

A. SUPPLEMENTAL GENERAL CONDITIONS

- 1. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND IT IS THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS THAT THE CONTRACTOR SHALL PROVIDE AN ELECTRICAL INSTALLATION THAT IS COMPLETE WITH ALL ITEMS AND APPURTENANCES NECESSARY FOR REASONABLE INCIDENTAL, OR CUSTOMARILY INCLUDED, EVEN THOUGH EACH AND EVERY ITEM IS NOT SPECIFICALLY CALLED OUT OR SHOWN. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIALS, LABOR, SUPERVISION AND SERVICE NECESSARY SO AS TO PROVIDE A COMPLETE, FUNCTIONING ELECTRICAL SYSTEM IN SAFE WORKING ORDER.
2. SYMBOLS FOR VARIOUS ELEMENTS AND SYSTEMS ARE SHOWN ON THE DRAWINGS. SHOULD THERE BE ANY DOUBT REGARDING THE MEANING OR INTENT OF THE SYMBOLS USED, AN INTERPRETATION SHALL BE OBTAINED FROM THE ARCHITECT IN WRITING. THE DECISION OF THE ARCHITECT SHALL BE FINAL.
3. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO EXAMINE THE CONTRACT DOCUMENTS CAREFULLY BEFORE SUBMITTING THEIR BID, WITH PARTICULAR ATTENTION TO ERRORS, OMISSIONS, CONFLICTS WITH PROVISIONS OF LAWS AND CODES HAVING JURISDICTION. CONFLICTS BETWEEN DRAWINGS OR DRAWINGS AND SPECIFICATIONS, AND AMBIGUOUS DEFINITION OF THE EXTENT OF COVERAGE BETWEEN CONTRACTS. ANY SUCH DISCREPANCY SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ARCHITECT FOR CORRECTION. SHOULD ANY OF THESE ERRORS, OMISSIONS, CONFLICTS, OR AMBIGUITIES EXIST IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING THEM BEFORE THE CONTRACT IS ADJUSTED IN WRITING BEFORE SIGNING THE CONTRACT OR PROCEEDING WITH THE WORK. OTHERWISE, THE CONTRACTOR SHALL, AT THEIR OWN EXPENSE, SUPPLY THE PROPER MATERIALS AND LABOR TO MAKE GOOD ANY DAMAGE OR DEFECTS IN THEIR WORK OR THE RESULTS OBTAINED THEREFROM, CAUSED BY SUCH DISCREPANCY.
4. WHEREVER CONFLICTS OCCUR BETWEEN DIFFERENT PARTS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL OBTAIN THE BETTER QUALITY, OR LARGER SIZE SHALL PREVAIL UNLESS THE ARCHITECT INFORMS THE CONTRACTOR OTHERWISE IN WRITING.
5. THE SCALE OF EACH DRAWING IS RELATIVELY ACCURATE; ANY DIMENSIONS SHOWN ARE APPROXIMATE TO CENTERLINE FROM ASSUMED BUILDING PERIMETER. THE CONTRACTOR SHALL OBTAIN THE NECESSARY DIMENSIONS FOR ANY EXACT TAKEOFFS FROM THE ARCHITECT. NO ADDITIONAL COST TO THE OWNER WILL BE CONSIDERED FOR FAILURE TO OBTAIN EXACT DIMENSIONS WHERE NOT CLEAR OR IN ERROR ON THE DRAWINGS. ANY DEVICE OR FIXTURE ROUGHED IN IMPROPERLY AND NOT POSITIONED ON IMPLIED CENTERLINES OR AS REQUIRED BY GOOD PRACTICE MUST BE REPOSITIONED AT NO COST TO THE OWNER.
6. ONLY EXPERIENCED CRAFTSMEN KNOWLEDGEABLE IN THEIR RESPECTIVE TRADES SHALL PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS.
7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPED EDITION OF NFPA STANDARD 70 (NATIONAL ELECTRICAL CODE). CONTRACTOR SHALL ALSO CONFORM TO ALL APPLICABLE LOCAL CODES AND AMENDMENTS.
8. UNLESS OTHERWISE INDICATED, ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND SHALL MEET NEMA AND ANSI STANDARDS. THEY SHALL ALSO BE LISTED OR LABELED BY A NATIONALLY RECOGNIZED LABORATORY IN ACCORDANCE WITH NFPA 70. EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND WITHIN THEIR LISTING/LABELING REQUIREMENTS AND RESTRICTIONS.
9. PROVIDE SHOP DRAWINGS FOR ENGINEER'S REVIEW FOR ALL ELECTRICAL EQUIPMENT, DEVICES, AND MATERIALS PROPOSED TO BE PROVIDED UNDER THIS CONTRACT. ANY DEVIATIONS FROM ITEMS SPECIFIED SHALL BE CLEARLY IDENTIFIED AND SEPARATELY SUBMITTED WITH A FORMAL SUBSTITUTION REQUEST. REFER TO SPECIFICATIONS (PROJECT MANUAL) FOR REQUIREMENTS.
10. PROVIDE MINIMUM 2-HOUR RATED FIRESTOPPING AT ALL ELECTRICAL PENETRATIONS THROUGH WALLS. REFER TO SPECIFICATION SECTION 078400 FIRESTOPPING. REFER TO 078400 SECTION 3.6 SCHEDULES FOR LIST OF ACCEPTABLE FIRESTOPPING ASSEMBLIES.

B. ELECTRICAL EQUIPMENT

- 1. PROVIDE AN IDENTIFICATION NAMEPLATE FOR EACH ELECTRICAL EQUIPMENT. APPURTENANCE DEPICTING THE DESIGNATION INDICATED ON THE DRAWINGS. REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
2. WEATHERPROOF ENCLOSURES SHALL BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT, DEVICES AND APPURTENANCES (ALL SYSTEMS) INSTALLED OUTDOORS.
3. COORDINATE AND SCHEDULE ALL POWER OUTAGES WITH OWNER. REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
4. SPACE ALLOCATIONS FOR MATERIALS, EQUIPMENT AND DEVICES HAVE BEEN MADE ON THE BASIS OF PRESENT AND KNOWN FUTURE REQUIREMENTS AND THE DIMENSIONS OF EQUIPMENT OR DEVICES OF A PARTICULAR MANUFACTURER. THE CONTRACTOR SHALL VERIFY THAT ALL MATERIALS, EQUIPMENT AND DEVICES PROPOSED FOR USE ON THIS PROJECT ARE WITHIN THE CONSTRAINTS OF THE ALLOCATED SPACE.
5. DO NOT USE PERMANENT INK WHEN MAKING FIELD MARKINGS OR TEMPORARY CIRCUIT LABELS ON PANELS. CONTRACTOR SHALL USE REMOVABLE MARKERS FOR ALL TEMPORARY MARKINGS AND SHALL REMOVE THESE TEMPORARY MARKINGS AT THE CONCLUSION OF THIS PROJECT.
6. THE SHORT CIRCUIT EQUIPMENT RATINGS WERE SELECTED BASED UPON OBSERVED CONDITIONS AND/OR INFORMATION PROVIDED BY USPS. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS OF THE ELECTRICAL EQUIPMENT PRIOR TO ORDERING EQUIPMENT AND THE COMMENCEMENT OF CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND NOTIFY THE ENGINEER AND OWNER IMMEDIATELY TO DETERMINE WHAT CHANGES NEED TO BE MADE.

