



PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, NECES

B. OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATES OF COMPLIANCE OR APPROVAL AS REQUIRED BY THE AUTHORITIES.

E. DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, CONDUIT, ETC. SHALL BE COVERED, PLUGGED, OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL ACCEPTANCE. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE NATIONAL ELECTRIC CODE (NEC.), AND ALL APPLICABLE LAYS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE.

PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOPS AS NECESSARY. PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING WORK WITH OWNER OR RESPONSIBLE PARTY, SO THAT THE EXISTING ROOFING WARRANTY MILL BE MAINTAINED. CONTRACTOR SHALL GUARANTEE ALL MORK AND MATERIALS AGONE YEAR FROM FINAL ACCEPTANCE.

CONTRACTOR SHALL PROVIDE ACCESS PANELS WHERE NECESSARY FOR CONCOMPONENTS. KATION AND MAINTENANCE MAN nst defects for a period of

B. ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIN THE OPERATION AND MAINTENANCE MANUALS. DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPILE OPERATING INSTRUCTIONS, MIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT. ALL LITERATURE LISTED ABOVE AND ALL PAPERS LISTING MARRANTIES, ETC. SHALL BE BOUND IN A 3-RING BINDER AND LABELED MITH THE PROJECT NAME, ADDRESS, ARCHITECT, ENGINEER, CONTRACTORS, ETC.

ESTING, AND BALANCING ALL CIRCUITS SHALL BE TESTED FOR CONTINUITY, SHORTS, AND GROUNDS BEFORE PROPER PHASE AS DESIGNED TO BALANCE THE LOADING BETWEEN PHASES. MANUFACTURERS, MODEL NUMBERS, ETC. INDICATED OR SCHEDULED ON THE DRAWINGS SHALL BE INTERPRETED AS HAVING ESTABLISHED A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. ARTICLES, FIXTURES, ETC. OF EQUAL QUALITY BY MANUFACTURERS SHALL BE ACCEPTABLE, SUBJECT TO STRUCTURAL AND ELECTRICAL CONSTRAINTS OF THE PROJECT DESIGN, UNLESS NOTED OTHERWISE.

B. POWER AND LIGHTING PANELS SHALL BE PROPERLY PHASED TO DISTRIBUTE THE LOAD AND SHALL BE CONNECTED AND ADJUSTED TO OPERATE AS SPECIFIED. C. ALL MOTORS AND SIMILAR EQUIPMENT SHALL BE CHECKED FOR PROPER PHASE ROTATION AND OPERA A. CONDUIT INSIDE THE BUILDING SHALL BE METALLIC TUBING (EMT), BEARING THE UL LABEL, WITH COMPRESSION TYPE FITTINGS OR SCREW SET FITTINGS. CONDUIT EXPOSED TO THE WEATHER, INSTALLED UNDERGROUND, IN CONCRETE, OR USED FOR SERVICE ENTRANCE SHALL BE STANDARD RIGID CONDUIT (GALVANIZED) WITH THREADED FITTINGS.

D. FLEXIBLE METAL CONDUIT SHALL ONLY BE USED FOR CONNECTIONS TO MOTORS TRANSFORMERS, AND LIGHT FIXTURES. MAXIMUM LENGTH SHALL BE 6'-0". UNDERGROUND CONDUIT MAY BE POLYVINYL CHLORIDE WITH A DEFLECTION TEMPERATURE, UNDER LOAD AT 264 PSI, OF 18 DEGREES C, AND A TENSILE STRENGTH OF 5,200 PSI. JONTS SHALL BE FLUSH SOLVENT MELDED IN ACCORDANCE MITH THE MANUFACTURER'S INSTRUCTIONS. CONDUIT SHALL BE EQUAL TO CARLON POMER AND COMMUNICATIONS DUCT TYPE DB (DIRECT BURIAL). CONDUIT AND FITTINGS SHALL BE PRODUCED BY THE SAME MANUFACTURER.

