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, 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, THE CONTRACTOR SHALL HAVE THEM EXPLAINED AND 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 GREATER QUANTITY, 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 CENTER-LINES OR AS REQUIRED BY GOOD PRACTICE MUST BE REPOSITIONED AT NO COST TO THE OWNER.
6. ONLY EXPERIENCED CRAFTSMEN KNOWLEDGEABLE IN THEIR RESPECTIVE TRADE SHALL PERFORM THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS.
7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED 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/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 ITEMS 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 TAPE/TAGS FOR ALL TEMPORARY MARKINGS AND SHALL REMOVE THESE TEMPORARY MARKINGS AT THE CONCLUSION OF THIS PROJECT. △3
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. △4

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.

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 KEPT 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 GROUND 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 AND MOUNTING HEIGHT OF ALL WALL AND FLOOR MOUNTED ELEMENTS (OUTLETS, LIGHT SWITCHES, CONTROLLERS, POKE-THRU, ETC). ALL WALL/FLOOR 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 TYPES IN ALL AREAS. DO 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 ENCLOSURES THAT ARE RATED 'WEATHER-PROOF-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 / OCCUPANCY SENSORS LOCATED 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 COMPONENTS OF SUCH 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. REFER TO ARCHITECTURAL DRAWINGS FOR MINIMUM VERTICAL CLEARANCE.
3. COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE MINIMUM VERTICAL 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 POWER RUNNING ALONG LIFT VEHICLE CLEARANCE AREA THAT INTERFERES WITH MINIMUM VERTICAL CLEARANCE REQUIREMENT. COORDINATE WITH GENERAL CONTRACTOR TO SHIFT/ADJUST ANY ELECTRICAL DEVICE/EQUIPMENT/RACEWAY/ WIRING/ELEMENT RUNNING ALONG VERTICAL CLEAR AREA BEYOND MINIMUM VERTICAL CLEARANCE. △5
4. ANY NEW LIGHTING, CONTROLS, POWER, CONDUIT AND APPURTENANCES ROUTED AS PART OF THE PROJECT SHALL NOT INTERFERE WITH VEHICLE LIFT CLEARANCE AREA.
5. REFER TO ARCHITECTURAL DRAWINGS FOR LIFT CLEARANCE DETAIL.
6. THIS SCOPE OF WORK DOES NOT APPLY TO ALIGNMENT LIFTS.

J. DEMO GENERAL NOTES

1. PROVIDE UPDATED, TYPE WRITTEN DIRECTORY OF ALL CORRECT CIRCUITS 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 ORIGINATION. 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 ORIGINATION.
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

AFC	ABOVE FINISHED COUNTER
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
ATS	AUTOMATIC TRANSFER SWITCH
BFC	BELOW FINISHED CEILING
BOF	BOTTOM OF FIXTURE
C	CONDUIT
CB,C/B OR CKT BKR	CIRCUIT BREAKER
CKT	CIRCUIT
CCTV	CLOSED CIRCUIT T.V.
CLG	CEILING
CR	CRITICAL (EMERGENCY SYSTEM)
CUH	CABINET HEATER
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRIC
E	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EP	EXPLOSION PROOF
EVSE	ELECTRIC VEHICLE SUPPLY EQUIPMENT
EWC	ELECTRIC WATER COOLER
EX	EXISTING
F	FUSE
FA	FIRE ALARM
FACP, FAP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FLR	FLOOR
FLUOR	FLUORESCENT
FTP, FTS OR FTU	FAN TERMINAL UNIT
FUT	FUTURE
G, GND	GROUND (EQUIPMENT)
GEF	GENERAL EXHAUST FAN
GEN	GENERATOR
GFCI, GFI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSE POWER
HV	HIGH VOLTAGE
HWAT	HEAT TRACE
IC	INTERRUPTING CAPACITY
ICAND	INCANDESCENT
IG	ISOLATED GROUND
IGF	GROUND FAULT INDICATION ONLY
JB	JUNCTION BOX
KEF	KITCHEN EXHAUST FAN
LTG	LIGHTING
LTS	LIGHTS
LV	LOW VOLTAGE
MATV	MASTER ANTENNA
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MH	MANHOLE
MLO	MAIN LUGS ONLY
MTD	MOUNT OR MOUNTED
MW	MICROWAVE
N	NEW DEVICE
NC (N.C.)	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NONFUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO (N.O.)	NORMALLY OPEN
OH	OVERHEAD
PB	PULL BOX
PLGMLD	PLUGMOLD
PNL	PANEL
PWR	POWER
R	RELOCATED DEVICE
RCPT(S) OR RECEPT	RECEPTACLE(S)
REF	REFRIGERATOR
RF	RETURN AIR FAN
SEF	SMOKE EXHAUST FAN
SF	SUPPLY AIR FAN
SO (S.O.)	SPACE ONLY
SP	SPARE
ST (S.T.)	SHUNT TRIP
SW	SWITCH
TEL	TELEPHONE
TF	TRANSFER FAN
TP	TAMPER PROOF
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
UF	UNDERFLOOR
UG	UNDERGROUND
UH	UNIT HEATER
UNK (U.N.K.)	UNKNOWN
UNO (U.N.O.)	UNLESS NOTED OR INDICATED OTHERWISE
V	VOLTAGE
VFD	VARIABLE FREQUENCY DRIVE
VMFEV	VEHICLE MAINTENANCE FACILITY ELECTRIC VEHICLE.
VP	VAPOR PROOF
VV	VARIABLE VOLUME UNIT
W	WIRE
W/	WITH
WG	WIRE GUARD
WP	WEATHER PROOF
WT	WATER TIGHT
XFMR	TRANSFORMER MOUNTING
+xx	HEIGHT IN INCHES. AFF UNO.
UCR	UNDER CABINET REFRIGERATOR

POWER SYMBOLS LEGEND

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

SYMBOL	DESCRIPTION	MNTG. HT. (U.N.O.)
⊖	SINGLE RECEPTACLE - 20A/125V/2P/3W/G NEMA 5-20R	24" AFF
⊜	DUPLEX RECEPTACLE - 20A/125V/2P/3W/G NEMA 5-20R	24" AFF
⊜	DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT	24" AFF
⊟	DUPLEX RECEPTACLE GFCI	24" AFF
⊖WP	DUPLEX RECEPTACLE, GFCI, TAMPER RESISTANT, WEATHER RESISTANT, HOUSED IN A "WEATHERPROOF-WHILE-IN-USE" ENCLOSURE - 20A/125V/2P/3W/G NEMA 5-20R	24" AFF
⊜	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTERTOP	6" AFC OR 44" AFF
⊕	QUADRUPLEX RECEPTACLE (TWO DUPLEX RECEPTACLES UNDER ONE COVERPLATE)	24" AFF
⊕	QUADRUPLEX RECEPTACLE ON EMERGENCY CIRCUIT (TWO DUPLEX RECEPTACLES UNDER ONE COVERPLATE)	24" AFF
⊗	SPECIAL PURPOSE RECEPTACLE (NEMA AS INDICATED)	24" AFF
⊙	FLOOR MOUNTED RECEPTACLE IN FLOOR BOX OR POKE-THRU DEVICE - FLUSH MOUNTED, UNO	24" AFF
⊙	CEILING MOUNTED RECEPTACLE - CONFIGURATION UNO	24" AFF
Ⓙ Ⓙ	JUNCTION BOX - SIZE & MOUNTING AS REQUIRED	24" AFF
ⒿD/T	WALL MOUNTED JUNCTION BOX FOR DATA/TELEPHONE - SIZE & MOUNTING AS REQUIRED	FLOOR
◪	POWER POLE	CLNG
▭	PLUGMOLD	AS REQ'D
☐X/Y/Z	DISCONNECT SWITCH (X=FRAME SIZE, Y=FUSE SIZE, Z=NUMBER OF POLES)	≤ 6' - 0" AFF TO TOP
☐X/-/Z	DISCONNECT SWITCH NON-FUSED (X=FRAME SIZE, Z=NUMBER OF POLES)	≤ 6' - 0" AFF TO TOP
$M	MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD AND PILOT LIGHT	AS REQ'D
⍑	EMERGENCY POWER OFF BUTTON - WALL MOUNTED	AS REQ'D
◩	208Y/120V PANELBOARD	≤ 6' - 0" AFF TO TOP
▬	480Y/277V PANELBOARD	≤ 6' - 0" AFF TO TOP
▧	208Y/120V DISTRIBUTION PANELBOARD	≤ 6' - 0" AFF TO TOP
▩	480Y/277V DISTRIBUTION PANELBOARD	≤ 6' - 0" AFF TO TOP
▥	SWITCHBOARD	--
T	STEP-DOWN TRANSFORMER	--
▷	AUTOMATIC TRANSFER SWITCH	--
⏚	GROUND BAR	
ATS	AUTOMATIC TRANSFER SWITCH ANNUNCIATOR PANEL	AS REQ'D

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.

⟨2⟩ - LEGEND NOTES: DENOTES "SEE LEGEND NOTE NO. 2"

02/E100 - DENOTES: REFERENCE DETAIL 02 ON DRAWING (SHEET) E100

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

717629 OR 717629 - EQUIPMENT (ID) NUMBER FOR OWNER PROVIDED EQUIPMENT. REFER TO OWNER'S EQUIPMENT BOOK / FF&E DOCUMENTS FOR DEFINITION AND REQUIREMENTS.

CODES AND STANDARDS

2018	WASHINGTON STATE BUILDING CODE
2018	WASHINGTON STATE EXISTING BUILDING CODE
2009	ICC/ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES DESIGN STANDARD
2018	INTERNATIONAL ENERGY CONSERVATION CODE (IECC) WITH STATE AMENDMENTS
2018	WASHINGTON STATE MECHANICAL CODE
2018	FUEL GAS CODE OF WASHINGTON
2018	WASHINGTON STATE PLUMBING CODE
2020	NATIONAL ELECTRIC CODE (NEC / NFPA 70)
2018	INTERNATIONAL FIRE CODE (IFC)
2005	USPS STANDARDS FOR FACILITY ACCESSIBILITY (RE-4)
2023	USPS STANDARDS DESIGN CRITERIA
2009	USPS BUILDING AND SITE SECURITY REQUIREMENTS HANDBOOK RE-5

LIGHTING SYMBOLS LEGEND

SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.