- 7. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS OF THE ELECTRICAL EQUIPMENT PRIOR TO ORDERING EQUIPMENT AND THE COMMENCEMENT OF CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND NOTIFY THE ENGINEER AND OWNER IMMEDIATELY TO DETERMINE WHAT CHANGES NEED TO BE MADE.

C. SITE WORK

- 1. COORDINATE WITH THE SITE WORK FOR THE LOCATION, DIMENSIONS AND ELEVATION OF ALL DUCTBANKS/SERVICE CONDUITS EXTERNAL TO THE BUILDING PRIOR TO INSTALLATION OF ALL DUCTBANKS/SERVICE CONDUITS INTERNAL TO THE BUILDING.
2. COORDINATE ALL ELECTRICAL UTILITY SERVICE REQUIREMENTS WITH UTILITIES REPRESENTATIVE PRIOR TO COMMENCING ANY ELECTRICAL SITE WORK. CONTRACTOR SHALL SCHEDULE ALL NECESSARY MEETINGS BETWEEN UTILITY COMPANIES CONSTRUCTION FOREMAN, ELECTRICAL SUBCONTRACTORS, AND VARIOUS SUBCONTRACTORS RESPONSIBLE FOR SITE CONSTRUCTION PRIOR TO ELECTRICAL ROUGH-IN.
3. WHERE EXISTING WALLS ARE DEMOLISHED, REMOVE ALL EXISTING ELECTRICAL DEVICES AND THEIR ASSOCIATED CONDUITS AND WIRING BACK TO THE POINT OF ORIGIN. ENERGIZE ALL EXISTING DEVICES THAT WERE INTERRUPTED DURING DEMOLITION, WHERE ENTIRE CIRCUITS ARE REMOVED, TURN THE CIRCUIT BREAKER OFF AND LABEL AS "SPARE".
4. PROVIDE FOR ANY AND ALL DEMOLITION WORK NECESSARY TO ACCOMMODATE ALL NEW CONSTRUCTION, INCLUDING ARCHITECTURAL, MECHANICAL, PLUMBING OR ELECTRICAL WORK.
5. IF DEMOLITION IS REQUIRED TO INSTALL AN ITEM, THE CONTRACTOR SHALL RESTORE THE AREA TO PREVIOUS CONDITION, OR REPLACE DAMAGED ITEMS WITH NEW ITEMS TO MATCH EXISTING.
6. DESIGNATION 'EX' REPRESENTS EXISTING DEVICE OR LIGHT FIXTURE TO REMAIN AS CIRCUITED AND SWITCHED UNLESS NOTED OTHERWISE. EXISTING LIGHT FIXTURES SHALL BE CLEANED AND REPAIRED AS REQUIRED.
7. A DEVICE WITH AN 'X' INDICATES EXISTING DEVICE TO BE REMOVED INCLUDING ALL ASSOCIATED CONDUIT AND WIRING.
8. A DEVICE WITH AN 'R' INDICATES EXISTING DEVICE TO BE RELOCATED INCLUDING ALL ASSOCIATED CONDUIT AND WIRING.
9. CONTRACTOR SHALL REMOVE ALL CONDUIT AND WIRING ASSOCIATED WITH DEVICES AND EQUIPMENT TO BE REMOVED AND/OR RELOCATED UNLESS NOTED OTHERWISE. PROVIDE AND INSTALL ALL NECESSARY DEVICES, EQUIPMENT AND ACCESSORIES REQUIRED TO MAINTAIN SERVICE TO ALL 'EXISTING' TO REMAIN' DEVICES AND EQUIPMENT THAT MAY BE INTERRUPTED DURING DEMOLITION.
10. WHERE EXISTING MECHANICAL/PLUMBING EQUIPMENT IS DEMOLISHED, REMOVE ALL RELATED ELECTRICAL FEEDS TO THE EQUIPMENT AND THEIR ASSOCIATED CONDUITS BACK TO THE POINT OF ORIGIN.
11. REFER TO ARCHITECTURAL PLANS FOR AREAS WHERE CEILING IS DEMOLISHED. REMOVE ALL LIGHTING FIXTURES AND ASSOCIATED CONDUIT AND WIRING FROM THESE LOCATIONS.

D. CONDUIT & RACEWAY

- 1. ALL WORK SHALL BE COORDINATED SO THAT INTERFERENCES ARE AVOIDED. PROVIDE ALL NECESSARY OFFSETS IN CONDUITS, RACEWAYS, ETC., REQUIRED TO PROPERLY INSTALL THE WORK. EXPOSED WORK MUST BE AS CLOSE AS POSSIBLE TO WALLS, CEILINGS, COLUMNS, ETC., SO AS TO TAKE UP MINIMUM AMOUNT OF SPACE. ALL OFFSETS, FITTINGS, ETC., REQUIRED SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER. WORK SHALL BE COORDINATED WITH OTHER TRADES.
2. CONDUIT RUNS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR SIZING AND LOCATING PULL BOXES PER NFPA 70 AND FOR COORDINATION WITH OTHER DISCIPLINES.
3. PENETRATIONS OF WALLS, FLOORS, AND ROOFS FOR THE PASSAGE OF ELECTRICAL RACEWAYS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF WORK. ALL SUCH PENETRATIONS SHALL BE PROPERLY SEALED OFF AFTER INSTALLATION OF RACEWAY SO AS TO MAINTAIN THE STRUCTURAL, WATER PROOF, AND FIRE PROOF INTEGRITY OF THE WALL, FLOOR, OR ROOF SYSTEM PENETRATED.
4. SEAL ALL CONDUITS THAT PENETRATE THE FLOOR SLAB TO MAKE THEM WATER TIGHT. THE CONDUITS SHALL BE DRIED PRIOR TO INSTALLATION OF WIRE/CABLE AND SHALL BE SEALED AT TERMINATIONS.
5. ALL PENETRATIONS THROUGH FIRE RATED WALLS OR PARTITIONS SHALL BE MADE IN ACCORDANCE WITH U.L. "FIRE RESISTANCE DIRECTORY". PENETRATIONS SHALL BE SLEEVED AND SEALED WITH A UL APPROVED FIRE RATED SEALANT. REFER TO ARCHITECTURAL PLANS FOR FIRE RATED WALLS.
6. ALL EMPTY CONDUIT SYSTEMS SHALL CONTAIN A PULL WIRE FOR FUTURE PULLING OF CONDUCTORS.
7. OR FROM BUILDING CONTROL POWER DISTRIBUTION SYSTEM.

