

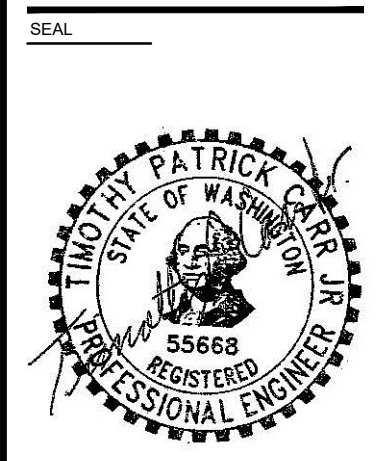
IDENTIFICATION	LUMINAIRES	ABBREVIATIONS	ABBREVIATIONS	ELECTRICAL SHEET INDEX															
<p>NOTE: NOT ALL SYMBOLS MAY BE USED IN PLAN.</p> <p># EQUIPMENT MARK - SEE SCHEDULE</p> <p>SECTION NUMBER SECTION MARK SHEET WHERE SECTION IS SHOWN</p> <p>DETAIL NUMBER DETAIL MARK SHEET WHERE DETAIL IS SHOWN</p> <p>ELEVATION NUMBERS ELEVATION MARK</p>	<p>XX = EM (EMERGENCY), NL (NIGHT LIGHT), EMINL (BOTH) EM FIXTURES ARE HALF SHADED, TYPICAL OF ALL FIXTURES.</p> <p>SURFACE MOUNTED FIXTURE</p> <p>SURFACE MOUNTED LINEAR FIXTURE</p> <p>PENDANT MOUNTED FIXTURE</p> <p>PENDANT MOUNTED LINEAR FIXTURE</p> <p>PADDLE FAN READY BOX</p> <p>WALL MOUNTED WALL PACK FIXTURE</p> <p>RECESSED CAN FIXTURE</p> <p>WALL MOUNTED SCONCE FIXTURE</p> <p>TRACK FIXTURE</p> <p>WALL MOUNTED LINEAR FIXTURE</p> <p>2X4 RECESSED TROFFER FIXTURE</p> <p>2X2 RECESSED TROFFER FIXTURE</p> <p>UNDERCABINET LIGHT FIXTURE (LENGTH VARIES)</p> <p>EMERGENCY LIGHT FIXTURE</p> <p>EXIT SIGN WITH OR WITHOUT LIGHTS AND ARROWS</p> <p>EXTERIOR POLE LIGHT FIXTURE</p>	<p>A AMP</p> <p>AF AMP FRAME</p> <p>AFF ABOVE FINISHED FLOOR</p> <p>AHJ AUTHORITIES HAVING JURISDICTION</p> <p>AHU AIR HANDLING UNIT</p> <p>AIC AMP INTERRUPTING CAPACITY</p> <p>APPROX APPROXIMATE</p> <p>AT AMP TRIP</p> <p>ATS AUTOMATIC TRANSFER SWITCH</p> <p>AV AUDIO VIDEO</p> <p>AWG AMERICAN WIRE GAUGE</p> <p>BFG BELOW FINISHED GRAD</p> <p>BHP BRAKE HORSEPOWER</p> <p>BLDG BUILDING</p> <p>BRF BELOW RAISED FLOOR</p> <p>C CONDUIT / CONTINUOUS LOAD</p> <p>CB CIRCUIT BREAKER</p> <p>CCW COUNTER CLOCKWISE</p> <p>CLG CEILING</p> <p>CKT CIRCUIT</p> <p>COM COMMON</p> <p>COMM COMMUNICATION</p> <p>CPT CONTROL POWER TRANSFORMER</p> <p>CT CURRENT TRANSFORMER</p> <p>CV CONTROL VALVE</p> <p>CW CLOCKWISE / COOL WHITE / COLD WATER</p> <p>DC DIRECT CURRENT</p> <p>DCS DISTRIBUTED CONTROL SYSTEM</p> <p>DEG DEGREES</p> <p>DEMO DEMOLISH</p> <p>DISC DISCONNECT</p> <p>DL LIGHTS W/ IN DAYLIGHT ZONE</p> <p>DL-X DAYLIGHT ZONE X</p> <p>DM DEMAND METER</p> <p>DND/DWN DOUBLE POLE DOUBLE THROW</p> <p>DPDT DOUBLE POLE DOUBLE THROW</p> <p>DPST DOUBLE POLE SINGLE THROW</p> <p>DS DOOR SWITCH</p> <p>DTL DETAIL</p> <p>DW DISHWASHER</p> <p>DWG(S) DRAWING(S)</p> <p>(E) OR (EX) EXISTING</p> <p>EA EACH</p> <p>EC ELECTRICAL CONTRACTOR</p> <p>EF EXHAUST FAN</p> <p>E/G EMERGENCY GENERATOR</p> <p>EL ELECTRICAL</p> <p>EM EMERGENCY</p> <p>EMT ELECTRICAL METALLIC</p> <p>ENCL ENCLOSURE</p> <p>ENGS ENGINEER</p> <p>ENT ELECTRICAL NON-METALLIC TUBING</p> <p>EXT EXTERIOR</p> <p>FA FIRE