B. CONDUCTORS FOR LIGHTING AND POWER SHALL BE COPPER, MINIMUM NO. 12 A.W.G., 600 VOLT.
C. NO. 10 GAUGE AND SMALLER CONDUCTORS SHALL BE TYPE THWN (WET LOCATIONS) OR THHN (DRY LOCATIONS), SOLID CONDUCTOR, UNLESS OTHERWISE INDICATED. D. NO. 8 GAUGE AND LARGER CONDUCTORS SHALL BE TYPE THAN (MET LOCATIONS) OR THIN (DRY LOCATIONS), STRANDED, UNLESS OTHERWISE INDICATED. MIRES SHALL BE CONTINUOUS MITHOUT SPLICES OR TAPS IN CONDUIT RUNS. ALL SPLICES SHALL BE MADE IN JUNCTION, PULL, OR OUTLET BOXES. ALL MIRE SHALL BE INSTALLED IN CONDUIT, MIREMAYS, OR OTHER PROTECTIVE COVER SANCTIONED BY CODES.

E. SERVICE ENTRANCE AND PANEL FEEDER CONDUCTORS, NO. 3 GAUGE AND LARGER SHALL BE TYPE XHHV-2 (VET LOCATIONS) OR THHN (DRY LOCATIONS), STRANDED COPPER, UNLESS OTHERWISE INDICATED MC CABLE SHALL CONSIST OF INTERLOCK ARMORED CABLE MADE OF THREE OR FOUR TYPE THHN SOLID (#8 AWG AND LARGER MAY BE STRANDED) COPPER CONDUCTORS RATED 40°C FOR DRY LOCATIONS, WITH NYLON OR EQUIVALENT UL LISTED JACKET, PER UL STANDARD 83 THE THREE CONDUCTORS SHALL BE TWISTED TOGETHER WITH THE COPPER GROUNDING CONDUCTOR, SUITABLE FILLERS, AND WRAPPED IN BINDER TAPE. THE ASSEMBLY SHALL BE ARMORED WITH SPIRALLY WRAPPED INTERLOCKED ARMOR OF ALUMINUM OR GALVANIZED STEEL.

WALL SWITCHES SHALL BE SPECIFICATION GRADE, QUIET TYPE, FLUSH TOGGLE SWITCH, RATED FOR 20 AMPS, WITH THERMOPLASTIC COVER PLATES.

CABLES SHALL BE TESTED IN ACCORDANCE WITH UL STANDARD 1569 FOR TYPE MC CABLE AND RATED AT 600 VOLTS, 90 DEG. C FOR DRY LOCATIONS AND 15 DEG. C FOR MET LOCATIONS.

4) EXISTING MIRE SH ABANDONED.

CONTROLS

C. GROUND FAULT INTERRUPTER RECEPTACLES (GFI) SHALL BE HUE PLATES SHALL BE AS HEREINBEFORE SPECIFIED. B. RECEPTACLES SHALL BE SPECIFICATION GRADE, DUPLEX, GROUNDING, THREE-MIRE TYPE, RATED FOR 20 AMPS, MITH THERMOPLASTIC COVER PLATES. HUBBELL #CR5352-X, OR EQUAL. 1) SNGLE POLE: HUBBELL #C51221-X, OR EQUAL.
2) THREE WAY: HUBBELL #C51223-X, OR EQUAL.
3) AS SPECIFIED ON PLANS

D. ISOLATED GROUND RECEPTACLES (IG) SHALL BE HUBBELL #CR5352IG, ORANGE COLOR. DEVICE COVER PLATES SHALL BE AS HERENBEFORE SPECIFIED.

RECEPTACLES OUTSIDE BUILDING AND WHERE NOTED AS WEATHERPROOF, SHALL BE LISTED WEATHER-RESISTANT HUBBEL #GFTR20-X OR EQUAL AND SHALL BE INSTALLED IN A WEATHERPROOF ENCLOSURE WHICH SHALL BE INTERMATIC #WF1010MXD OR #WF1010HMXD DIECAST METAL WEATHERPROOF RECEPTACLE COVER. COVER SHALL BE WEATHER PROOF RATED WHILE IN USE.

DEVICES SHALL BE GRAY WITH STAINLESS STEEL COVER PLATES TO MATCH EXISTING.