SYMBOL	DESCRIPTION	MNTG. HT. (U.N.O.)
▭	2'x4' LIGHT FIXTURE	NOTE 3
▨	2'x4' LIGHT FIXTURE (EMERGENCY)	NOTE 3
☐	2'x2' LIGHT FIXTURE	NOTE 3
▨	2'x2' LIGHT FIXTURE (EMERGENCY)	NOTE 3
▭	WALL MOUNTED LINEAR FIXTURE	NOTE 2
▨	WALL MOUNTED LINEAR FIXTURE (EMERGENCY)	NOTE 2
▭	RECESSED/SURFACE MOUNTED LINEAR FIXTURE	NOTE 3
▨	RECESSED/SURFACE MOUNTED LINEAR FIXTURE (EMERGENCY)	NOTE 3
○ ☐	RECESSED/SURFACE DOWNLIGHT FIXTURE	NOTE 3
⊘ ▨	RECESSED/SURFACE DOWNLIGHT FIXTURE (EMERGENCY)	NOTE 3
○ ☐	WALL MOUNTED FIXTURE	NOTE 2
⊘ ▨	WALL MOUNTED FIXTURE (EMERGENCY)	NOTE 2
◑	RECESSED DOWNLIGHT FIXTURE WITH WALL WASH	NOTE 3
◑	RECESSED DOWNLIGHT FIXTURE WITH WALL WASH (EMERGENCY)	NOTE 3
▭	HANGING RECTANGULAR PENDANT FIXTURE	NOTE 4
▨	HANGING RECTANGULAR PENDANT FIXTURE (EMERGENCY)	NOTE 4
○	HANGING CIRCULAR PENDANT FIXTURE	NOTE 4
⊘	HANGING CIRCULAR PENDANT FIXTURE (EMERGENCY)	NOTE 4
⍽	EMERGENCY LIGHTING UNIT. WALL MOUNTED BATTERY-POWERED LIGHTING. CONNECT TO NORMAL CIRCUIT IN AREA SERVED	7'-6" A.F.F. U.N.O.
⊗ ⊗ ⊗	CEILING MOUNTED EXIT SIGN. SHADING INDICATES DOUBLE OR SINGLE FACE. ARROW INDICATES CHEVRON DIRECTIONS.	NOTE 2
⊗ ⊗ ⊗	END MOUNTED EXIT SIGN. SHADING INDICATES DOUBLE OR SINGLE FACE. ARROW INDICATES CHEVRON DIRECTIONS.	NOTE 2
⊗ ⊗	WALL MOUNTED EXIT SIGN. SHADING INDICATES DOUBLE OR SINGLE FACE. ARROW INDICATES CHEVRON DIRECTIONS.	NOTE 2
☐	WALL PACK LIGHT FIXTURE	NOTE 2
▨	WALL PACK LIGHT FIXTURE (EMERGENCY)	NOTE 2
○—☼	EXTERIOR LIGHT POLE FIXTURE ON NORMAL CIRCUIT.	NOTE 2
!	SPOT/FLOOD LIGHT FIXTURE.	--
$	WALL SWITCH SPST, 20A, 120/277V	NOTE 5
$D	WALL DIMMER SWITCH	NOTE 5
$K	KEY OPERATED WALL SWITCH	NOTE 5
$LV	LOW VOLTAGE WALL SWITCH	NOTE 5
$P	WALL SWITCH WITH PILOT LIGHT	NOTE 5
$T	WALL SWITCH WITH ADJUSTABLE COUNTDOWN TIMER	NOTE 5

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 ARCHITECTS 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.

SYMBOL	DESCRIPTION	MNTG. HT. (U.N.O.)
⬡OS	OCCUPANCY SENSOR, DUAL TECHNOLOGY	CLNG
⬡OS US	OCCUPANCY SENSOR, ULTRASONIC	CLNG
⬡VS DT	VACANCY SENSOR, DUAL TECHNOLOGY	CLNG
$O	WALL SWITCH OCCUPANCY SENSOR CONTROL	NOTE 1
$OT	WALL TIMER SWITCH OCCUPANCY SENSOR CONTROL	NOTE 1
$V	WALL SWITCH VACANCY SENSOR CONTROL	NOTE 1

OCCUPANCY SENSOR/CONTROLS NOTES:

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

SHEET INDEX

Sheet Number	Sheet Name
E001	ELECTRICAL GENERAL INFORMATION
ES100	ELECTRICAL SITE PLAN
ED100	ELECTRICAL DEMOLITION PLAN
E100	ELECTRICAL POWER & LIGHTING PLANS
E400	ELECTRICAL ONE-LINE DIAGRAM
E401	ELECTRICAL SCHEDULES
E500	ELECTRICAL DETAILS
△1 E501	ELECTRICAL DETAILS

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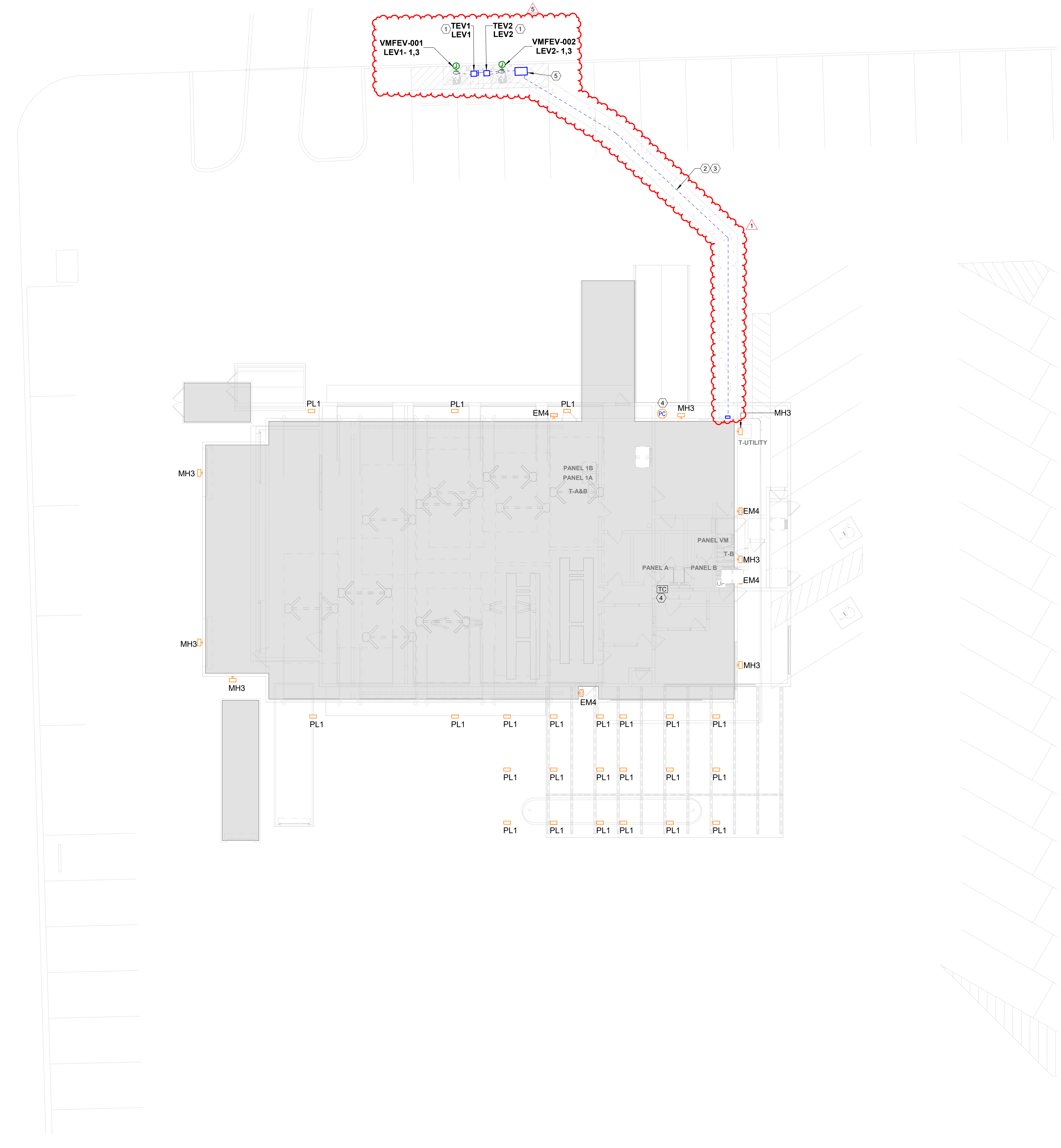

1 ES100 ELECTRICAL SITE PLAN

SCALE: 1" = 10'-0"

GENERAL NOTES

A. REFER TO E001 FOR SYMBOLS LEGEND.

B. PROTECT EXISTING TO REMAIN CONDITIONS FROM DAMAGE DURING DEMOLITION AND/OR NEW CONSTRUCTION OPERATIONS.

C. EXISTING CIRCUITING TO REMAIN SHALL BE RECONNECTED AS REQUIRED WHERE AFFECTED BY DEMOLITION OR NEW WORK TO MAINTAIN THE CONTINUITY OF THE CIRCUIT.

D. ROUTING SHOWN ON PLANS DOES NOT ACCOUNT FOR EXISTING UTILITIES OR RACEWAYS THAT MAY BE PRESENT. COORDINATE ALL EXCAVATION WITH GENERAL CONTRACTOR AND CIVIL CONTRACTOR.

E. PROVIDE HAND HOLES PER NEC FOR POWER.

F. ALL BUILDING ENTRY POINTS SHALL BE COORDINATED WITH GENERAL CONTRACTOR/USPS FOR PHASING AND EXACT LOCATION.

G. PROVIDE CONCRETE DUCTBANK FOR AREAS UNDER VEHICLE TRAFFIC OR PARKING.

H. ALL CONDUIT SIZING AND ROUTING SHOWN FOR PROCUREMENT AND COORDINATION PURPOSES AND SHALL BE VERIFIED WITH FINAL EQUIPMENT DIMENSIONS.

I. ALL UNDERGROUND WIRING SHALL BE INSTALLED IN PVC CONDUIT AND BURIED AT A DEPTH OF NOT LESS THAN 2 FT. BELOW GRADE. SEAL CONDUITS TERMINATING BELOW GRADE TO PREVENT ENTRY OF DIRT OR MOISTURE. PROVIDE RED DETECTABLE WARNING TAPE 12 INCHES ABOVE ALL UNDERGROUND CONDUIT ROUTINGS. SPLICES SHALL BE TERMINATED ABOVE GRADE. PROVIDE PVC ELBOWS AND CONDUIT TURNING UP FROM GRADE.

J. COORDINATE WITH GC AND ALL TRADES TO DISCONNECT AND MAKE SAFE ANY POWERED EQUIPMENT THAT SHALL BE DEMOLISHED.

K. MAINTAIN AT LEAST 12" SEPARATION BETWEEN 480V AND 208V OR 240V CONDUIT WHERE POSSIBLE.

L. REFER TO E100 FOR LIGHTING CIRCUITING INFORMATION.

M. REFER TO E500s SECTION FOR EXTERIOR LIGHTING CONTROL INFORMATION.

N. REFER TO E500s SECTION FOR EVSE DETAILS.

O. ALL THE EXTERIOR AND CANOPY LIGHTS ARE CONTROLLED BY PHOTOCELL AND TIME SWITCH.

LEGEND NOTES

1 PROVIDE MOUNTING FOR 25 KVA MINI POWER ZONE. REFER TO CIVIL DRAWINGS FOR STRUCTURAL DETAIL. COORDINATE WITH EQUIPMENT SHOP DRAWINGS FOR CLEARANCE AND INSTALLATION INSTRUCTIONS.

2 TRANSITION ELECTRICAL RACEWAYS FOR CHARGERS UNDERGROUND FROM VMF BUILDING EQUIPMENT STORAGE ROOM TO UNDERGROUND. PROVIDE PULL BOXES AS NECESSARY PER NEC AND COORDINATE LOCATION WITH EXISTING UTILITIES AND STRUCTURE. COORDINATE EXCAVATION PATHWAYS WITH GC. COORDINATE PHASING OF EXCAVATION/SAWCUTTING FOR ELECTRICAL WORK WITH GC AS TO NOT AFFECT NEW PAVEMENT AND STRIPING WORK.