E. BRANCH CIRCUITS AND FEEDERS

- 1. CIRCUITING IS SHOWN DIAGRAMMATICALLY.
2. UNLESS OTHERWISE INDICATED, ALL CIRCUITS 100' OR LESS SHALL BE MINIMUM #12 AWG WIRE SIZE. CIRCUITS OVER 100' BUT LESS THAN 200' SHALL BE MINIMUM #10 AWG WIRE SIZE. CIRCUITS OVER 200' BUT LESS THAN 300' SHALL BE MINIMUM #8 AWG WIRE SIZE.
3. UNLESS OTHERWISE INDICATED, ALL CONDUCTORS SHALL BE COPPER, 98% CONDUCTIVITY CONTINUOUS FROM OUTLET TO OUTLET.
4. UNLESS OTHERWISE INDICATED, CONDUCTOR SIZES #12 AWG AND #10 AWG SHALL BE SOLID. CONDUCTOR SIZES #8 AWG AND LARGER MAY BE STRANDED.
5. A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE PULLED WITH THE CIRCUIT CONDUCTORS FOR GROUNDING WHETHER OR NOT INDICATED ON THE DRAWINGS. METAL RACEWAY, OR A CABLE ARMOR OR SHEATH SHALL NOT BE USED AS THE ONLY EQUIPMENT GROUNDING CONDUCTOR.
6. HOMERUN CIRCUITS FOR ISOLATED ROOM RECEPTACLES SHALL BE SEPARATED FROM OTHER CIRCUITS. EACH CIRCUIT SHALL HAVE ITS OWN NEUTRAL CONDUCTOR AND EACH HOMERUN SHALL CONTAIN AN ISOLATED AND EQUIPMENT GROUND CONDUCTOR.

F. WIRING DEVICES

- 1. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATION OF ALL CEILING ELEMENTS (LIGHTS, SPRINKLERS, DIFFUSERS, ETC.). ALL CEILING MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL DIMENSIONED DRAWINGS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL WALL/FLOOR MOUNTED ITEMS THAT ARE NOT SCALE OR DIMENSION LOCATIONS FROM THESE DRAWINGS.
2. COORDINATE THE LOCATION AND INSTALLATION DETAIL OF OUTLETS IN MILLWORK WITH ARCHITECTURAL DRAWINGS (WALL ELEVATIONS, MILLWORK DETAILS, ETC.) AND WITH MILLWORK MANUFACTURER PRIOR TO ELECTRICAL ROUGH-IN.
3. WALL AND FLOOR MOUNTED POWER RECEPTACLES SHOWN NEAR DATA OUTLETS SHALL BE LOCATED WITHIN SIX (6) INCHES OF THE DATA OUTLET. LOCATE AT SAME MOUNTING HEIGHT UNLESS NOTED OTHERWISE.
4. VERIFY THE EXACT POWER CONNECTION TYPE AND NEMA CONFIGURATION OF RECEPTACLES FOR EQUIPMENT FURNISHED BY THE OWNER, OTHER TRADES, OR UNDER A SEPARATE SECTION OF THIS CONTRACT PRIOR TO ELECTRICAL ROUGH-IN.
5. ALL RECEPTACLES LOCATED OUTSIDE THE BUILDING ENVELOPE SHALL BE HOUSED IN A WEATHERPROOF, WHILE-IN-USE' AND SHALL BE EQUIPPED WITH GFCI FOR PERSONNEL PROTECTION.
6. ALL GFCI RECEPTACLES SHALL BE CONNECTED SO THAT ALL DEVICES ON THE SAME CIRCUIT AS THE GFCI RECEPTACLE DO NOT DE-ENERGIZE UPON TRIPPING. ALL GFCI RECEPTACLES SHALL INCLUDE A LOCK-OUT FUNCTION TO PROTECT AGAINST THE USE OF MISWIRED DEVICES OR DEVICES THAT HAVE BEEN DAMAGED DUE TO DISABLING SURGES.

G. LIGHTING SYSTEM

- 1. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR LOCATION OF ALL CEILING ELEMENTS (LIGHTS, SPRINKLERS, DIFFUSERS, ETC.). ALL CEILING MOUNTED ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL DIMENSIONED DRAWINGS. IF LOCATION FOR AN ITEM IS NOT SHOWN ON THE ARCHITECTURAL DRAWINGS, VERIFY THE EXACT LOCATION OF THE ITEM WITH THE ARCHITECT PRIOR TO INSTALLATION. THESE REQUIREMENTS APPLY TO ALL CEILING TYPES IN ALL AREAS. DO NOT SCALE OR DIMENSION LOCATIONS FROM THESE DRAWINGS.
2. PROVIDE AND INSTALL ALL SUPPORTS FOR LIGHT FIXTURES. SUPPORTS SHALL BE INDEPENDENT OF THE CEILING GRID SUPPORT SYSTEM.
3. LIGHT SWITCHES SHALL BE OCCUPANCY SENSORS IN A ROOM SHALL CONTROL ALL THE LIGHT FIXTURES IN THAT ROOM UNLESS NOTED OTHERWISE. CONTRACTOR SHALL GANG TOGETHER ALL SWITCHES/DIMMERS UNDER A SINGLE COVER PLATE IN ALL AREAS THAT REQUIRE MORE THAN ONE SWITCH TO CONTROL ELECTRICAL DEVICES.
4. IN INSTANCES WHERE A TRACK LIGHTING SYSTEM, DIMMING SYSTEM, AND/OR LIGHTING CONTROL SYSTEM IS SPECIFIED, THE CONTRACTOR SHALL COORDINATE ALL NECESSARY ACCESSORIES (DIMMING SYSTEM(S) WITH THE MANUFACTURER PRIOR TO BID AND INCLUDE ALL NECESSARY ACCESSORIES TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM.

H. 2-POST LIFT COORDINATION

- 1. LIFTS MAY BE PROVIDED AS PART OF PROJECT SCOPE OR BY USPS. REVIEW DRAWINGS AND LIFT SCHEDULE FOR SITE SPECIFIC INFORMATION.
2. MINIMUM VERTICAL CLEARANCE ABOVE ALL LIFTS IS 15'-3".
3. COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE MINIMUM 15'-3" CLEARANCE ABOVE ALL NEW LIFTS, WHETHER LIFT(S) ARE PROVIDED AS PART OF SCOPE OF WORK FOR THE PROJECT OR PROVIDED BY OWNER. MAKE SAFE AND DISCONNECT ANY EQUIPMENT, DEVICES, LIGHTS, AND/OR CONDUIT WITH POTENTIAL FOR INTERFERENCE WITH CLEARANCE AREA THAT INTERFERES WITH 15'-3" MINIMUM VERTICAL CLEARANCE REQUIREMENT. COORDINATE WITH GENERAL CONTRACTOR TO SHIFT/ADJUST ANY ELECTRICAL DEVICE/EQUIPMENT/RACEWAY/WIRING/ELEMENT RUNNING ALONG VERTICAL CLEAR AREA BEYOND 15'-3".
4. ANY NEW LIGHTING, CONTROL, DEVICES, CONDUIT AND APPURTENANCES ROUTED AS PART OF THIS PROJECT SHALL NOT INTERFERE WITH VEHICLE LIFT CLEARANCE AREA.
5. REFER TO A500 FOR LIFT CLEARANCE DETAIL.
6. THIS SCOPE OF WORK DOES NOT APPLY TO ALIGNMENT LIFTS.