A. HOT DIPPED GALVANIZED STEEL BOXES. PROVIDE TYPE TO SUIT COND B. ALL BOXES SHALL BE FLUSH MOUNTED, UNLESS INDICATED OTHERWISE. PANELBOARDS: TIONS FOR INSTALLATION.

PANELBOARDS ARE EXISTING AND SHALL BE REUSED. PROVIDE ADDITIONAL BREAKERS AS REQUIRED TO CONNECT CIRCUITS AS SHOWN ON THE DRAWINGS. ADDITIONAL BREAKERS SHALL BE THERMAL MAGNETIC, QUICK-BREAK BOLT ON CIRCUIT BREAKERS WITH ONE HANDLE FOR SINGLE OR MULTI-POLE RATINGS AND SHALL BE COMPATIBLE WITH EXISTING PANELS.

A. DISCONNECTS SHALL BE EXTERNALLY OPERATED, QUICK-MAKE, QUICK-BREAK, SAFETY, WITH PROYISIONS FOR PAD LOCKING. FUSED AND NON-FUSED DISCONNECT SWITCHES SHALL BE PROYIDED AS INDICATED. B. COMPLETE EXISTING DIRECT

A. FUSES PROTECTING CIRCUIT BREAKER PANELS SHALL BE CURRENT LIMITING U.L. CLASS RK-1 FUSES WITH 200,000 AMPERES RMS SYM INTERRUPTING CAPACITY. FUSING ELEMENTS SHALL BE SILVER FOR RATINGS ABOVE 60 AMPERES. ALL OTHER FUSES SHALL BE UL. CLASS RK-5, DUAL-ELEMENT WITH A MINIMUM TIME-DELAY OF 10 SECONDS AT 500% RATING. FUSES SHALL HAVE CURRENT-LIMITING SHORT-CIRCUIT LINKS AND 200,000 AMPERES RMS SYM INTERRUPTING CAPACITY. FUSING ELEMENTS SHALL BE COPPER.

FILE

B. INDOOR SMITCH OTHERWISE.

RED AT ALL LIGHTING OUTLETS SHOWN ON THE DRAWINGS. APPROVED LIGHTING IRED IN ALL FIXTURES AND FIXTURE RACEWAYS. WEATHERPROOF WIRING IS RICK FIXTURES. ALL PARTS OF FIXTURES AND WIRING SHALL BE IN ACCORDANCE

A PROVIDE, SET, AND B. INTERIOR PARTITIO SAFING AND CAULK C. ROOF: PROSET C R EQUAL, MANUFACTURED PYC SCHEDULE 40 PIPE SLEEVE WITH MEATHERPROOF SEARCOFNG CONTRACTOR AND FLASH AS REQUIRED TO MAINTAIN ROOF MARRANTY. Y TROPERLY LOCATE PIPE SLEEVES AS REQUIRED FOR THIS MORK. NS: 16 GAGE GALVANIZED STEEL, PACK BETWEEN CONDUIT AND SLEEVE MITH FI AT EACH END MITH FIRE RESISTANT SEALANT.

B. BOND METAL PIPIN 5. REMODELING WORK: A. GROUND ALL ELEC AND ANY LOCAL RE PROVIDE BONDING A. DEMOLITION: DISC TRICAL APPARATUS IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) 250, QUIREMENTS. INSURE CONTINUOUS BOND WHERE FLEXIBLE CONDUIT IS USED. JUMPER INSIDE ALL FLEXIBLE CONDUIT.

2) ALL MATERIALS
REMOVED, AND 9
"LIKE NEW" COND
REPAINTED AS RI
ANY ITEMS WHICH
ACTIVITY SHALL I 1) DISCONNECT AN EQUIPMENT TO BE

D. PROTECT ADJACENT BARRIERS TO KEEP I PROTECTION AND BA C. DISPOSAL AND CL EQUIPMENT NOT INI NT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE 'S DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE BARRIERS AFTER REMODELING OPERATIONS ARE COMPLETE. ED MATERIALS ,