3 REFER TO DETAILS 1 AND 2 ON E500s SECTION FOR UNDERGROUND ELECTRICAL DUCTBANK REQUIREMENTS.

4 CANOPY AND EXTERIOR WALL MOUNTED LIGHTS ARE CONTROLLED BY PHOTOCELL AND TIME SWITCH. REFER TO E500s SECTION FOR SITE LIGHTING CONTROL DETAILS.

5 ⚠5 ROUTE AND TERMINATE SPARE CONDUIT AT THE PULL BOX FOR THE FUTURE EVSE EXPANSION. USE ELECTRICAL PULL BOX SUITABLE FOR CONDUIT DUCT BANK SIZE. ADHERE TI ADDITIONAL NOTES ON PULL BOX REQUIREMENTS, AS SHOWN IN ELECTRICAL DETAILS SECTION.

0 5' 10' 20'
1" = 10'-0"

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DEMO NOTES - POWER

A. DEMOLITION DRAWINGS ARE BASED ON EXISTING PLANS AND LIMITED FIELD INVESTIGATION.

B. PROVIDE DEMOLITION WORK SHOWN ON THE DRAWINGS AND RELATED AND INCIDENTAL DEMOLITION WORK REQUIRED TO COMPLETE NEW CONSTRUCTION WORK.

C. FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE START OF DEMOLITION OPERATIONS. BRING ANY DISCREPANCIES WHICH MAY SIGNIFICANTLY AFFECT DEMOLITION OR NEW CONSTRUCTION WORK TO THE ATTENTION OF THE ENGINEER FOR REVIEW.

D. PROTECT EXISTING CONSTRUCTION TO REMAIN FROM DAMAGE DURING DEMOLITION AND/OR NEW CONSTRUCTION OPERATIONS.

LEGEND NOTES

1

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DEMO NOTES - LIGHTING

A. LIGHT FIXTURES AND ASSOCIATED LIGHTING CIRCUITRY & CONTROLS WITHIN THE INDICATED LIGHTING DEMOLITION AREAS TO BE REMOVED. CONTRACTOR SHALL REMOVE CONDUCTORS BACK TO SOURCE. REFER TO NEW WORK LIGHTING PLANS PRIOR TO START OF DEMOLITION. TRACE LIGHTING BACK TO PANEL AND VERIFY CIRCUIT NUMBER. ONLY VERTICAL CONDUIT HIDDEN IN BLOCK OR FINISHED WALLS MAY BE RE-USED TO MINIMIZE PATCHWORK. DISCONNECT AND REMOVE EXISTING LIGHT FIXTURE AND PREPARE PANELS FOR NEW CIRCUIT.

B. DISCONNECT AND REMOVE LIGHT SWITCHES AND ASSOCIATED WIRING AND CONDUIT ON EXISTING WALLS THAT ARE TO REMAIN WITHIN INDICATED LIGHTING DEMOLITION AREAS. REMOVE BRANCH CIRCUITS BACK TO EXISTING PANELS AND MARK AS "SPARE." LIGHTING CONTROLS TO BE REPLACED IN NEW WORK PHASE. PLACE NEW LIGHTING CONTROLS DEVICES IN LOCATION TO MINIMIZE PATCH WORK.

C. DISCONNECT EXTERIOR BUILDING MOUNTED LIGHTS. COORDINATE WITH GC TO PATCH AFTER DEMOLITION.

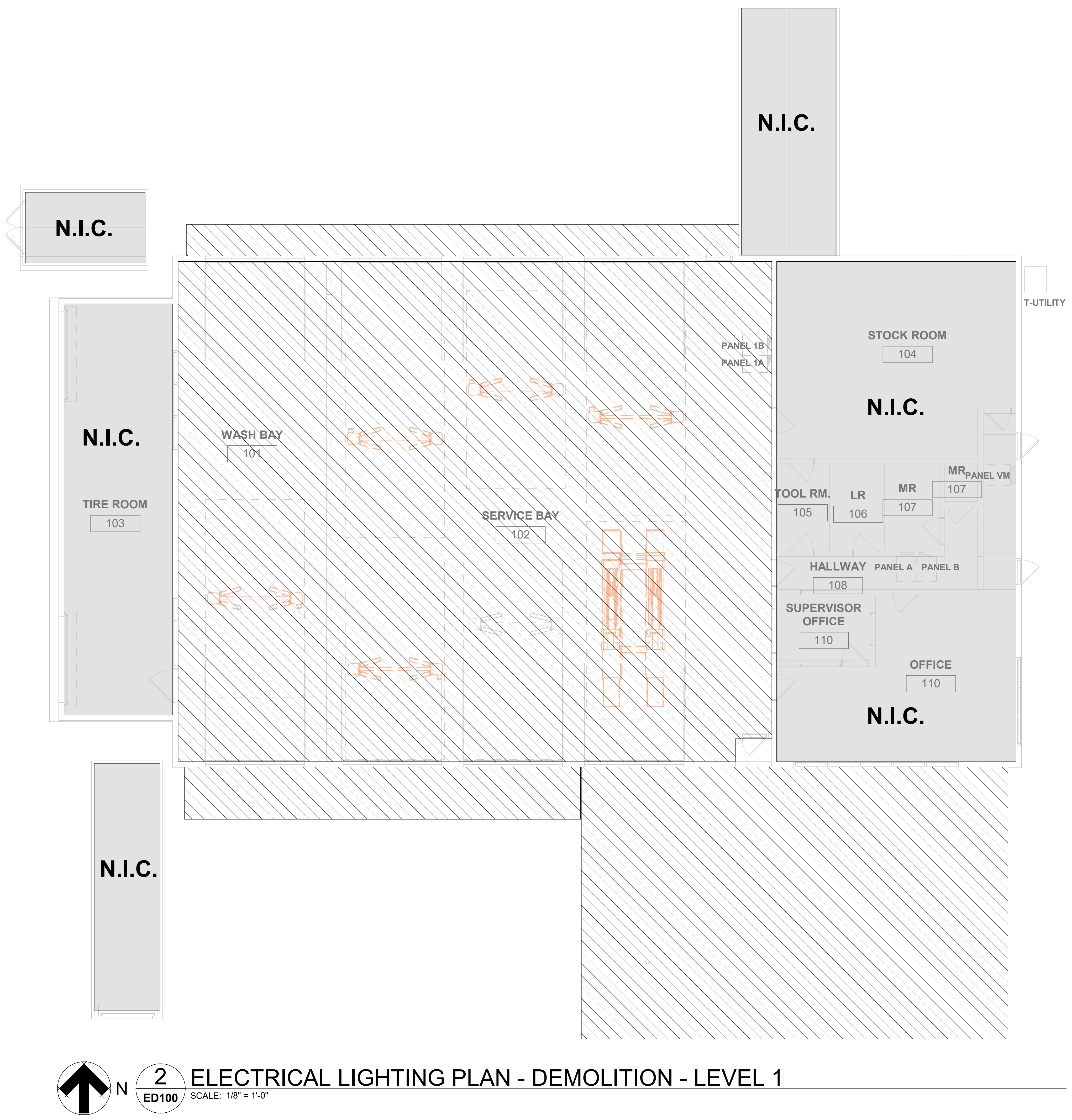
DEMO NOTES -LIFTS

A. FOR LIFTS THAT ARE NOT IN SCOPE OF WORK FOR THIS PROJECT, PROTECT AND MAINTAIN. FOR ALL LIFTS, FIELD VERIFY THAT NO ELECTRICAL WIRING, DEVICES, RACEWAYS, INTERFERE WITH MINIMUM VERTICAL CLEARANCE ABOVE REPLACEMENT LIFT LOCATION. IF DEVICE/EQUIPMENT/RACEWAY/WIRING INTERFERES WITH MINIMUM VERTICAL CLEARANCE, COORDINATE WITH GENERAL CONTRACTOR TO DISCONNECT AND MAKE SAFE TO ALLOW FOR RAISING. IF ELECTRICAL DEVICE/EQUIPMENT/WIRING RUNS THROUGH CLEARANCE ZONE, RAISE/ADJUST ROUTING TO ACHIEVE MINIMUM VERTICAL CLEARANCE.REFER TO ARCHITECTURAL DRAWINGS FOR LIFT CLEARANCE REQUIREMENTS.

5

1 ED100 ELECTRICAL POWER FLOOR PLAN - DEMOLITION - LEVEL 1

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



2 ED100 ELECTRICAL LIGHTING PLAN - DEMOLITION - LEVEL 1

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

0 4' 8' 16'
1/8" = 1'-0"

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GENERAL NOTES

A. REFER TO E001 FOR SYMBOL LEGEND, ABBREVIATIONS, AND NOTES.

B. REFER TO E400s SECTION FOR ONE-LINE DIAGRAMS, AND PANEL SCHEDULES.

C. REFER TO E401 FOR LIGHTING FIXTURE SCHEDULE AND LIGHTING CONTROLS SCHEDULE.

D. REFER TO E500s SECTION FOR DETAILS.

E. COORDINATE WITH GENERAL CONTRACTOR FOR FINAL LIGHT LOCATIONS WITH VERIFIED EXISTING BUILDING DIMENSIONS AND FINAL LIFT LOCATIONS TO MAINTAIN CLEARANCES AROUND AND ABOVE LIFT FOR VEHICLES.

LEGEND NOTES

1 CANOPY AND EXTERIOR WALL MOUNTED LIGHTS ARE CONTROLLED BY PHOTOCELL AND TIME SWITCH. REFER TO E500s SECTION FOR SITE LIGHTING CONTROL DETAILS.

2 CIRCUIT NEW BATTERY-BACKED EMERGENCY LIGHT FIXTURE TO EXISTING INTERIOR LIGHTING CIRCUIT PROVIDE UNSWITCHED HOT CONDUCTOR TO SENSE NORMAL POWER LOSS.