I. DEMO GENERAL NOTES

- 1. PROVIDE UPDATED, TYPE WRITTEN DIRECTORY OF ALL CORRECT DEVICES WITH LOAD DEFINITIONS FOR EACH PANEL BOARD. DIRECTORY SHALL BE LOCATED INSIDE PANEL DOOR.
2. INFORMATION PROVIDED ON THESE DRAWINGS HAVE BEEN TAKEN FROM DESIGN DRAWING AND FIELD OBSERVATIONS CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO PRICING AND COMMENCEMENT OF WORK.
3. WHERE EXISTING WALLS ARE DEMOLISHED, REMOVE ALL EXISTING ELECTRICAL DEVICES AND THEIR ASSOCIATED CONDUITS AND WIRING BACK TO THE POINT OF ORIGIN. ENERGIZE ALL EXISTING DEVICES THAT WERE INTERRUPTED DURING DEMOLITION, WHERE ENTIRE CIRCUITS ARE REMOVED, TURN THE CIRCUIT BREAKER OFF AND LABEL AS "SPARE".
4. PROVIDE FOR ANY AND ALL DEMOLITION WORK NECESSARY TO ACCOMMODATE ALL NEW CONSTRUCTION, INCLUDING ARCHITECTURAL, MECHANICAL, PLUMBING OR ELECTRICAL WORK.
5. IF DEMOLITION IS REQUIRED TO INSTALL AN ITEM, THE CONTRACTOR SHALL RESTORE THE AREA TO PREVIOUS CONDITION, OR REPLACE DAMAGED ITEMS WITH NEW ITEMS TO MATCH EXISTING.
6. DESIGNATION 'EX' REPRESENTS EXISTING DEVICE OR LIGHT FIXTURE TO REMAIN AS CIRCUITED AND SWITCHED UNLESS NOTED OTHERWISE. EXISTING LIGHT FIXTURES SHALL BE CLEANED AND REPAIRED AS REQUIRED.
7. A DEVICE WITH AN 'X' INDICATES EXISTING DEVICE TO BE REMOVED INCLUDING ALL ASSOCIATED CONDUIT AND WIRING.
8. A DEVICE WITH AN 'R' INDICATES EXISTING DEVICE TO BE RELOCATED INCLUDING ALL ASSOCIATED CONDUIT AND WIRING.
9. CONTRACTOR SHALL REMOVE ALL CONDUIT AND WIRING ASSOCIATED WITH DEVICES AND EQUIPMENT TO BE REMOVED AND/OR RELOCATED UNLESS NOTED OTHERWISE. PROVIDE AND INSTALL ALL NECESSARY DEVICES, EQUIPMENT AND ACCESSORIES REQUIRED TO MAINTAIN SERVICE TO ALL 'EXISTING' TO REMAIN' DEVICES AND EQUIPMENT THAT MAY BE INTERRUPTED DURING DEMOLITION.
10. WHERE EXISTING MECHANICAL/PLUMBING EQUIPMENT IS DEMOLISHED, REMOVE ALL RELATED ELECTRICAL FEEDS TO THE EQUIPMENT AND THEIR ASSOCIATED CONDUITS BACK TO THE POINT OF ORIGIN.
11. REFER TO ARCHITECTURAL PLANS FOR AREAS WHERE CEILING IS DEMOLISHED. REMOVE ALL LIGHTING FIXTURES AND ASSOCIATED CONDUIT AND WIRING FROM THESE LOCATIONS.

ELECTRICAL ABBREVIATIONS

Table with 2 columns: Symbol and Description. Includes abbreviations for AFC, AFF, AHJ, ATS, BFC, BOF, C, CB, C/B OR CKT BKR, C, C/B, C/B OR CKT BKR, C, C/B, C/B OR CKT BKR, C, C/B, C/B OR CKT BKR, C, C/B, C/B OR CKT BKR, etc.

POWER SYMBOLS LEGEND

Table with 3 columns: Symbol, Description, MNTG. HT. (U.N.O.). Includes symbols for SINGLE RECEPTACLE, DUPLEX RECEPTACLE, DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT, DUPLEX RECEPTACLE GFCI, etc.

GENERAL NOTATIONS AND MOUNTING HEIGHTS

NOTE 1: ALL MOUNTING HEIGHTS REFER TO BOTTOM OF DEVICE, UNLESS OTHERWISE INDICATED.
A) 24" AFF INDICATES TO BOTTOM OF DEVICE;
B) 42" AFF INDICATES TO CENTER OF DEVICE;
C) 60" AFF INDICATES TO BOTTOM OF DEVICE;
D) 80" AFF INDICATES TO BOTTOM OF DEVICE;

NOTE 2: CONFIRM ALL BACKBOX SIZE WITH VENDOR SHOP DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN.

LEGEND NOTES: DENOTES "SEE LEGEND NOTE NO. 2"

DENOTES: REFERENCE DETAIL 02 ON DRAWING (SHEET) E100

DENOTES: REFERENCE ENLARGED DETAIL PLAN 02 ON DRAWING (SHEET) E100

EQUIPMENT (ID) NUMBER FOR OWNER PROVIDED EQUIPMENT. REFER TO OWNER'S EQUIPMENT BOOK / FF&E DOCUMENTS FOR DEFINITION AND REQUIREMENTS.

CODES AND STANDARDS

Table with 2 columns: Year, Code Name. Includes WASHINGTON STATE BUILDING CODE, WASHINGTON STATE EXISTING BUILDING CODE, ICC/ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES DESIGN STANDARD, etc.

LIGHTING SYMBOLS LEGEND

Table with 3 columns: Symbol, Description, MNTG. HT. (U.N.O.). Includes symbols for 2x4' LIGHT FIXTURE, 2x4' LIGHT FIXTURE (EMERGENCY), 2x2' LIGHT FIXTURE, etc.

LIGHTING NOTES:

- 1. ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.
2. REFER TO LIGHT FIXTURE SCHEDULE FOR SPECIFIC FIXTURE INFORMATION.
3. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR MOUNTING HEIGHTS. IT IS THE INTENT, UNLESS NOTED OTHERWISE, THAT SURFACE AND RECESSED FIXTURES ARE TO BE MOUNTED AT ARCHITECT'S CEILING PLANE.
4. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS FOR MOUNTING HEIGHTS OF PENDANT FIXTURES. REFER TO LIGHTING FIXTURE SCHEDULE FOR PENDANT MATERIAL.
5. REFER TO ARCHITECTURAL DRAWINGS FOR TYPICAL MOUNTING HEIGHTS. WHERE MOUNTING HEIGHT IS NOT INDICATED BY ARCHITECT, PROVIDE AT 42" AFF TO CENTER.

OCCUPANCY SENSOR/CONTROLS SYMBOLS LEGEND

ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

Table with 3 columns: Symbol, Description, MNTG. HT. (U.N.O.). Includes symbols for OCCUPANCY SENSOR, DUAL TECHNOLOGY, OCCUPANCY SENSOR, ULTRASONIC, etc.

OCCUPANCY SENSOR/CONTROLS NOTES:

- 1. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT MOUNTING HEIGHTS OF ALL DEVICES.

SHEET INDEX

Table with 2 columns: Sheet Number, Sheet Name. Includes E001 ELECTRICAL GENERAL INFORMATION, ES100 ELECTRICAL SITE PLAN, ED100 ELECTRICAL DEMOLITION PLAN, etc.



