be Indicated By Lower Case Letters (i.e.- a,b,c,d,---).

RECEPTACLE DEVICES

15A	20A	Mtg-UNC	Descriptions	LEGRAND-P&S Series
		18" AFF	Single Rcpt. HD Tamper Resistant	TR 26/36
		18" AFF	Duplex Rcpt.	PT26 213/252
		18" AFF	Quad Rcpt. (2-Duplex)	415/420
		18" AFF	Duplex WR-ST-TR STC1 Rcpt	PT 15/20 97A
		18" AFF	Duplex-WR-ST-TR-GFCI Rcpt + WP In-Use Cover	PT 15/20 97B & W1UC10
		18" AFF	Duplex Surge Protected (See Wiring Notes)	PTTR-5262-xx-SF
		18" AFF	Two Duplex Surge Prot. (See Wiring Notes)	(2)PTTR-5262-xx-SF
		18" AFF	Dplx Rcpt-Tpo Switched	PT26 213/52
		18" AFF	TR Duplex & 2-USB Type-A Ports, Class-2/3 Tamper Resistant	TR 26/31 62Y5B
		18" AFF	Duplex Rcpt. Tamper Resistant	PTTR 26 213/62
		18" AFF	Duplex Rcpt. ST-GFCI	PT 15/20 97NAA

COMMENTS & NOTES

- 01- Devices To Be UL20, UL49 Listed & Labeled Where Applicable.
- 02- Devices To Be FSUL-W3698, FSUL-WC956 Compliant, Where Applicable.
- 03- Devices To Be NFPA (Buy American) Where Available.
- 04- Devices To Be Legend / P&S, Plug/Tabl, Specification Grade Devices, UNO.
- 05- Devices To Be Decor Style Unless Not Available In Decor Style.
- 06- Provide Smooth Finish Matching P&S Trade-Master Grade Cover Plates.
- 07- Products Of Other Manufacturers To Match Appearance, Features, Performance, Rating & Size, Are Acceptable.
- 08- Color As Selected By Owner / Tenant Or Architect.
- 09- Field Verify Final Exact Location Prior To Rough-In With Archt. Owner / User.
- 10- Multiple Adjacent Devices Shall Be Mtd In Multi-Gang Box With Multi-Gang Cover.

MISC. DEVICES & ITEMS

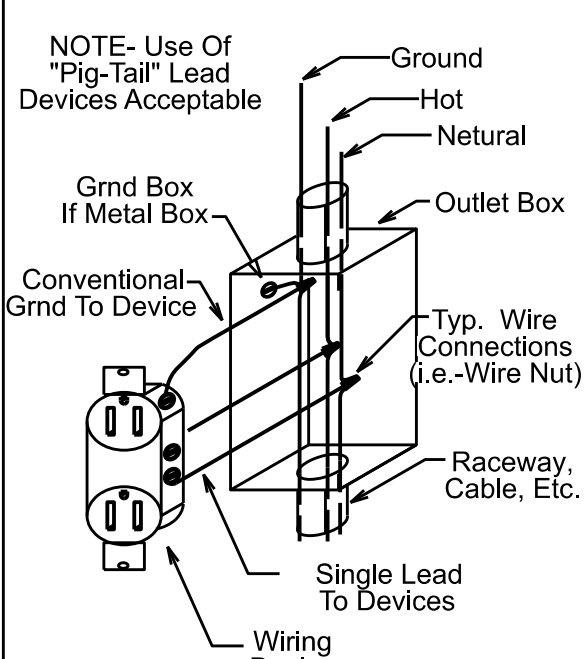
SYMBOL	DESCRIPTIONS - U.N.O.	COMMENTS - UNO
	Outlet(s) - Special Type As Req'd., 48" AFF (For Final Lift Htg)	As Noted or Required
	Power Pole, Type As Noted, Section To Structure	Hubbell Asn Serv Pole Series Or Equal
	Poke-Thru Floor Device As Noted P-Data, D-Data, C-Conn	Hubbell FRPT Series Or Equal
	Multi-Service Floor Box (P-AVD), Type As Req'd., Coord., Exact Placement	Hubbell 3-4-8 Gang Series Or Equal
	1-Gang Floor Boxes, Type As Req'd., J-Box, D-Data, P-Wire, 1-Teico	Hubbell System-One Series Or Equal
	Plug-Mold Raceway, 2-Channels Type Length As Shown Or Req'd.	Wiermold 4000 Series Or Equal
	Surface Raceway, 2-Channels Type Length As Shown Or Req'd.	Wiermold DS4000 Series Or Equal
	Door Bell Button, Lighted, WP, 48" AFF	Nutone-BK142LVH Chime Kit
	Door Bell Chime, Multi-Tone	