3 PROVIDE NEMA 6P ENCLOSURES FOR LIGHTING CONTROL DEVICES IN WASH BAY.

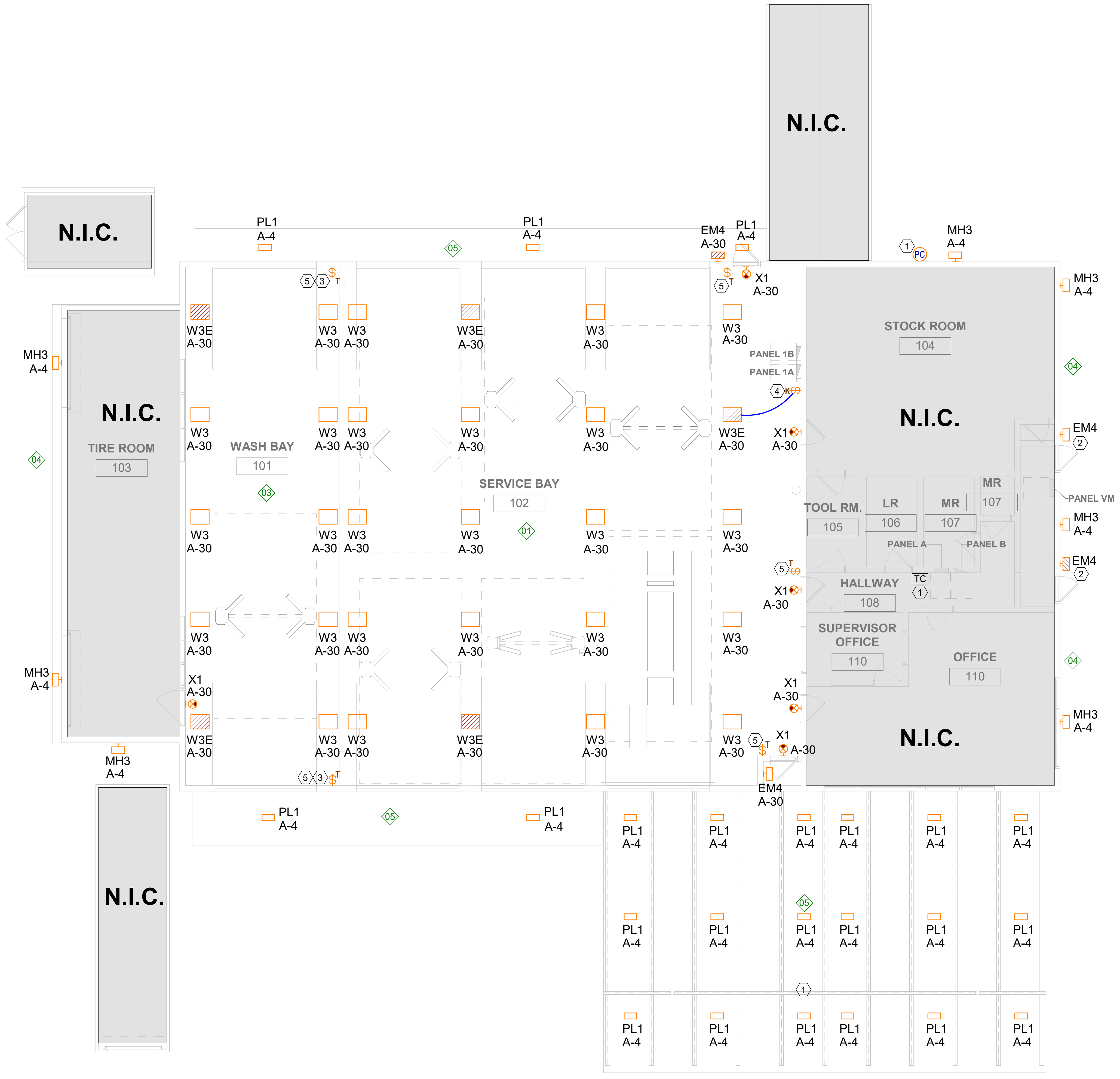
4 PROVIDE OVERRIDE MANUAL SWITCH FOR SINGLE HIGH BAY LIGHT NEAR ELECTRICAL EQUIPMENT.

5 TIME SWITCH FOR HIGH OUTPUT PROGRAMMED FOR MAXIMUM OF 4 HRS. REFER TO LIGHTING CONTROL SCHEDULE ON E401 FOR MORE INFORMATION.

6

5

N 1 E100 ELECTRICAL POWER FLOOR PLAN - LEVEL 1
SCALE: 1/8" = 1'-0"



N 2 E100 ELECTRICAL LIGHTING PLAN - LEVEL 1
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
1/8" = 1'-0"

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E100 ELECTRICAL POWER & LIGHTING PLANS
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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"

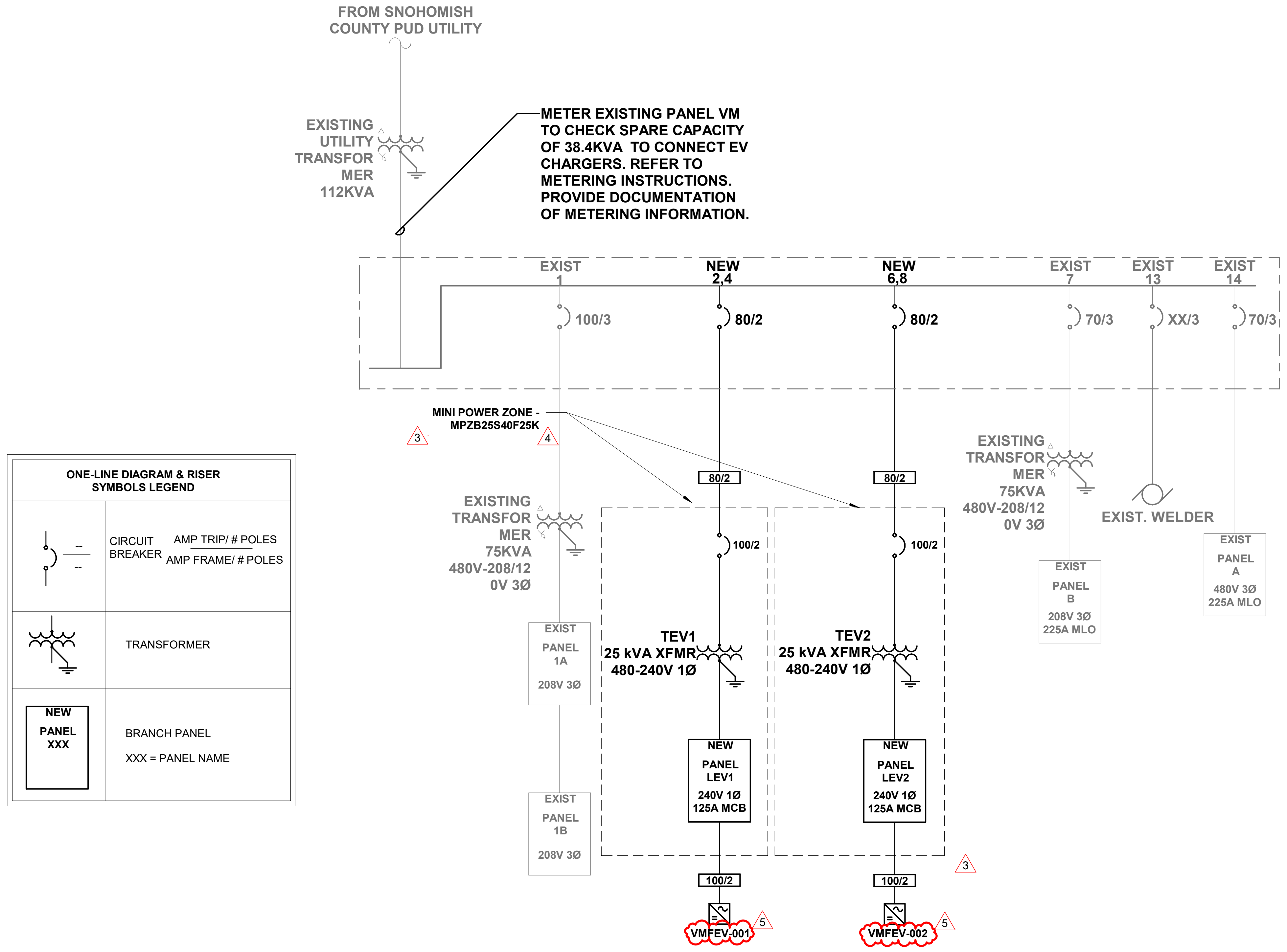
NOTES:

1. SIZES BASED ON THWN CONDUCTORS AND PVC/EMT CONDUIT SIZES IN NEC TABLE 9. EXTERIOR CONDUCTORS SHALL BE 90° XHHW.
2. AMPACITY RATINGS BASED ON NEC.
3. FEEDERS SERVING TRANSFORMERS DO NOT REQUIRE A GROUND. FOR TRANSFORMERS GEC, MATCH SIZE OF EGC SHOWN ON FEEDER SCHEDULE.
4. 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 kjhaack@snopud.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 E400 ELECTRICAL ONE-LINE DIAGRAM

SCALE: NTS

TRANSFORMER SCHEDULE

IDENTIFICATION	KVA	PRIMARY VOLTAGE	SECONDARY VOLTAGE	PHASE	MOUNTING STYLE	ENCLOSURE TYPE	LOCATION	K-RATING	WINDINGS	TEMPERATURE RISE	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:

1. 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.
2. REFER TO CIVIL DRAWING DETAILS FOR MOUNTING INFORMATION.

EVSE SCHEDULE

EVSE #	EV KIT #	DESCRIPTION	LOCATION	PHASE	VOLTS	MAX CURRENT	ELECTRICAL OUTPUT (W)	CB RATING	POLES	FEEDER INFORMATION		REMARKS
										PANEL	CIRCUIT	
VMFEV-001	CP001	240V 1Ø - 80A (100A BREAKER)	EXTERIOR	1	240 V	80 A	19,200	100 A	2	LEV1	1,3	
VMFEV-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	DISCONNECT					CONTROL DEVICE			FEEDER INFORMATION								REMARKS
									FURNISHED BY	INSTALLED BY	TYPE	SWITCH/ FUSE SIZE	LOCATION	FURNISHED BY	WIRED BY	TYPE	PANEL	CIRCUIT	(L.C.) QTY	LINE	(GND) QTY	GROUND	(CNDT) QTY	CONDUIT	

OVERHEAD DOOR ELECTRICAL REQUIREMENT SCHEDULE

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

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E400 ELECTRICAL ONE-LINE DIAGRAM
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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	AFFOELDWHGXDUVOLTLTPSDRTFCT
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 DWHXD
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	14860 △5	97	277 V	LITHONIA	XIB L24 15000LM ATWD MVOLT GZ10 40K 80CRI WGX DHWXD
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 DHWXD E15WMCP
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	LQM S W 3 R 120/277 ELN SD

NOTES:

1. 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.
2. EC TO PROVIDE MOUNTING HARDWARE FOR WALL/CEILING/PENDENT MOUNT.
3. 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 06 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

		NORMAL BUSINESS HOURS		AFTER BUSINESS HOURS			OCCUPANCY SENSOR			MANUAL OVERRIDE		
TAG	SPACE TYPE	LIGHTING	RECEPTACLES	LIGHTING	RECEPTACLES	CONTROL SYSTEM TYPE	TYPE / LOCATION	SETPOINT	PHOTOCELL CONTROL	DEVICE	DURATION	EMERGENCY FIXTURES CONTROLLED
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:

1. SETPOINTS AND TIME SCHEDULES MUST BE VERIFIED WITH OWNER PRIOR TO PROGRAMMING.
2. 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 SUBMISISON OF SHOP DRAWINGS.
3. PROVIDE NUMBER OF RELAYS/POWER PACKS TO CONTROL ALL LIGHTING ZONES AND CIRCUITS SHOWN ON PLANS.
4. PROVIDE UNSWITCHED HOT CONDUCTOR TO FIXTURES WITH INTEGRAL BATTERY PACKS TO SENSE POWER LOSS.
5. NO DAYLIGHTING IS PROVIDED IN THIS PROJECT DUE TO DISTANCE OF CEILING GRIDS/LIGHT FIXTURES FROM WINDOWS.
6. 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.
7. 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.
8. 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
MAIN BUS: 125 A
MCB: 125 A
VOLTAGE: 120/240V Single