**COPPER WIRE & CONDUIT SCHEDULE**

TAG	AMPACITY	PHASE		NEUTRAL		GROUND		CONDUIT	
		NO. WIRES	SIZE (AWG OR KCMIL)	NO. WIRES	SIZE (AWG/KCMIL)	NO. WIRES	SIZE (AWG/KCMIL)	QTY.	SIZE
80/2	80	2	#3	-	-	1	#8	1	1"
100/2	100	2	#2	-	-	1	#8	1	1 1/4"

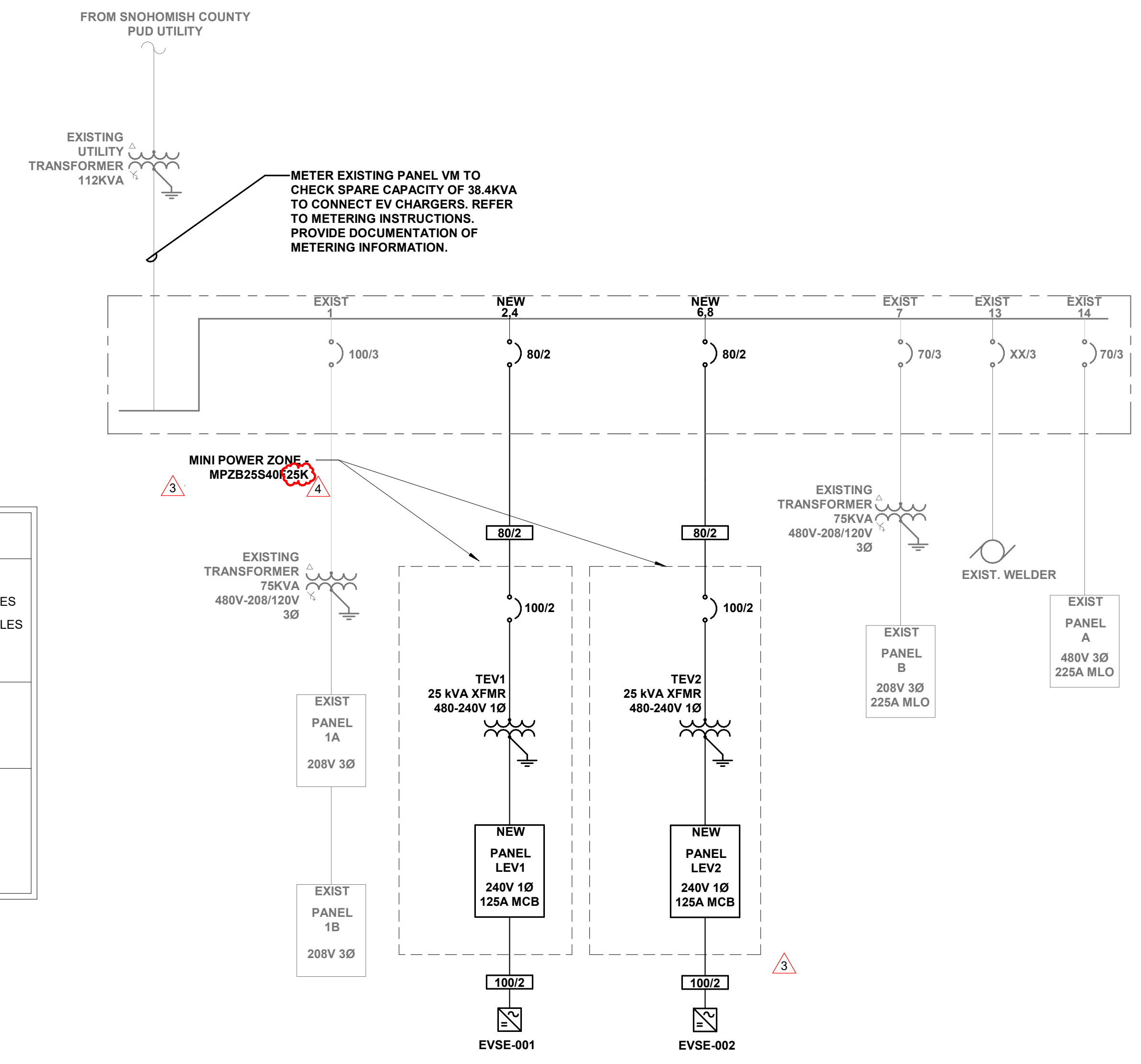
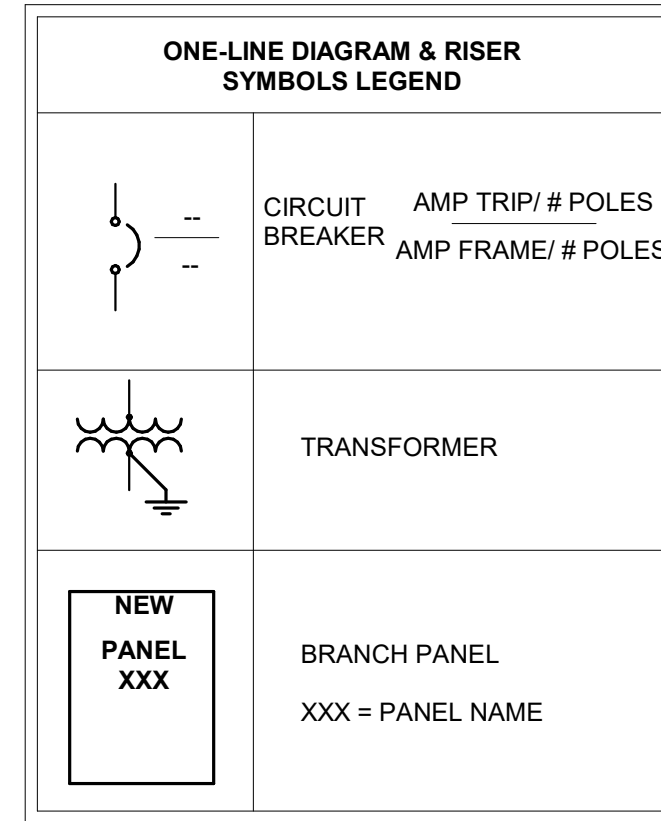
**NOTES:**

- SIZES BASED ON THWN CONDUCTORS AND PVC/EMT CONDUIT SIZES IN NEC TABLE 9. EXTERIOR CONDUCTORS SHALL BE 90° XHHW.
- AMPACITY BASED ON NEC.
- FEEDERS SERVING TRANSFORMERS DO NOT REQUIRE A GROUND. FOR TRANSFORMERS GEC, MATCH SIZE OF EGC SHOWN ON FEEDER SCHEDULE.
- COMPACT STRANDED ALUMINUM CONDUCTORS MAY BE USED FOR CONDUCTORS #1/0 AND LARGER IF EQUIPPED WITH COMPRESSION LUGS AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