COMMENTS & NOTES

- 1- Devices To Be UL Listed & Labeled Where Applicable.
- 2- Devices To Be NFPA (Buy American) Where Available.
- 3- Colors As Selected By Owner / Tenant Or Architect.
- 4- Field Verify Final Exact Location Prior To Rough-In With Archt., Owner / User.
- 5- Products Of Other Manufacturers, Equivalent In Appearance, Features, Performance, Rating & Size, Are Acceptable.

TYP OUTLET WIRING

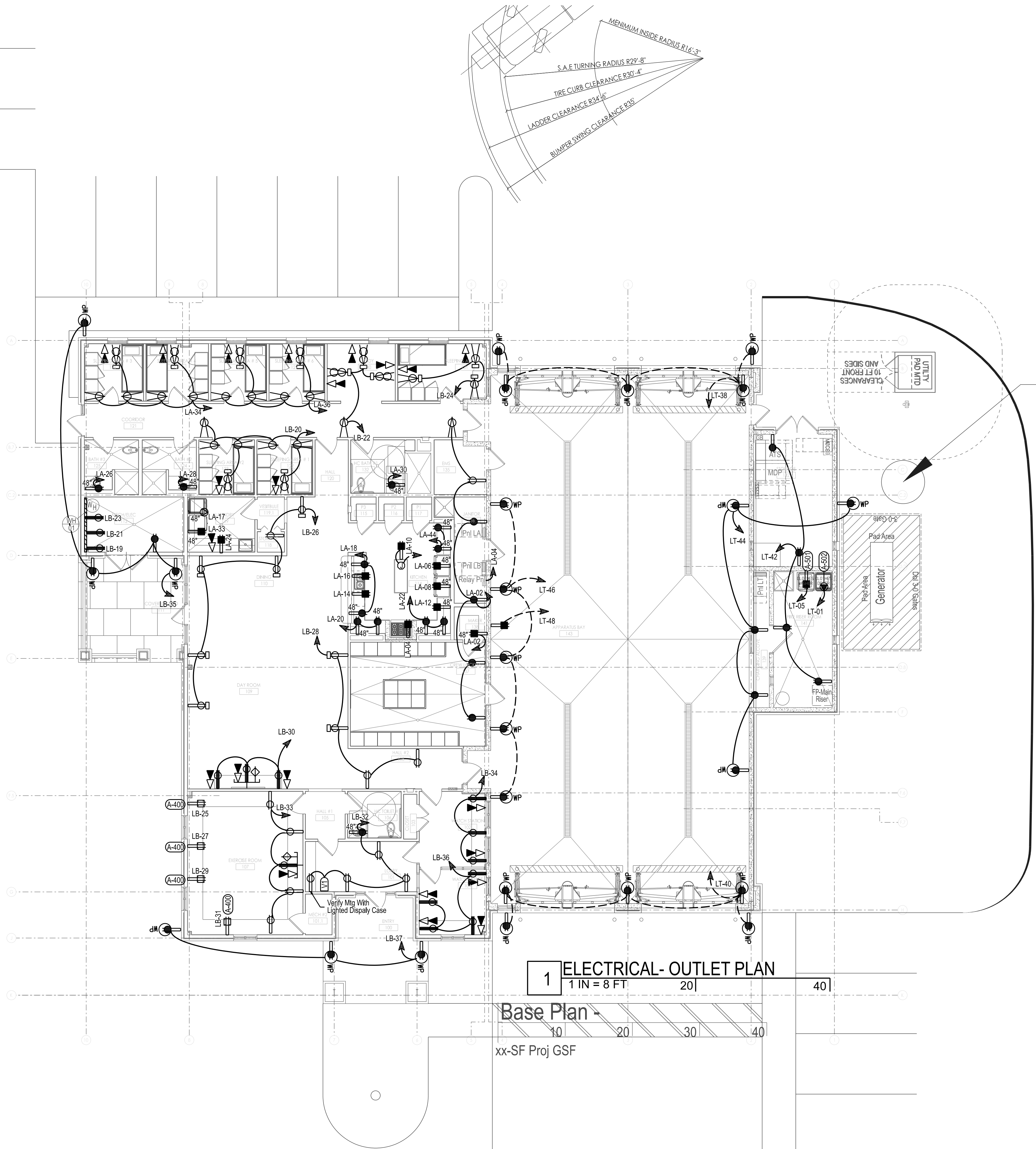
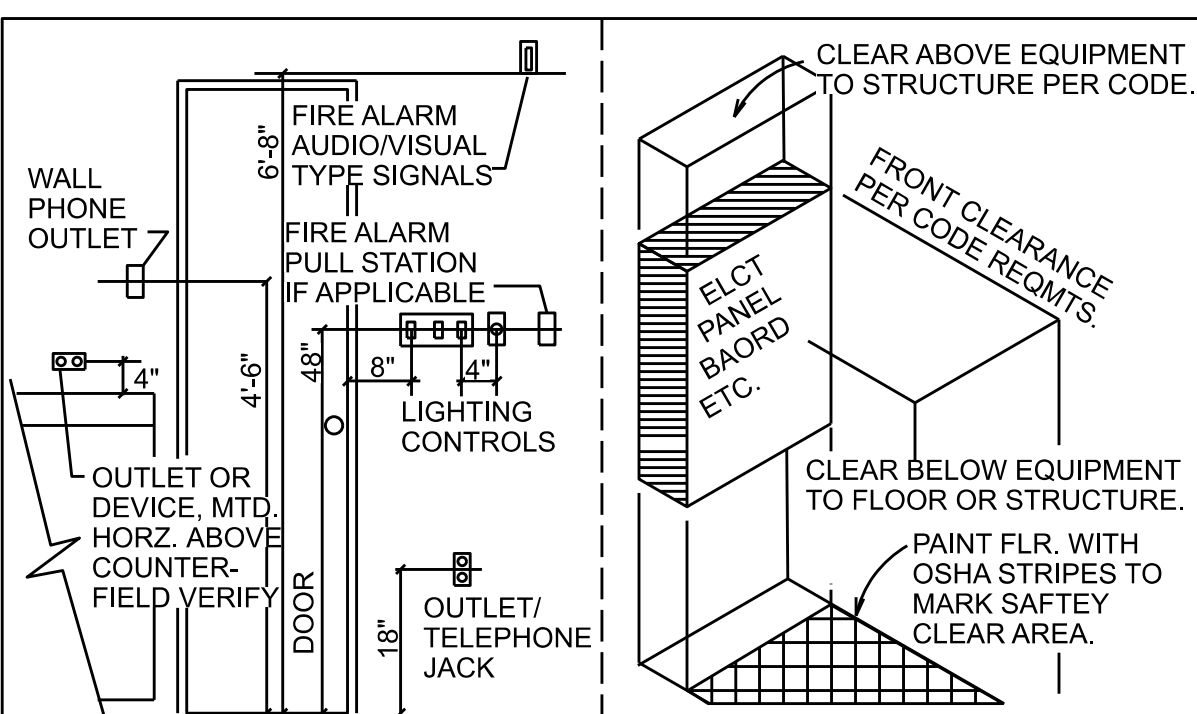
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TYP. DEVICE & PANEL MOUNTING

DETAIL # - MG

NOT TO SCALE



ELECTRICAL- OUTLET PLAN

$$1 \text{ IN} = 8 \text{ FT}$$

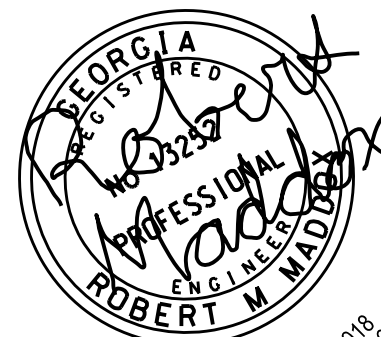
Base Plan

xx-SF Proj GSF

architecture
interiors
town planning

KAOD

K A Oldham Design, Inc.
75 Jackson Street
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Facsimile: 770-683-5
E-Mail: info@kaod.com
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FAYETTE CO.
FIRE STATION
#2

1330 Highway
92 North
Fayetteville, GA 30214

Prepared for
FAYETTE CO.
FIRE DEPT.