FED FROM: TEV2
WIRES: 2W + G
ENCLOSURE: NEMA 3R
BUS TYPE: COPPER
MOUNTING: STEEL STRUCTURE
PANEL LUGS: MCB

NEUTRAL BUS: NO
GROUND BUS: YES
AIC AVAILABLE: △3
AIC RATING: 10000 A △5

CKT NO.	DESCRIPTION	TRIP	POLES	A (VA)		B (VA)		POLES	TRIP	DESCRIPTION	CKT NO.
1	**VMFEV-002** △5	**100 A**	**2**	9600	--			1	--	SPACE	2
3						9600	--	1	--	SPACE	4
5	SPACE	--	1	--	--			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
MAIN BUS: 125 A
MCB: 125 A
VOLTAGE: 120/240V Single

FED FROM: TEV1
WIRES: 2W + G
ENCLOSURE: NEMA 3R
BUS TYPE: COPPER
MOUNTING: STEEL STRUCTURE
PANEL LUGS: MCB

NEUTRAL BUS: NO
GROUND BUS: YES
AIC AVAILABLE: △3
AIC RATING: 10000 A △5

CKT NO.	DESCRIPTION	TRIP	POLES	A (VA)		B (VA)		POLES	TRIP	DESCRIPTION	CKT NO.
1	**VMFEV-001** △5	**100 A**	**2**	9600	--			1	--	SPACE	2
3						9600	--	1	--	SPACE	4
5	SPACE	--	1	--	--			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
MAIN BUS: 400 A
MCB: N/A
VOLTAGE: 480/277V WYE

FED FROM: T-UTILITY
WIRES: 4W + G
ENCLOSURE: NEMA 1
BUS TYPE:
MOUNTING: SURFACE
PANEL LUGS: MLO

NEUTRAL BUS: YES
GROUND BUS: YES
AIC AVAILABLE: △4
AIC RATING: MIN 16kA

CKT NO.	DESCRIPTION	TRIP	POLES	A (VA)		B (VA)		C (VA)		POLES	TRIP	DESCRIPTION	CKT NO.
1	EXIST. PANEL 1A&1B XFMR 75KVA	100	3	0	9600					**2**	**80**	**TEV1 (NOTE-1)**	**2**
3						0	9600						**4**
5								0	9600	**2**	**80**	**TEV2 (NOTE-1)**	**6**
7	EXIST. PANEL B VIA T-B	70	3	0	9600								**8**
9						0	--			1	--	SPACE (NOTE-2)	10
11								0	--	1	--	SPACE (NOTE-2)	12
13	EXIST. WELDER	--	3	--	0					3	70	EXIST. PANEL A	14
15						--	2664						16
17								--	2939				18
	TOTAL LOAD (VA)			19,200 VA		12,264 VA		12,539 VA					
	TOTAL CURRENT (AMPS)			69.5 A		44.3 A		45.4 A					

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

EXISTING: PANEL A

LOCATION: HALLWAY 108
MAIN BUS: 225 A
MCB: N/A
VOLTAGE: 480/277V WYE

FED FROM: PANEL VM
WIRES: 4W + G
ENCLOSURE: NEMA 1
BUS TYPE:
MOUNTING: RECESSED
PANEL LUGS: MLO

NEUTRAL BUS: YES
GROUND BUS: YES
AIC AVAILABLE:
AIC RATING: MIN 16kA △4

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	2664			**1**	**20**	**EXT & CANOPY LTG (NOTE-1)**	**4**
5	EXIST. LUBE ROOM LIGHTS	20	1					0	0	1	20	EXIST. OFFICE & HALL LTS	6
7	EXIST. HYD PUMP & AIR COMPR	40	3	0	0					3	30	EXIST. HOT WATER TANK	8
9						0	0						10
11								0	0				12
13	EXIST. AIR HAND UNIT & AIR COMPR	20	3	0	0					3	20	EXIST. GAS ISLAND POLE LIGHT	14
15						0	0						16
17								0	0				18
19	EXIST. VEHICLE EXHAUST FAN	20	3	0	0					3	30	EXISTING LOAD	20
21						0	0						22
23								0	0				24
25	EXISTING LOAD	20	1	0	0					1	20	EXIST. GAS ISLAND FLOOD...	26
27	EXISTING LOAD	20	1			0	0			1	20	EXISTING LOAD	28
29	EXISTING LOAD	20	1					0	2939	**1**	**20**	**LTG-ROOMS 101&102 (NOTE-2)**	**30**
	TOTAL LOAD (VA)			0 VA		2,664 VA		2,939 VA					
	TOTAL CURRENT (AMPS)			0.0 A		11.1 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:
1. DEMO EXISTING CIRCUIT, CONDUITS AND CONNECT NEW LIGHTING TO THE EXISTING CIRCUIT BREAKER.
2. PROVIDE 20A/1P CIRCUIT BREAKER IN EXISTING SPACE.

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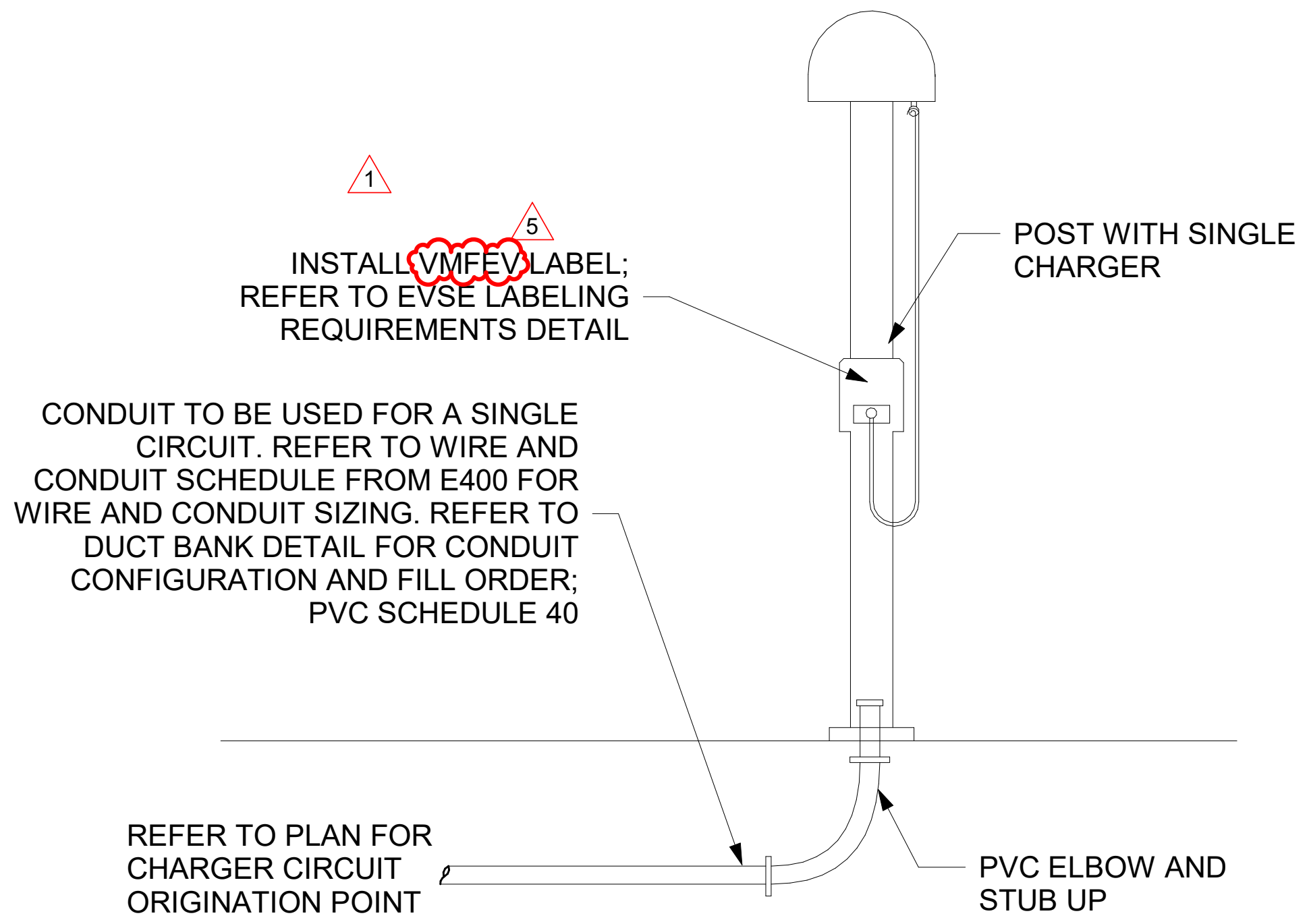
Revisions:
△5 Revision 5 07/19/2024

E401
ELECTRICAL SCHEDULES
Scale: AS NOTED
Date: Jan 10, 2024
Project: LYNWOOD (NORTH) VMF
USPS File Number: K45983



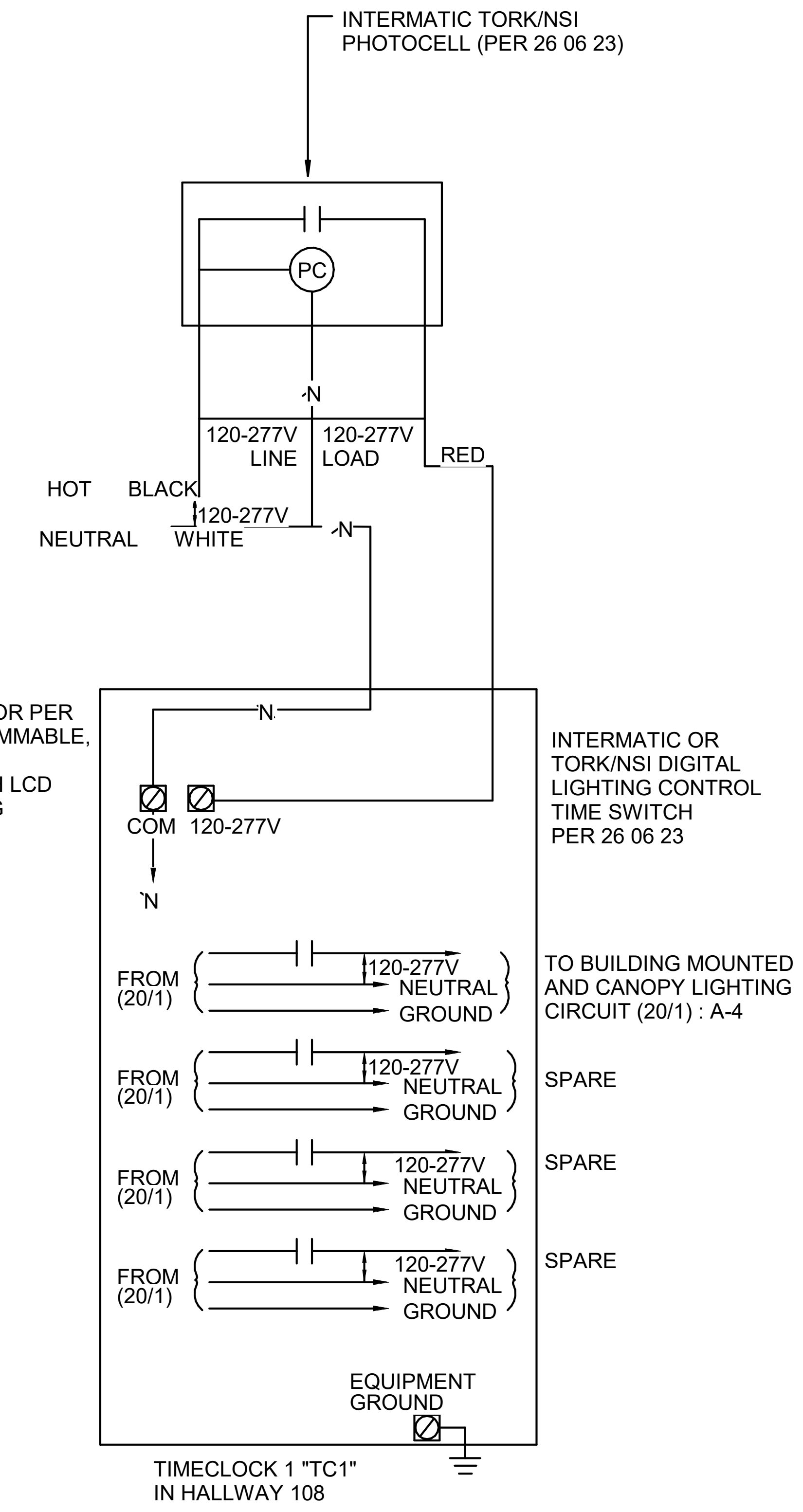
EV CHARGER HARDWARE LIST	
Type	Count
SINGLE CIRCUIT POST	2

CHARGE POINT CP6011B
POWER FACTOR AND EFFICIENCY INFORMATION IS NOT AVAILABLE. TO SIMPLIFY DESIGN, CHARGER OUTPUT VALUES (PROVIDED BY MANUFACTURER IN kW) HAVE BEEN CONVERTED TO kVA USING A POWER FACTOR AND EFFICIENCY OF 1. THE CHARGER OUTPUT VALUE IS CONSIDERED TO BE THE MAXIMUM POSSIBLE OUTPUT TO THE EV.

REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS FOR VOLTAGE SHOWN ON EVSE SCHEDULE FOR ELECTRICAL CONNECTIONS.
PROVIDE OUTPUT SETTING AT 80A AT EACH CHARGER. USPS TO PROVIDE COMMISSIONING AND ENERGY MANAGEMENT SYSTEM.

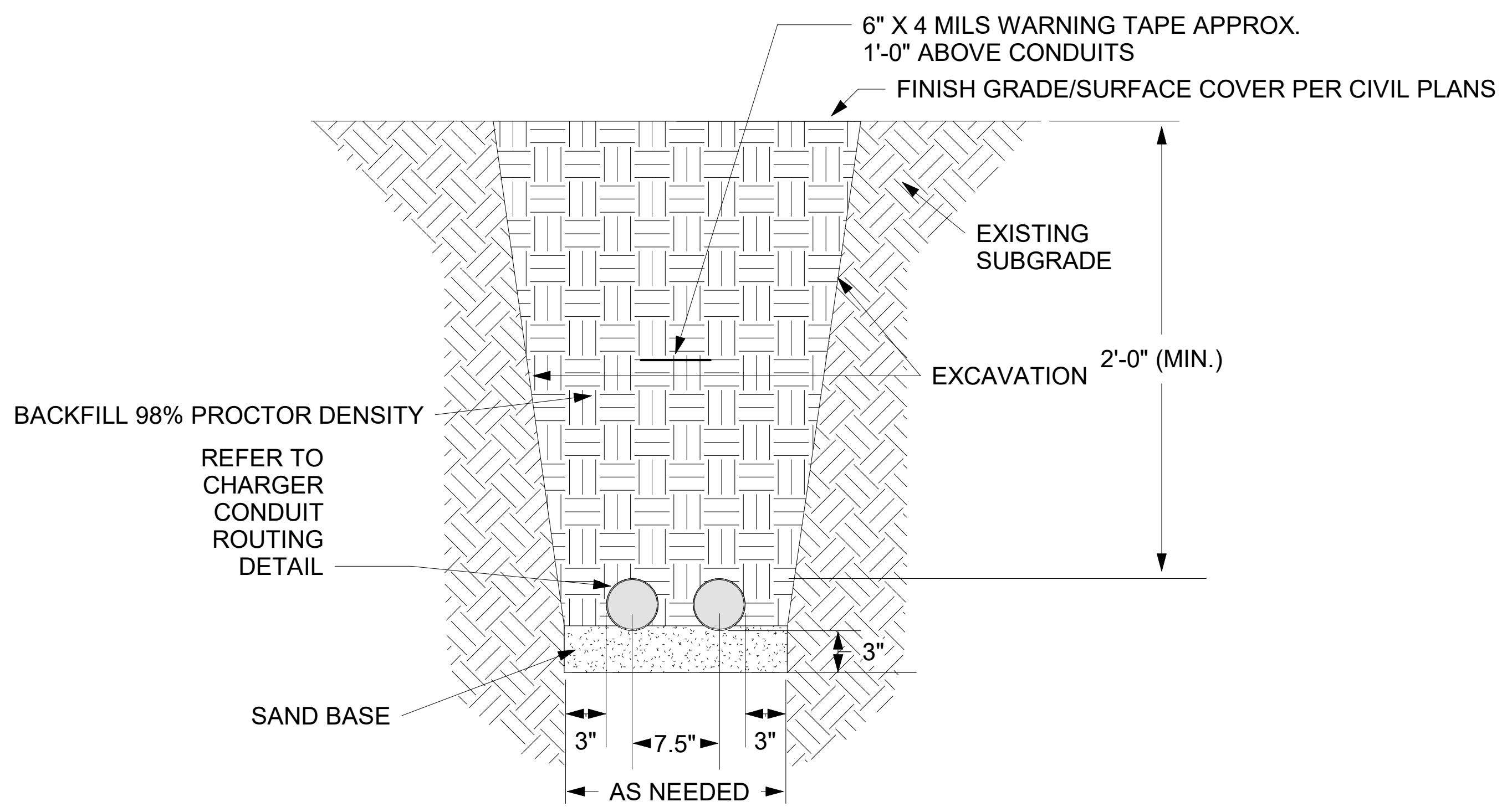
4 E500 CHARGER CONDUIT ROUTING

SCALE: NTS



5 E500 SITE LIGHTING CONTROLS

SCALE: NTS

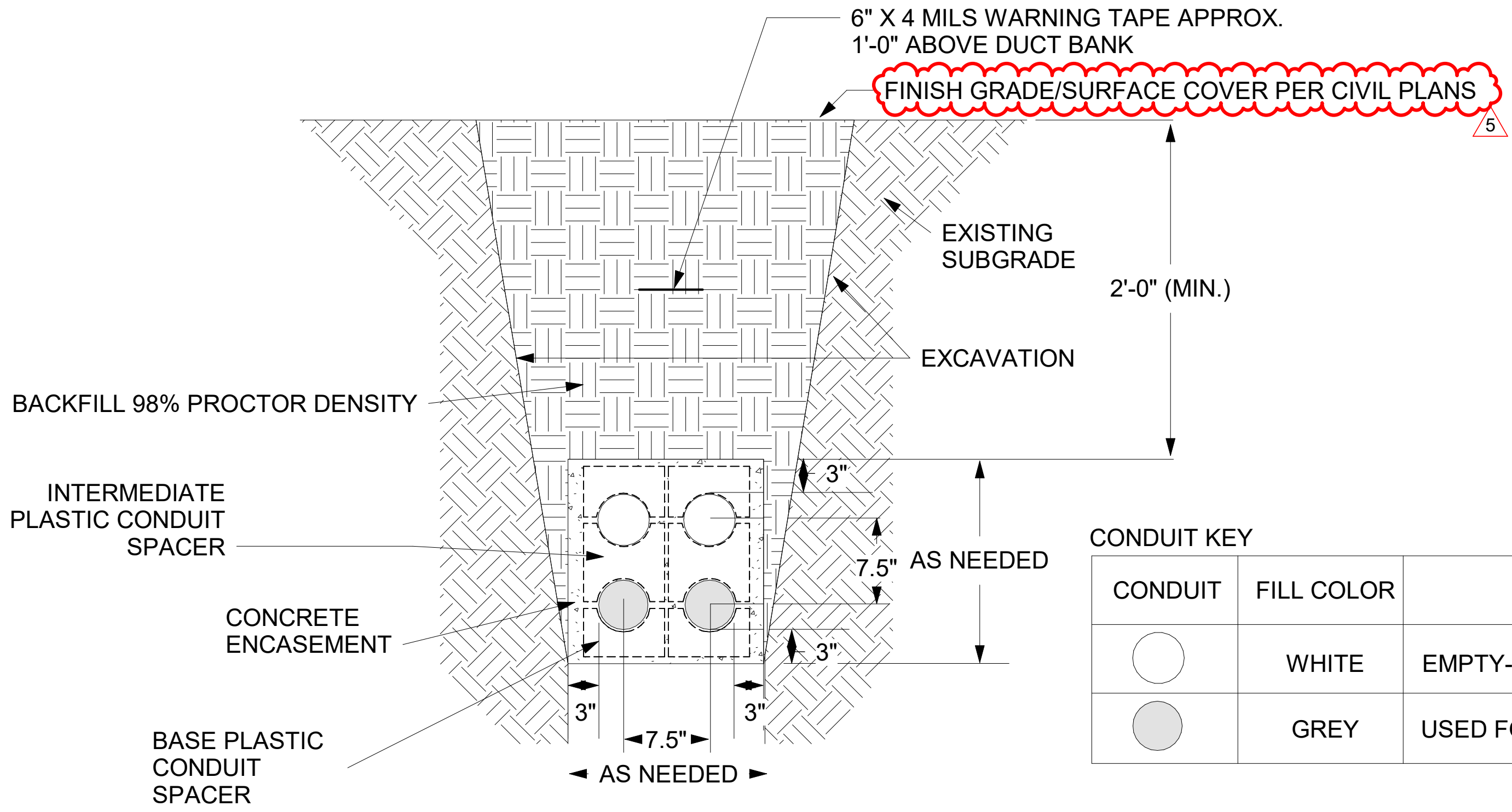


NOTES:
1. CONDUITS UNDER NON VEHICLE TRAFFIC AREAS MAY BE DIRECT BURRIED

3

1 E500 DIRECT BURY DETAIL

SCALE: NTS



CONDUIT KEY

CONDUIT	FILL COLOR	USE
○	WHITE	EMPTY-SPARE CONDUIT
●	GREY	USED FOR EVSE CIRCUIT

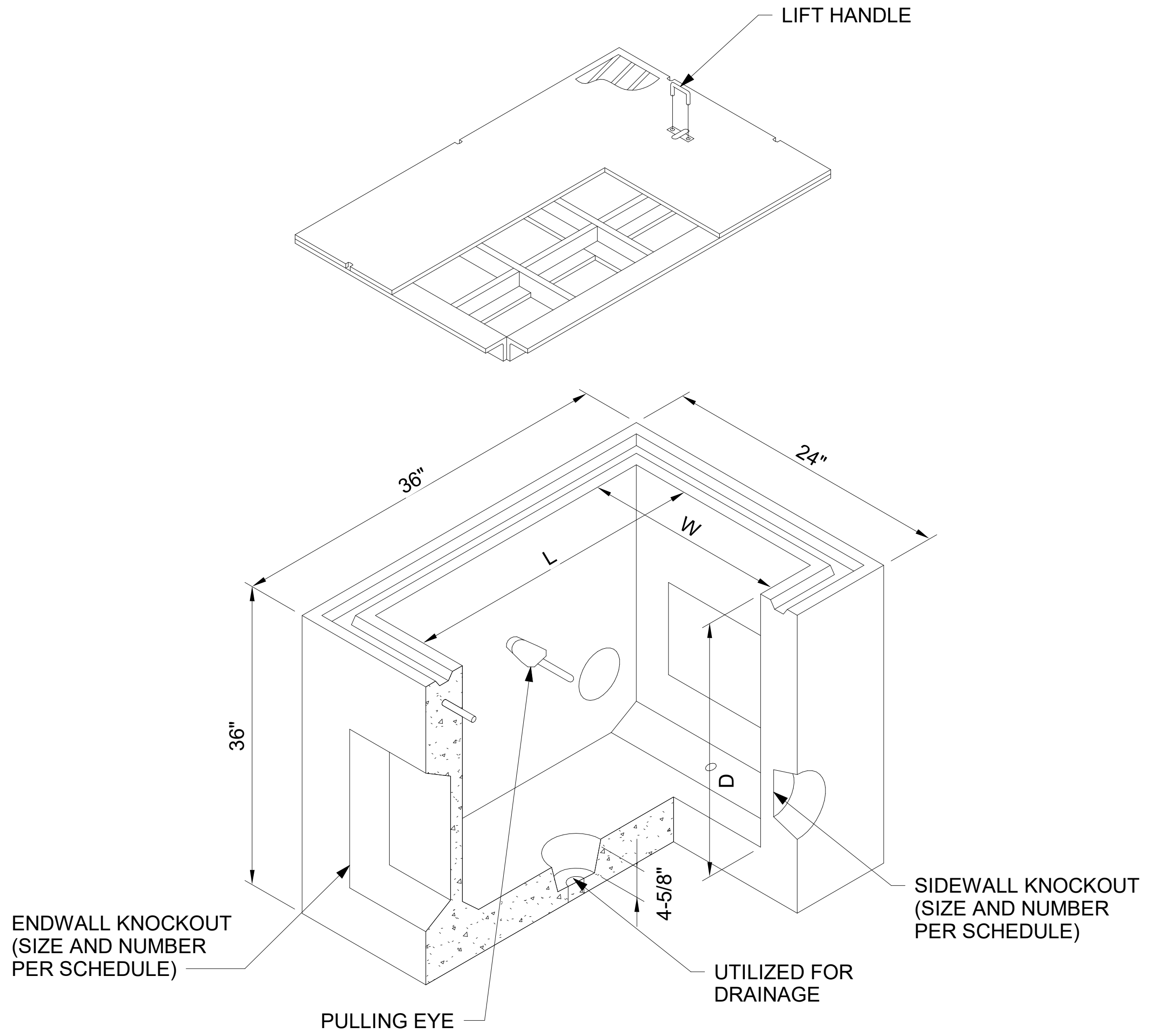
NOTES:
1. PROVIDE CONDUITS IN SINGLE LAYER. CONDUITS UNDER VEHICLE TRAFFIC AND WEIGHT TO BE ENCASED IN CONCRETE.
2. PROVIDE SUFFICENT AGGREGATE SUBLAYER TO ALLOW FOR SUPPORT AND DRAINAGE OF JUNCTION BOX.
3. TERMINATE SPARE CONDUIT FROM DUCT BANK TO PREVENT DIRT AND WATER INGRESS AND ALLOW FOR USE OF CONDUIT IN FUTURE EVSE EXPANSION.