**ELECTRICAL LOAD ANALYSIS  
(985- LYNNWOOD VMF)**

UTILITY PROVIDER	SNOHOMISH COUNTY PUD
UTILITY CONTACT	Karl Haack khaack@snohud.com 425 670 3208
VMF FED BY MAIN BUILDING	NO
EXISTING MAIN BUILDING TRANSFORMER SIZE (IF APPLICABLE)	150KVA
VMF DISTRIBUTION VOLTAGE	480/277V
EXISTING VMF TRANSFORMER SIZE	112 KVA
EXISTING VMF DISTRIBUTION SIZE (MCB)	400 A
VMF BUILDING CAPACITY (80% OF MCB)	320 A
EXISTING ELEC PEAK LOAD (AS PER UTILITY)	118 KW (BOTH BUILDINGS)
EXISTING PEAK LOAD MONTH	Sep-14
NEC EXISTING LOAD FACTOR OF 25% PEAK	29.5 KW
REMAINING CAPACITY	101.4 KW (BOTH BUILDINGS) EC HAS TO METER VMF PANEL-VM FOR SPARE CAPACITY
ADDED CHARGER LOAD	(2) CHARGERS AT 19,200 W EACH =38.4 KW (240V 1Ø)
UTILITY UPGRADE NEEDED	NO
FEEDER FROM MAIN BUILDING UPGRADE NEEDED (IF APPLICABLE)	NO
NOTES	PEAK CONSUMPTION INFORMATION OBTAINED FROM UTILITY

**NOTES:** SCOPE OF WORK IS RENOVATION OF EXISTING BUILDING. ONLY NEW/ADDED LOADS ARE SHOWN ON PANEL SCHEDULES. EXISTING LOAD VALUES ARE NOT KNOWN AND DEPICTED AS 0.



**1 ELECTRICAL ONE-LINE DIAGRAM**  
E400 SCALE: NTS

**TRANSFORMER SCHEDULE**

IDENTIFICATION	KVA	PRIMARY VOLTAGE	SECONDARY VOLTAGE	PHASE	MOUNTING STYLE	ENCLOSURE TYPE	LOCATION	K-RATING	WINDINGS	TEMPERATURE RISE RATING	NOTES
TEV1	25	480 V	240 V	1	STEEL STRUCTURE	NEMA 3R	EXTERIOR	STD	COPPER	115°C	
TEV2	25	480 V	240 V	1	STEEL STRUCTURE	NEMA 3R	EXTERIOR	STD	COPPER	115°C	

- NOTES:**
- STOCK OPTIONS HAVE BEEN SPECIFIED DUE TO CONSTRUCTION SCHEDULE. EQUIPMENT LEAD TIMES HAVE BEEN COORDINATED WITH SCHNEIDER FOR 22.5/25 KVA MINI POWER-ZONE INTEGRATED EQUIPMENT FOR EVSE SUPPORT. COORDINATE WITH SCHNEIDER ELECTRIC ON PROCUREMENT OF MINI POWER-ZONE FOR USPS VMF PROGRAM.
  - REFER TO CIVIL DRAWING DETAILS FOR MOUNTING INFORMATION.

**EVSE SCHEDULE**

EVSE #	EV KIT #	DESCRIPTION	LOCATION	PHASE	VOLTS	MAXIMUM CURRENT	ELECTRICAL OUTPUT (W)	CB RATING	POLES	FEEDER INFORMATION	REMARKS
EVSE-001	CP001	240V 1Ø - 80A (100A BREAKER)	EXTERIOR	1	240 V	80 A	19,200	100 A	2	LEV1	1,3
EVSE-002	CP001	240V 1Ø - 80A (100A BREAKER)	EXTERIOR	1	240 V	80 A	19,200	100 A	2	LEV2	1,3

**LIFTS ELECTRICAL REQUIREMENTS SCHEDULE**

NAME	DESCRIPTION	LOCATION	HP	VOLTAGE	PHASE	MCA	MOCP	ENCLOSURE TYPE	FURNISHED BY	INSTALLED BY	DISCONNECT		CONTROL DEVICE			FEEDER INFORMATION					REMARKS
											TYPE	SWITCH/ FUSE SIZE	LOCATION	FURNISHED BY	WIRED BY	TYPE	PANEL	CIRCUIT	(L.C.) QTY	LINE	

**OVERHEAD DOOR ELECTRICAL REQUIREMENT SCHEDULE**

NAME	DESCRIPTION	LOCATION	HP	VOLTAGE	PHASE	MCA	MOCP	ENCLOSURE TYPE	FURNISHED BY	INSTALLED BY	DISCONNECT		CONTROL DEVICE			FEEDER INFORMATION					REMARKS
											TYPE	SWITCH/ FUSE SIZE	LOCATION	FURNISHED BY	WIRED BY	TYPE	PANEL	CIRCUIT NUMBER	(L.C.) QTY	LINE	



LIGHTING FIXTURE SCHEDULE										
TYPE	COUNT	DESCRIPTION	MOUNTING	COLOR TEMP.	LUMENS	VA	VOLTAGE	MANUFACTURER	CATALOG NUMBER	
EM4	4	WALL MOUNTED EMERGENCY EXIT DISCHARGE LIGHT, SELF DIAGNOSTIC LITHIUM IRON PHOSPHATE BATTERY, FIELD CONFIGURABLE THROW OPTICS.	WALL-8" AFF	-	-	12	277 V	LITHONIA	AFFOELDWHGXDUVOLTLPDSRDTFCT	
MH3	7	WALL MOUNTED LED LIGHT, TYPE 4 DISTRIBUTION, WHITE FINISH, IP 65 RATED, WET LOCATION LISTED.	WALL-11" AFF	4,000K	2863	29	277 V	LITHONIA	MRWLED P2 40K SR4 MVOLT PIR DWXHD	
PL1	23	EXTERIOR SURFACE MOUNTED LED CANOPY LIGHTS, DIE CAST ALUMINUM HOUSING, TYPE 5 MEDIUM DISTRIBUTION, IP66 RATED, WET LOCATION LISTED.	SURFACE MOUNTED	4,000K	10092	107	277 V	LITHONIA	DSXSC LED 30C 1000 40K T5M MVOLT SRM PIR3FC3V DWXHD	
W3	25	2'X2' HIGH BAY SUSPENDED LED LIGHT, TEXTURED ACRYLIC LENS, WIDE DISTRIBUTION, SUPER DURABLE WHITE COLOR FINISH, DIE CAST ALUMINUM HOUSING, THERMOSET POWDER COAT FINISH, WET LOCATION LISTED, IP65 RATED.	CABLE- 18" AFF	4,000K	148690	97	277 V	LITHONIA	XIB L24 15000LM ATWD MVOLT GZ10 40K 80CRI WGX DHXWD	
W3E	5	2'X2' HIGH BAY SUSPENDED LED LIGHT, TEXTURED ACRYLIC LENS, WIDE DISTRIBUTION, SUPER DURABLE WHITE COLOR FINISH, DIE CAST ALUMINUM HOUSING, THERMOSET POWDER COAT FINISH, WET LOCATION LISTED, IP65 RATED. PROVIDE WITH SELF-DIAGNOSTIC BATTERY PACK.	CABLE- 18" AFF	4,000K	14860	97	277 V	LITHONIA	XIB L24 15000LM ATWD MVOLT GZ10 40K 80CRI NLTAIR2 RMSOD45 DHXWD E15WMCPC	
X1	6	SINGLE FACE WALL MOUNTED SELF POWERED AND SELF-DIAGNOSTICS LED EXIT LIGHT, WHITE HOUSING COLOR, RED COLORED LETTERS, NICKEL CADMIUM BATTERY.	ABOVE DOOR	N/A	N/A	1	277 V	LITHONIA	LOM S W 3 R 120/277 ELN SD	

**NOTES:**

- LIGHTING FIXTURE SCHEDULE IS BASIS OF DESIGN AND SUBSTITUTIONS BASED ON SPECIFICATIONS SECTION 26 51 00 IS ACCEPTABLE, HOWEVER, ANY SUBSTITUTES CHOSEN SHALL MEET CONSTRUCTION DEADLINE. CONTRACTOR SHALL REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- EC TO PROVIDE MOUNTING HARDWARE FOR WALL/CEILING/PENDENT MOUNT.
- PROVIDE WITH LUMINAIRE MOUNTED OCCUPANCY SENSORS AS PER SCHEDULE.