國

RECESSED OR SURFACE MOUNTED FIXTURE WITH TYPE DESIGNATION

STRIP FIXTURE WITH TYPE DESIGNATION

EXIT LIGHT MITH DIRECTIONAL ARRONS INDICATED

EMERGENCY TWIN HEAD LIGHT FIXTURE

E. PROVIDE ALL ALTER AND OPERATION OF LOCATE, IDENTIFY, A SERVING OTHER ART REMODELING LIMITS AFFECTED AREAS.

2) WHERE EXISTING
TO BE REMOVED,
CUT BACK AND CO 1) ABANDONED CONDUIT SHALL HAVE WIRE REMOVED AND SHALL BE CAPPED. ABANDONED OUTLETS IN WALLS OR PARTITIONS SHALL HAVE DEVICES AND WIRE REMOVED, AND SHALL BE COVERED. CONDUITS TERMINATE AT AN EXISTING OUTLET IN A WALL, CEILING, OR FLOOR, DISCONNECT AND REMOVE DEVICE AND WIRE FROM CONDUIT. CONDUIT SHALL BE APPED (BELOW THE FLOOR OR ABOVE THE CEILING) SO NOT TO CREATE AN VATCH FLOOR TO MATCH EXISTING.

3) WHERE EXISTING (
FLOOR TO BE RE
CIRCUIT OR FEED
A MANNER AS NO
ARCHITECT. CIRCUITS EXTEND BEYOND THE OUTLET IN THE EXISTING WALL, CEILING, OR MOVED, FURNISH AND INSTALL NEW CONDUIT AND WIRE TO EITHER REROUTE THE THE REMAINING OUTLET(S) FROM ANOTHER ELECTRICAL SOURCE, BUT IN SUCH TO REVISE THE CIRCUIT. ALL REROUTED CONDUIT SHALL BE APPROVED BY THE

4) WHERE EXISTING MAINTAIN OPERAT LOCATION. EXIST OUTLETS IN A WALL, CEILING, OR FLOOR TO BE REMOVED ARE ESSENTIAL TO TION OF OTHER REMAINING OUTLETS, RELOCATE THE OUTLET TO A NEW CONVENIENT TING MIRING DEVICES SHALL NOT BE REUSED, UNLESS OTHERWISE INDICATED.

6) WHERE A TELEPHOF FLOOR TO BE REPORT THE OWN REMAIN. 7) WHERE EXISTING CONDUIT AND MIRE RUNS ARE LOCATED IN OR ATTACHED TO AN EXISTING WALL CEILING OR FLOOR TO BE REMOVED, THEY SHALL BE REROUTED IN EITHER NEW OR EXISTING CONSTRUCTION TO MAINTAIN CONTINUITY OF CIRCUITS UNLESS OTHERWISE INDICATED. 5) WHERE LIGHTING FIXTURES ARE INDICATED TO BE DEMOLISHED, REMOVE ALL WIRE AND MODIFY THE EXISTING CONDUIT (IF APPLICABLE) FOR THE NEW LIGHTING. ALL UNUSED CONDUIT SHALL BE REMOVED. IONE CIRCUIT EXTENDS BEYOND AN OUTLET IN AN EXISTING WALL, CEILING, OR INOVED, PROVIDE NECESSARY EMPTY CONDUIT AND NOTIFY THE OMNER WHO MILL NER TO ARRANGE MITH THE TELEPHONE COMPANY FOR NEW MIRING TO OUTLETS THE

E N × Μ <u>0</u> <u>></u> <u>∑</u> m <u>ā</u> GROUND FAULT CIRCUIT INTERRUPTER DEVICE PARTIAL HOMERUN. REFER TO PLANS FOR ADDITIONAL CONNECTED TO THIS CIRCUIT. EMERGENCY BATTERY BACKUP ELECTRICAL FLOOR PLAN NOTE MITH DESIGNATION SOLATED GROUND DEVICE WEATHERPROOF RESISTANT DEVICE VEATHERPROOF ENCLOSURE ON DEVICE