4. SPARE CONDUIT SIZE SHALL MATCH THE OTHER CONDUIT SIZE LISTED IN THE TABLE FOR EACH DUCT BANK.

5

2 E500 DUCTBANK DETAIL

SCALE: NTS

1



3 E500 PULLBOX DETAIL

SCALE: NTS

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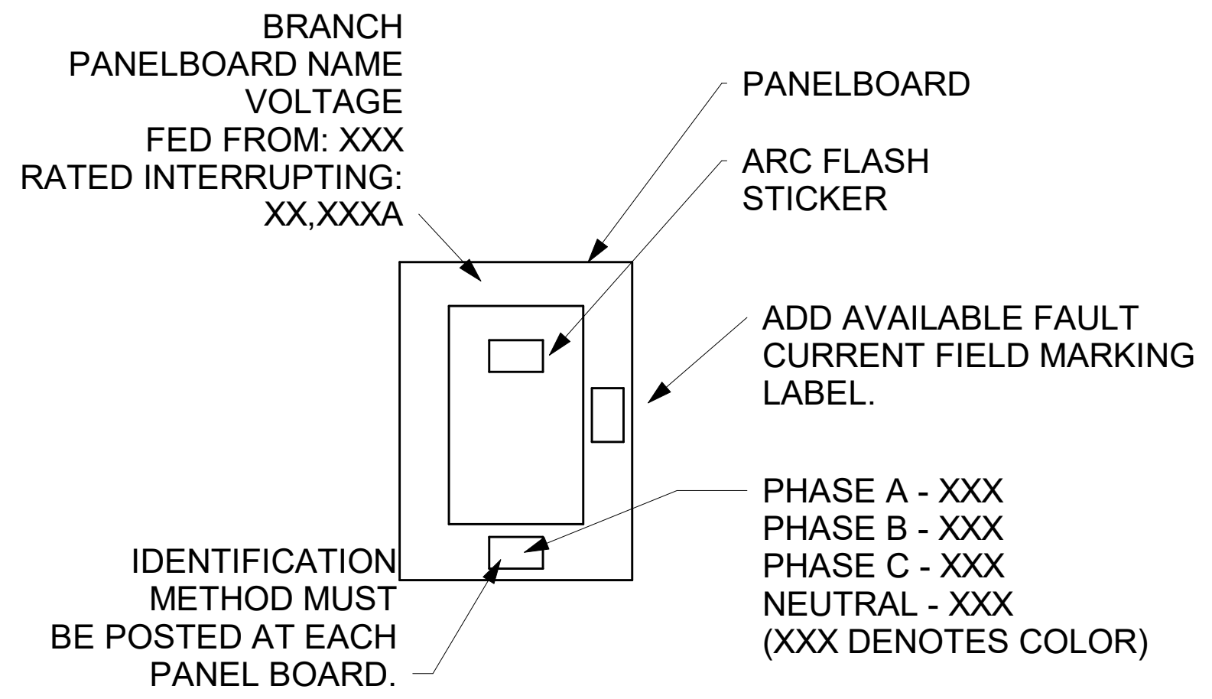
E500
ELECTRICAL DETAILS
Scale: AS NOTED
Date: Jan 10, 2024
Project: LYNWOOD (NORTH) VMF
USPS File Number: K45983

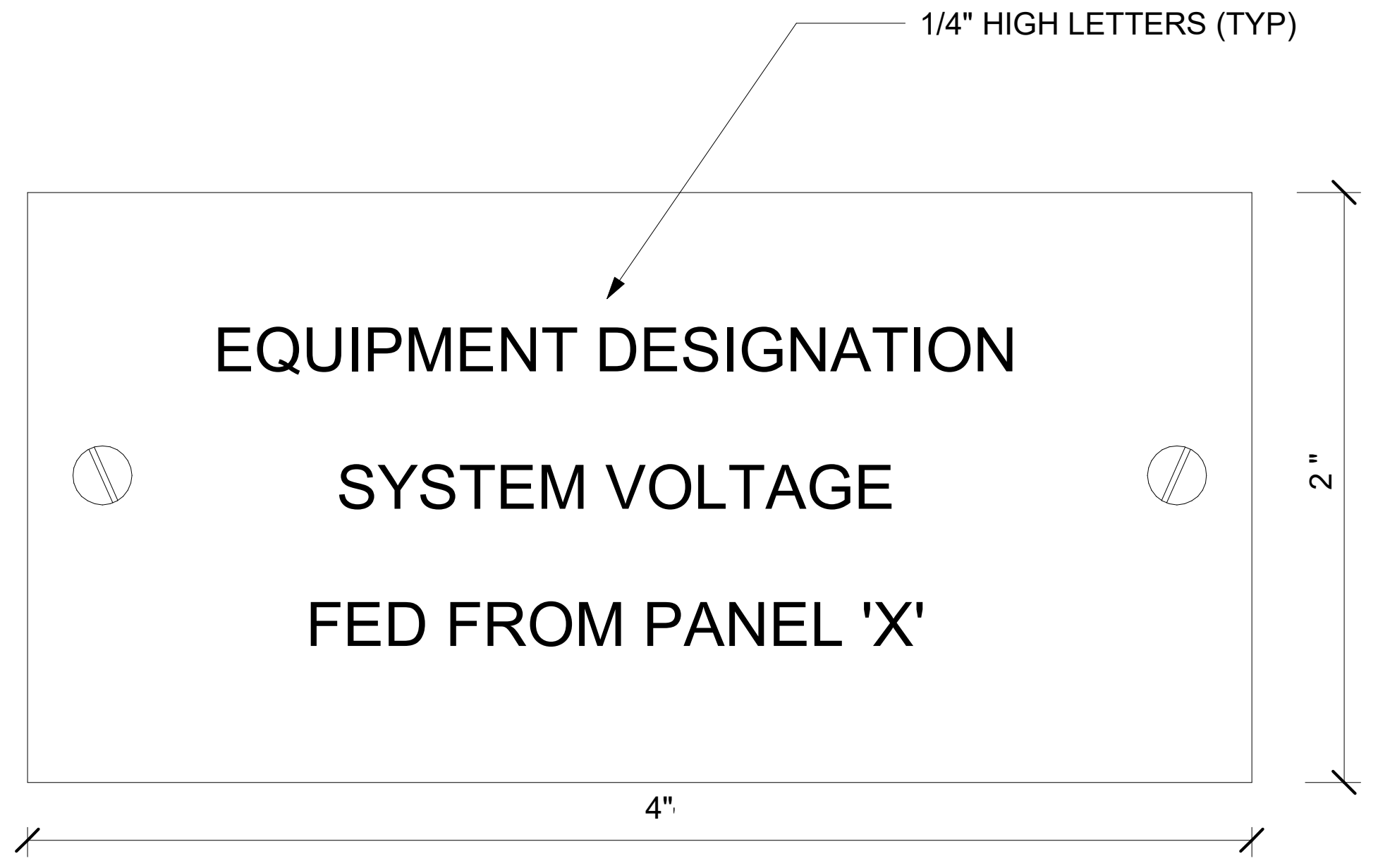


GENERAL NOTES:

A. WHEN MORE THAN ONE NORMAL VOLTAGE SYSTEM SUPPLIES THE PREMISES THE FOLLOWING MUST BE APPLIED PER NFPA 70.
  a. ALL DISTRIBUTION EQUIPMENT AS DEFINED BY NFPA 70 SHALL BE IDENTIFIED BY SYSTEM.
  b. IDENTIFICATION OF BRANCH CIRCUITS MUST BE IDENTIFY BY COLOR CODING, TAGGING, MARKING TAPE, OR APPROVED MEANS AND SHALL BE PERMANENTLY POSTED AT BRANCH CIRCUIT PANELBOARD OR SIMILAR BRANCH CIRCUIT DISTRIBUTION EQUIPMENT.