LIGHTING CONTROL DEVICE SCHEDULE			
DESCRIPTION	MANUFACTURER	MODEL	COUNT
OVERRIDE MANUAL SWITCH	nLIGHT ACUITY	nPOD KEY	1
PHOTOCELL	INTERMATIC OR TORK	K4141C OR 2002	1
TIME CLOCK	INTERMATIC OR TORK	ET70000 OR ELC SERIES	1
TIME SWITCH	nLIGHT ACUITY	nPOD MA 2L	5

LIGHTING CONTROL SCHEDULE IS BASIS OF DESIGN AND SUBSTITUTIONS BASED ON SPECIFICATIONS SECTION 26 08 23 IS ACCEPTABLE, HOWEVER, ANY SUBSTITUTES CHOSEN SHALL MEET CONSTRUCTION DEADLINE. CONTRACTOR SHALL REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

LIGHTING CONTROL REQUIREMENTS AND SEQUENCE OF OPERATIONS												
TAG	SPACE TYPE	NORMAL BUSINESS HOURS		AFTER BUSINESS HOURS		CONTROL SYSTEM TYPE	OCCUPANCY SENSOR		PHOTOCELL CONTROL	MANUAL OVERRIDE		EMERGENCY FIXTURES CONTROLLED
		LIGHTING	RECEPTACLES	LIGHTING	RECEPTACLES		TYPE / LOCATION	SETPPOINT		DEVICE	DURATION	
01	VEHICLE SERVICE BAY	OCCUPANCY SENSOR ACTIVATES TO 50%. OFF AFTER 20 MINUTES OF INACTIVITY	N/A	NO CHANGE	N/A	STANDALONE	DUAL-TECH / INTEGRAL	AUTO ON TO 50% / OFF IN 20 MIN	N/A	TIMER SWITCH - HIGH OUTPUT	4 HRS	NO
03	WASH BAY	OCCUPANCY SENSOR ACTIVATES TO 50%. OFF AFTER 20 MINUTES OF INACTIVITY	N/A	NO CHANGE	N/A	STANDALONE	DUAL-TECH / INTEGRAL	AUTO ON TO 50% / OFF IN 20 MIN	N/A	TIMER SWITCH - HIGH OUTPUT	4 HRS	NO
04	EXTERIOR LIGHTING	CONTROLLED VIA PHOTOCELL ONLY	N/A	FOR THE TIME BETWEEN 1 HOUR AFTER BUSINESS HOURS AND 1 HOUR PRIOR TO BUSINESS HOURS; CONTROLLED BY PHOTOCELL AND OCCUPANCY SENSOR	N/A	STANDALONE	TIME CLOCK/PHOTOCELL/ OCCUPANCY SENSOR	AUTO ON TO 100% / OFF IN 20 MIN	YES	ON/OFF VIA ASTRONOMICAL TIME CLOCK, PHOTOCELL, AND OCCUPANCY CONTROLS	OFF HOURS	N/A
05	EXTERIOR CANOPY	CONTROLLED VIA PHOTOCELL ONLY	N/A	FOR THE TIME BETWEEN 1 HOUR AFTER BUSINESS HOURS AND 1 HOUR PRIOR TO BUSINESS HOURS; CONTROLLED BY PHOTOCELL AND OCCUPANCY SENSOR	N/A	STANDALONE	TIME CLOCK/PHOTOCELL/ OCCUPANCY SENSOR	AUTO ON TO 100% / OFF IN 20 MIN	YES	ON/OFF VIA ASTRONOMICAL TIME CLOCK, PHOTOCELL, AND OCCUPANCY CONTROLS	OFF HOURS	N/A

**NOTES:**

- SETPPOINTS AND TIME SCHEDULES MUST BE VERIFIED WITH OWNER PRIOR TO PROGRAMMING.
- PROVIDE QUANTITY AND COVERAGE PATTERN OF OCCUPANCY/VACANCY SENSORS WHERE REQUIRED BY THIS SCHEDULE TO COVER ENTIRE ROOM/SPACE CONTROLLED. QUANTITY AND LOCATION OF SENSORS INDICATED ON DRAWINGS IS FOR COORDINATION AND PRICING PURPOSES, AND SHALL BE VERIFIED BY SELECTED MANUFACTURER PRIOR TO SUBMISSION OF SHOP DRAWINGS.
- PROVIDE NUMBER OF RELAYS/POWER PACKS TO CONTROL ALL LIGHTING ZONES AND CIRCUITS SHOWN ON PLANS.
- PROVIDE UNSWITCHED HOT CONDUCTOR TO FIXTURES WITH INTEGRAL BATTERY PACKS TO SENSE POWER LOSS.
- NO DAYLIGHTING IS PROVIDED IN THIS PROJECT DUE TO DISTANCE OF CEILING GRIDS/LIGHT FIXTURES FROM WINDOWS.
- WASH BAYS WHICH HAVE LIFTS INSTALLED ARE CONSIDERED TO HAVE BEEN REPURPOSED INTO VEHICLE SERVICE BAYS. ENVIRONMENT IS CONSIDERED TO BE THE SAME AS VEHICLE SERVICE BAYS.
- WIRELESS CONTROLS ENCOURAGED FOR WORK BAY HIGH BAY FIXTURES. PROVIDE HEAD END EQUIPMENT, POWER TO EQUIPMENT, AND PROGRAMMING AS NECESSARY TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
- EACH MANUAL COUNTDOWN TIMER MUST BE DIGITAL TYPE MOUNTED AT 48" AFF TO ALLOW FOR LIGHTING FOR THE HIGH OUTPUT LEVEL ILLUMINATION ZONE TO BE ENERGIZED FOR UP TO (4) HOURS WITH OCCUPANCY DETECTION. SWITCH MUST BE LABELED FOR IDENTIFICATION AS DIRECTED BY USPS PERSONNEL.