LIGHTING Ŧ } #12 MIRE IN CONDUIT, UNLESS NOTED OTHERMISE ON DRAMINGS OR SPECIFICATION

GROUNDING CONDUCTOR, #12 MIRE UNLESS NOTED OTHERMISE ON DRAMINGS OR SPECIFICATION CONDUIT CONCEALED MHERE POSSIBLE OR AS NOTED, ARRONG INDICATE HOME RUN TO PANEL. CIRCUIT NUMBERS INDICATED CONDUIT ROUTED UNDER FLOOR/GRADE

POWER DEVICES **₩** ₩ Ŷ 囟 Q ģ Ó Q **©** # ***** MAGNETIC STARTER FOURPLEX RECEPTACLE, BOTTOM OF BOX AT 16" NON-FUSED DISCONNECT SMITCH DEVICE MOUNTED ABOVE COUNTER AND/OR SPLASH GUARD DUPLEX RECEPTACLE, BOTTOM OF BOX AT 16" AFF, UNLESS NOTED FUSED DISCONNECT SMITCH PANEL BOARD, TOP OF BOX 6'-0" AFF WALL MOUNTED FIXTURE WITH TYPE DESIGNATION CEILING OR RECESSED FIXTURE WITH TYPE DESIGNATION NIGHT LIGHT, CONNECT TO UNSMITCHED CIRCUIT

ហ្វ Ŋ MANUAL MOTOR STARTER WITH OVEKLUAUS

PANCY SENSORS

TECHNOLOGY/ULTRASONIC CEILING SENSORS SHALL BE MOUNTED 6'

JUPPLY/EXHAUST AIR DIFFUSERS.

VOLTAGE CEILING SENSORS SHALL BE PROVIDED WITH 6' SLACK

CTOR COILED AT SENSOR. DIMMER SMITCH, TOP OF BOX AT 48" AFF MANUAL MOTOR STARTER WITH OVERLOA SINGLE POLE WALL SMITCH, KEY OPERATED,, TOP OF BOX AT 48" THREE-MAY MALL SMITCH, TOP OF BOX AT 48" AFF TWO POLE WALL SWITCH, TOP OF BOX AT 48" AFF SINGLE POLE WALL SMITCH MITH PILOT LIGHT, TOP OF BOX AT 48" AFF SINGLE POLE WALL SMITCH, TOP OF BOX AT 48" AFF

8 S S S -8 DATA/TELEPHONE OUTLET WITH 3/1" CONDUIT STUBBED UP TO ABOYE ACCESSIBLE CEILING, BOTTOM OF BOX AT 16", UNLESS NOTED OTHERWISE. PROVIDE WITH PULL STRING DUAL TECHNOLOGY CEILING MOUNT OCCUPANCY SENSORS, WATTSTOPPER DT-300 INFRARED OCCUPANCY SENSOR WITH DIMMING, WATT STOPPER #PW-100D, TOP OF BOX AT 48" AFF, VERIFY DIMMER COMPATIBILITY INFRARED OCCUPANCY SENSOR, WATT STOPPER #PW-100, TOP OF BOX AT 48" AFF. SENSOR TO BE MIRED FOR 'AUTOMATIC-ON' OPERATION INFRARED OCCUPANCY SENSOR, WATT STOPPER #PW-100, TOP BOX AT 48" AFF MOMENTARY SMITCH, TOP OF BOX AT 48" AFF RARED OCCUPANCY SENSOR, WATT STOPPER #PW-100, TOP OF X AT 48" AFF. SENSOR TO BE MIRED FOR 'MANUAL-ON' CUPANCY SENSOR POWER PACK, WATTSTOPPER BZ-150 OR JAL, PROVIDE LOW VOLTAGE MIRING TO OCCUPANCY SENSORS D MOMENTARY SMITCHES

IS THE ELECTRICAL CONTRACTORS RESPONSIBILING BRANCH CIRCUITS BETWEEN THE PHASES OF THE ROUTING INDICATED.