B. CONTENTS OF LABELS SHOW IN DETAIL ARE EXAMPLES ONLY. REFER TO SPECIFICATIONS FOR EXACT REQUIREMENTS OF EACH LABEL.

3 PANEL IDENTIFICATION DETAIL
E501
SCALE: NTS



NOTES:

1. PROVIDE LAMOCOID NAMEPLATE ENGRAVED WITH WHITE LETTERS.

2. NAMEPLATE SHALL BE THE FOLLOWING COLORS:
GREEN - NORMAL POWER ON 480/277 VOLT SYSTEM
BLACK - NORMAL POWER ON 208/120 VOLT SYSTEM
RED - EMERGENCY POWER (ALL VOLTAGES)

3. SECURE NAMEPLATE TO EQUIPMENT WITH TWO SHEET METAL SCREWS.

4. PROVIDE A NAMEPLATE FOR EVERY MAJOR ELECTRICAL DEVICE OR ELECTRICAL CONTROLS SUCH AS: SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, LIGHTING CONTROL PANELS, STARTERS, TRANSFORMERS, DISCONNECT SWITCHES, ETC. (AS APPLICABLE).

5. REFER TO USPS SPECIFICATIONS 260500 COMMON WORK RESULTS FOR ELECTRICAL DESCRIPTION.

6. EQUIPMENT DESIGNATION SHOULD INDICATE NAME OF PANELBOARD OR TYPE OF EQUIPMENT BE SERVED (I.E. "PANEL LPA", "PUMP CWP-1").

7. SYSTEM VOLTAGE SHALL INDICATE VOLTAGE AND PHASE SUCH AS: 480/277V(3Ø), 240/120V(1Ø) & 208/120(1Ø),ETC.

8. THE THIRD LINE OF TEXT SHALL INDICATE UPSTREAM POWER SOURCE IDENTIFIED BY ITS NAME, SUCH AS "TRANSFORMER T1", PANEL "LPA", ETC.

4 DISTRIBUTION EQUIPMENT NAMEPLATE DETAIL
E501
SCALE: NTS

GENERAL NAMEPLATES AND SIGNS

A. SAFETY SIGNS: COMPLY WITH 29 CFR, CHAPTER XVII, PART 1910.145.

B. ENGRAVED PLASTIC NAMEPLATES AND SIGNS: ENGRAVING STOCK, MELAMINE PLASTIC LAMINATE, MINIMUM 1/16 INCH (1.6 MM) THICK FOR SIGNS UP TO 20 SQ. IN. (129 SQ. CM) AND 1/8 INCH (3.2 MM) THICK FOR LARGER SIZES.

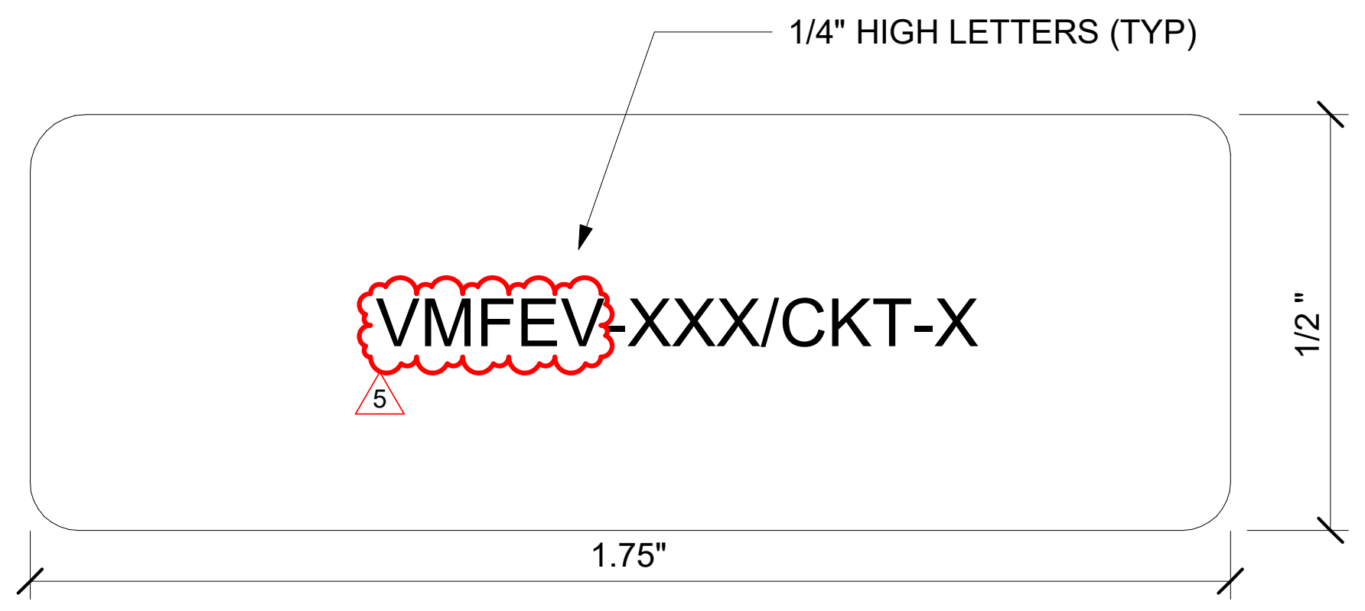
C. BAKED-ENAMEL SIGNS FOR INTERIOR USE: PREPRINTED ALUMINUM SIGNS, PUNCHED OR DRILLED FOR FASTENERS, WITH COLORS, LEGEND, AND SIZE REQUIRED FOR THE APPLICATION. 1/4-INCH (6.4-MM) GROMMETS IN CORNERS FOR MOUNTING.

D. EXTERIOR, METAL-BACKED, BUTYRATE SIGNS: WEATHER-RESISTANT, NONFADING, PREPRINTED, CELLULOSE-ACETATE BUTYRATE SIGNS WITH 0.0396-INCH (1-MM) GALVANIZED-STEEL BACKING; AND WITH COLORS, LEGEND, AND SIZE REQUIRED FOR THE APPLICATION. 1/4-INCH (6.4-MM) GROMMETS IN CORNERS FOR MOUNTING.

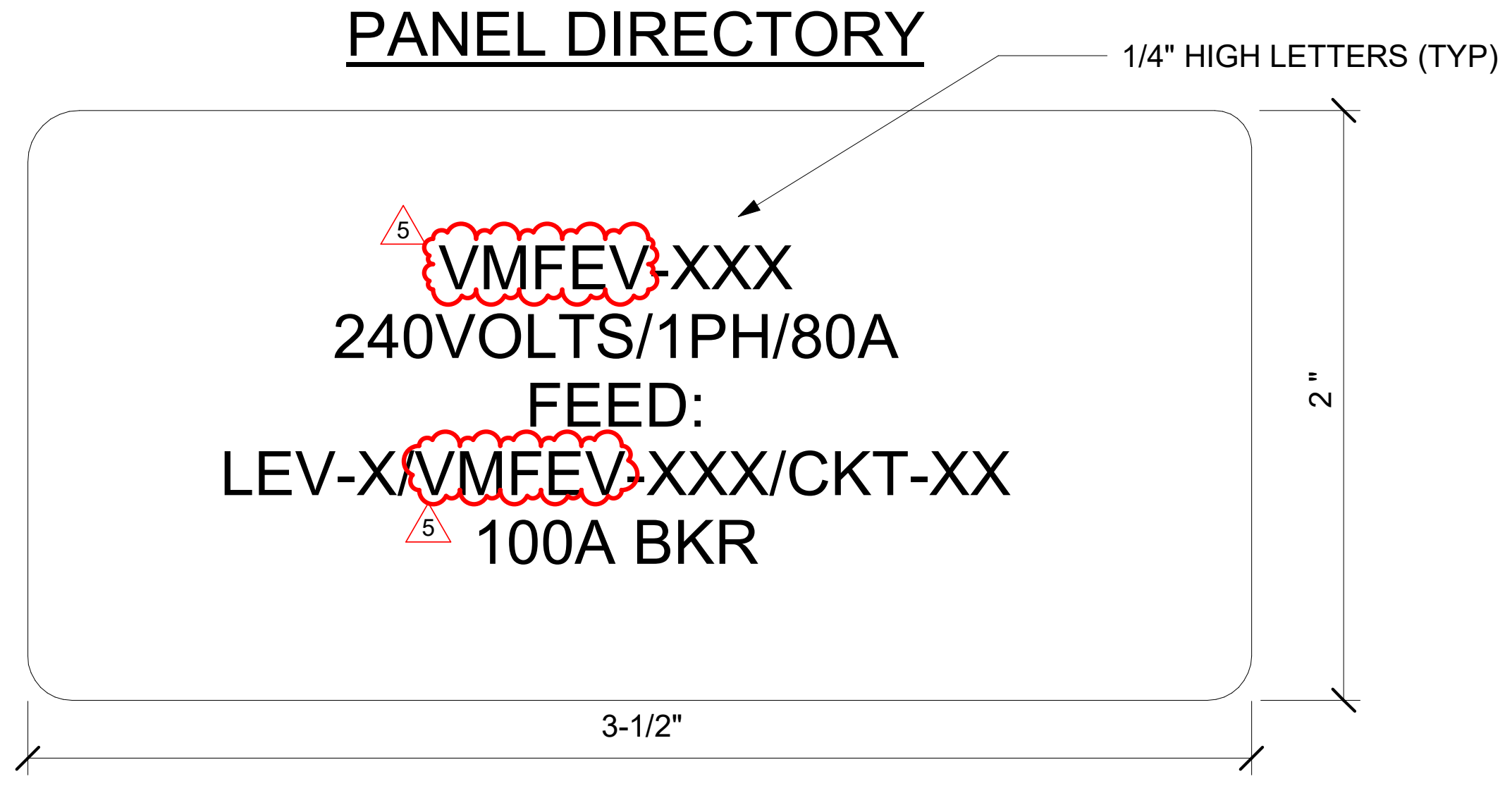
E. FASTENERS FOR NAMEPLATES AND SIGNS: SELF-TAPPING, STAINLESS-STEEL SCREWS OR NO. 10/32, STAINLESS-STEEL MACHINE SCREWS WITH NUTS AND FLAT AND LOCK WASHERS.

F. CAUTION LABELS FOR INDOOR BOXES AND ENCLOSURES FOR POWER AND LIGHTING: INSTALL PRESSURE-SENSITIVE, SELF-ADHESIVE LABELS IDENTIFYING SYSTEM VOLTAGE WITH BLACK LETTERS ON ORANGE BACKGROUND. INSTALL ON EXTERIOR OF DOOR OR COVER.

1 GENERAL SIGNAGE REQUIREMENTS
E501
SCALE: NTS



PANEL DIRECTORY



CHARGING UNIT

NOTES:
1. PROVIDE SELF ADHESIVE LAMOCOID NAMEPLATE ENGRAVED WITH WHITE LETTERS. CLEAN SURFACES BEFORE APPLICATION.

2. REFER TO USPS SPECIFICATIONS 260500 COMMON WORK RESULTS FOR ELECTRICAL SPECIFICATIONS.

3. DO NOT COVER CIRCUIT NUMBER FACTORY STAMPED INTO PANEL COVER.

4. PANEL DIRECTORIES SHALL BE TYPED, LAMINATED, WEATHER RESISTANT AND PLACED ON INSIDE COVER OF EACH PANELBOARD

2 EVSE LABELING REQUIREMENTS
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E501 ELECTRICAL DETAILS
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