NEW: LEV2									
LOCATION: EXTERIOR					FED FROM: TEV2				
WIRES: 2W + G					ENCLOSURE: NEMA 3R				
MAIN BUS: 125 A					BUS TYPE: COPPER				
MCB: 125A					MOUNTING: STEEL STRUCTURE				
VOLTAGE: 120/240V Single					PANEL LUGS: MCB				
NEUTRAL BUS: NO					GROUND BUS: YES				
AIC AVAILABLE:					AIC RATING: 18000 A				
CKT NO.	DESCRIPTION	TRIP	POLES	A (VA)	B (VA)	POLES	TRIP	DESCRIPTION	CKT NO.
1	EVSE-002	100 A	2	9600	--	1	--	SPACE	2
3		--	1	--	9600	--	1	SPACE	4
5	SPACE	--	--	--	--	1	--	SPACE	6
				TOTAL LOAD (VA)	9,600 VA	9,600 VA			
				TOTAL CURRENT (AMPS)	80.0 A	80.0 A			
LOAD CLASSIFICATION		CONNECTED LOAD (VA)		ESTIMATED DEMAND (VA)		PANEL TOTALS			
EV CHARGER		19,200		19,200		KVA		AMPS	
						TOTAL CONNECTED LOAD:		19.2 80	
						TOTAL ESTIMATED DEMAND:		19.2 80	

**NOTES:**

NEW: LEV1									
LOCATION: EXTERIOR					FED FROM: TEV1				
WIRES: 2W + G					ENCLOSURE: NEMA 3R				
MAIN BUS: 125 A					BUS TYPE: COPPER				
MCB: 125A					MOUNTING: STEEL STRUCTURE				
VOLTAGE: 120/240V Single					PANEL LUGS: MCB				
NEUTRAL BUS: NO					GROUND BUS: YES				
AIC AVAILABLE:					AIC RATING: 18000 A				
CKT NO.	DESCRIPTION	TRIP	POLES	A (VA)	B (VA)	POLES	TRIP	DESCRIPTION	CKT NO.
1	EVSE-001	100 A	2	9600	--	1	--	SPACE	2
3		--	1	--	9600	--	1	SPACE	4
5	SPACE	--	--	--	--	1	--	SPACE	6
				TOTAL LOAD (VA)	9,600 VA	9,600 VA			
				TOTAL CURRENT (AMPS)	80.0 A	80.0 A			
LOAD CLASSIFICATION		CONNECTED LOAD (VA)		ESTIMATED DEMAND (VA)		PANEL TOTALS			
EV CHARGER		19,200		19,200		KVA		AMPS	
						TOTAL CONNECTED LOAD:		19.2 80	
						TOTAL ESTIMATED DEMAND:		19.2 80	

**NOTES:**

EXISTING: PANEL VM										
LOCATION: HALLWAY 108					FED FROM: T-UTILITY					
WIRES: 4W + G					ENCLOSURE: NEMA 1					
MAIN BUS: 400 A					BUS TYPE: COPPER					
MCB: N/A					MOUNTING: SURFACE					
VOLTAGE: 480/277V WYE					PANEL LUGS: MLO					
NEUTRAL BUS: YES					GROUND BUS: YES					
AIC AVAILABLE:					AIC RATING: MIN 18KA					
CKT NO.	DESCRIPTION	TRIP	POLES	A (VA)	B (VA)	C (VA)	POLES	TRIP	DESCRIPTION	CKT NO.
1	EXIST. PANEL 1A&1B XFMR	100	3	0	9600		2	80	TEV1 (NOTE-1)	2
3	75KVA			0	9600		2	80	TEV2 (NOTE-1)	4
5				0	9600		1	--	SPACE (NOTE-2)	6
7				0	--		1	--	SPACE (NOTE-2)	8
9	EXIST. PANEL B VIA T-B	70	3				3	70	EXIST. PANEL A	10
11				0	--		1	--	SPACE (NOTE-2)	12
13				--	0					14
15	EXIST. WELDER	--	3	--	2664					16
17				19,200 VA	12,264 VA	12,539 VA		2939		18
				TOTAL LOAD (VA)	89.5 A	44.3 A	45.4 A			
				TOTAL CURRENT (AMPS)						
LOAD CLASSIFICATION		ADDED LOAD (VA)		ADDED ESTIMATED DEMAND (VA)		PANEL TOTALS				
LGHT		5,603		5,603		KVA		AMPS		
EV CHARGER		38,400		38,400		EXISTING CONNECTED LOAD:		TBD TBD		
						REMOVED CONNECTED LOAD:		TBD TBD		
						TOTAL ADDED LOAD:		44 52.9		
						TOTAL ADDED ESTIMATED DEMAND:		44 52.9		

**NOTES:**

- PROVIDE 80A/2P CIRCUIT BREAKER IN EXISTING SPARE/SPACE
- REMOVE EXISTING SPARE BREAKER ON CIRCUIT 8,10,12 AND LEAVE CIRCUIT 10 AND 12 AS SPACE.

EXISTING: PANEL A										
LOCATION: HALLWAY 108					FED FROM: PANEL VM					
WIRES: 4W + G					ENCLOSURE: NEMA 1					
MAIN BUS: 225 A					BUS TYPE: COPPER					
MCB: N/A					MOUNTING: RECESSED					
VOLTAGE: 480/277V WYE					PANEL LUGS: MLO					
NEUTRAL BUS: YES					GROUND BUS: YES					
AIC AVAILABLE:					AIC RATING: MIN 18KA					
CKT NO.	DESCRIPTION	TRIP	POLES	A (VA)	B (VA)	C (VA)	POLES	TRIP	DESCRIPTION	CKT NO.
1	EXIST. LUBE ROOM LIGHTS	20	1	0	0		1	20	EXIST. BALCONY LIGHTS	2
3	EXIST. LUBE ROOM LIGHTS	20	1	0	0	0	2664		EXIST. CANOPY LGT (NOTE-1)	4
5	EXIST. LUBE ROOM LIGHTS	20	1				0	0	EXIST. OFFICE & HALL LTS	6
7				0	0					8
9	EXIST. HYD PUMP & AIR COMP	40	3				0	0	EXIST. HOT WATER TANK	10
11				0	0					12
13				0	0					14
15	EXIST. AIR HAND UNIT & AIR COMP	20	3				0	0	EXIST. GAS ISLAND POLE LIGHT	16
17				0	0					18
19				0	0					20
21	EXIST. VEHICLE EXHAUST FAN	20	3				0	0	EXISTING LOAD	22
23				0	0					24
25	EXISTING LOAD	20	1	0	0				EXIST. GAS ISLAND FLOOD...	26
27	EXISTING LOAD	20	1	0	0				EXISTING LOAD	28
29	EXISTING LOAD	20	1				0	2939	LTG-ROOMS 101&102 (NOTE-2)	30
				TOTAL LOAD (VA)	0 VA	2,664 VA	0	2939		
				TOTAL CURRENT (AMPS)	0.0 A	11.1 A	0.0 A	12.1 A		
LOAD CLASSIFICATION		ADDED LOAD (VA)		ADDED ESTIMATED DEMAND (VA)		PANEL TOTALS				
LGHT		5,603		5,603		KVA		AMPS		
						EXISTING CONNECTED LOAD:		TBD TBD		
						REMOVED CONNECTED LOAD:		TBD TBD		
						TOTAL ADDED LOAD:		5.6 6.7		
						TOTAL ADDED ESTIMATED DEMAND:		5.6 6.7		

**NOTES:**

- DEMO EXISTING CIRCUIT. CONDUITS AND CONNECT NEW LIGHTING TO THE EXISTING CIRCUIT BREAKER.
- PROVIDE 20A/1P CIRCUIT BREAKER IN EXISTING SPACE.