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FIRE

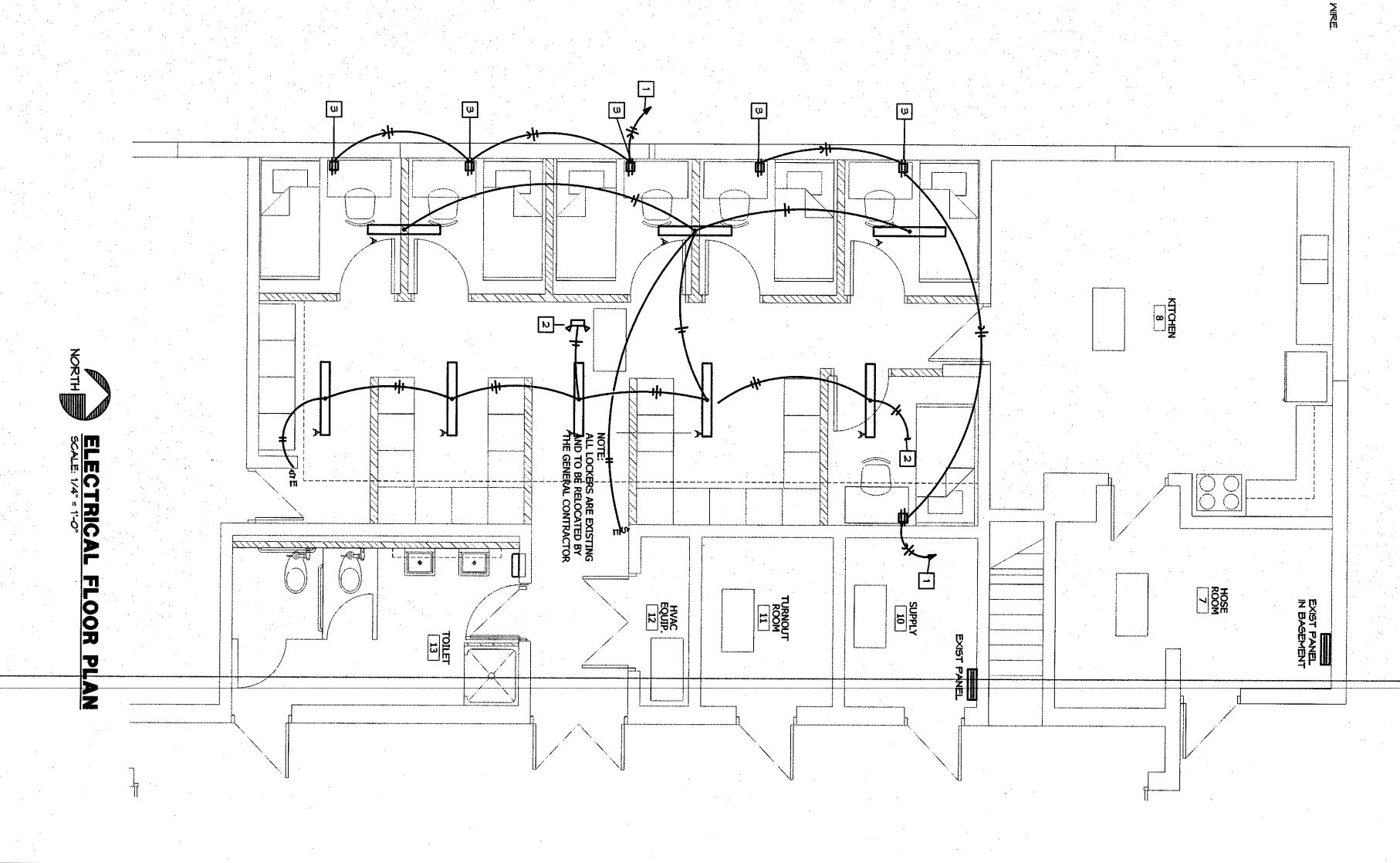
an interior renovation for: STATION NO. 5

ENGINEERS

9TH AND QUINDERO

KANSAS CITY, KANSAS

A SLF-4-L52/835-HIA- 58	MILLIAMS	MARK MANUFACTURER \$ VOLTS NO. CATALOG NUMBER MATTS	
·····	A LED	LAMPS	HT FIXT
	4' SURFACE MOUNT LED LIGHT WITH FROSTED	DESCRIPTION	LIGHT FIXTURE SCHEDULE
OR EQUAL	COOPER	EQUIVALENT MANUFACTURERS	