COMMISSION / JOB NO:

1852.00

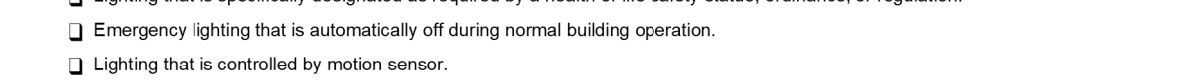
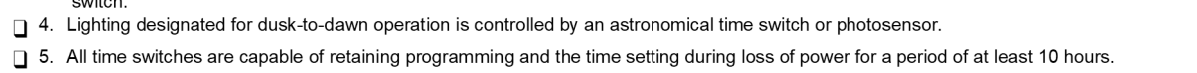
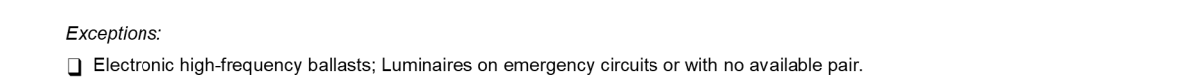
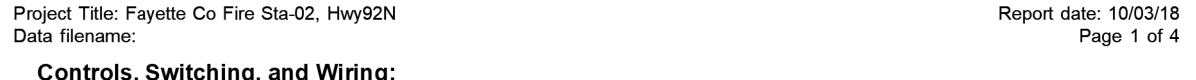
SHEET TITLE:

ELECTRICAL OUTLET PLAN

SHEET NO:

E-12

RELEASED FOR
PERMIT OR CONSTRUCTION



SPECIFIC ITEM NOTES			
1-	Connect Emergency Battery To Unswitched Source	2-	Refer To Interior Lighting Plans & Schedules For Details
3-		4-	
Misc Abbreviations		Lamp / Ballast / Driver Terms	Mounting Terms
PBO-	Furnished By Owner Complete U.N.O.	CRI	Color Rendering Index (Of Lamp)
FMC-	Fixt. Material Cost With Lamps & Hardware Complete	xx K	Kelvin (Lamp Color)
IBC	Installed Complete By Contractor, U.N.O.	lum	Lumens (Lamp Light Output)
		mA	Milli-Amp (LED Driver Rating)
		PS	Programmed Start
PBC-	Provided By Contractor	STA	Self-Test & Alarm
SBO-	Selected By Owner	RS	Rapid Start
		THD	Total Harmonic Distortion Max.
BFC-	Below Finished Ceiling	CB-	Concrete Base- See Details
FIC-	Flush In Ceiling	FIG-	Flush In Grade
PH-	Pend Hung, Htg As Ntd; Per Archt.	SM-	Surface Mtd On Ceiling Or Structure
WM-	Wall Mtd- Htg As Noted, Per Archt.		
ALTERNATES / PRIOR APPROVAL REQUEST			
AA	Project Base Quote Shall Be Based On The Lighting As Scheduled & Specified.		
AB	Lighting Products Of Other Manufacturers May Be Submitted As Add Or Deduct Alternates, Complete With Labeled Fixtures & Lampe Data, Cut-Sheets & Any Variations From The Specified Fixtures Must Be Denoted.		
SUBMITTALS REQUIRED			
SA	A Complete Submittal Is Required, Including Cover-Page, Bill-Of-Materials, & Individual Product Data. The Submittal Shall Bear The "Compliance Statement" & Reviewed Stamp Of The Supplier, Sub-Contractor & General Contractor. Failure To Do So Is Grounds For Automatic Rejection Of Submittals.		
SB	Each Item Cut-Sheet Shall Be Labeled With Specific Choices Marked, Including Lighting Data, Indicating Full Compliance With The Criteria-Specification Requirements.		
MADDOX GROUP INC.		End Of Lighting Fixture Schedule - See Lighting Criteria	

[illegible]