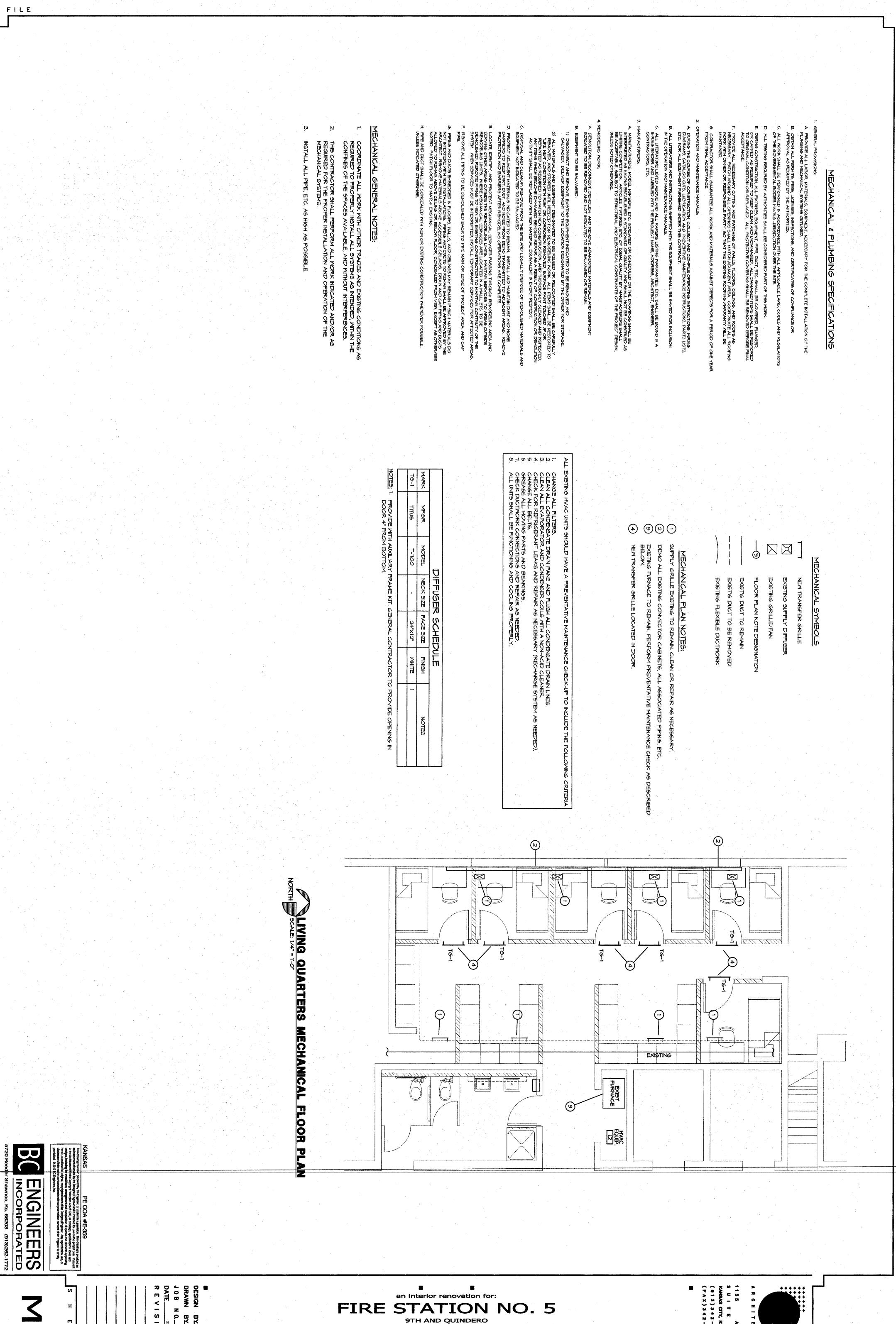


ENGINEERS

FILE

an interior renovation for: FIRE STATION NO. 5
9TH AND QUINDERO

KANSAS CITY, KANSAS



KANSAS CITY, KANSAS