ALARM</p> <p>FACP FIRE ALARM CONTROL PANEL</p> <p>FDR FEEDER</p> <p>FF FAN FORCED</p> <p>FLA FULL LOAD AMPS</p> <p>F&I FURNISH & INSTALL</p> <p>FLR FLOOR</p> <p>FO FIBER OPTIC</p> <p>FT FOOT / FEET</p> <p>FREQ FREQUENCY</p> <p>FWD FORWARD</p> <p>G or GND GROUND / EQUIPMENT GROUND</p> <p>GC GENERAL CONTRACTOR</p> <p>GEN GENERATOR</p> <p>GFCI GROUND FAULT CIRCUIT INTERRUPTER (RECEPTACLE)</p> <p>GFI GROUND FAULT INTERRUPTER (BREAKER)</p> <p>GFR GROUND FAULT RELAY</p> <p>GRC GALVANIZED RIGID CONDUIT</p> <p>HP HEAT PUMP / HORSE-POWER / HOUSE PANEL</p> <p>HPS HIGH PRESSURE SODIUM HOUR</p> <p>HR HVAC</p> <p>HVAC HEATING VENTILATION & AIR CONDITIONING</p> <p>HW HOT WATER</p> <p>HZ HERTZ</p> <p>IC INTERRUPTING CAPACITY</p> <p>IHP INDOOR HEAT PUMP</p> <p>IMC INTERMEDIATE METAL CONDUIT</p> <p>INST INSTANTANEOUS</p> <p>INT INTERLOCK</p> <p>INTERCOM INTERCOMMUNICATION</p> <p>J J-BOX</p> <p>JUNCTION BOX</p> <p>KA KILOAMP</p> <p>KV KILOVOLT</p> <p>KVA KILO VOLT-AMP</p> <p>KVAR KILO VAR (REACTANCE)</p> <p>KW KILOWATT</p> <p>KWD KILOWATT DEMAND</p> <p>KWH KILOWATT HOUR</p> <p>LA LIGHTNING ARRESTOR</p> <p>LC LIGHTING CONTACTOR</p> <p>LCP LIGHTING CONTROL PANEL</p> <p>L-G LINE - GROUND</p> <p>LAFF LAFLOOR</p> <p>LP LIGHT POLE</p> <p>LV LOW VOLTAGE</p> <p>LVL LEVEL</p> <p>MA MILLIAMPER</p> <p>MAX MAXIMUM</p> <p>MC MECHANICAL CONTRACTOR</p> <p>MCA MINIMUM CIRCUIT AMPS</p> <p>MCC MOTOR CONTROL CENTER</p> <p>MDP MAIN DISTRIBUTION PANEL</p> <p>MECH MECHANICAL</p> <p>MEP MECHANICAL ELECTRICAL AND PLUMBING</p> <p>MFG MANUFACTURER</p> <p>MH MOUNTING HEIGHT</p> <p>MIN MINIMUM</p> <p>MLO MAIN LUG ONLY</p> <p>MRP MOTOR PROTECTION RELAY</p> <p>MS MOTOR STARTER</p> <p>MSP MOTOR STARTER PANEL</p> <p>MTS MANUAL TRANSFER SWITCH</p> <p>MV MEGAVOLT</p> <p>MVA MEGAVOLT-AMP</p> <p>MW MICROWAVE / MEGAWATT</p> <p>N NEUTRAL</p> <p>NC NORMALLY CLOSED</p> <p>NEC NATIONAL ELECTRIC CODE</p> <p>NFC NONMETALLIC FLEXIBLE CONDUIT</p> <p>NIGHTLIGHT</p> <p>NO NORMALLY OPEN</p> <p>NP NAMEPLATE</p> <p>NTS NOT TO SCALE</p> <p>O OPEN OR OPENED</p> <p>OCP OVER CURRENT PROTECTION</p> <p>OHP OUTDOOR HEAT PUMP</p> <p>OL OVERLOAD RELAY</p> <p>OS OCCUPANCY SENSOR</p> <p>P POLE</p> <p>PA PUBLIC ADDRESS</p> <p>PB PUSHBUTTON / PULL BOX</p> <p>PC PLUMBING CONTRACTOR</p> <p>PE OR PC PHOTOELECTRIC CELL</p> <p>PF POWER FACTOR</p> <p>PH PHASE</p> <p>PM PROJECT MANAGER</p> <p>PNL PANEL</p> <p>POE POWER OVER ETHERNET</p> <p>PRI PRIMARY</p> <p>PSE PUGET SOUND ENERGY</p> <p>PVC POLYVINYL CHLORIDE CONDUIT</p> <p>PWR POWER</p> <p>REC RECEPTACLE</p> <p>REFER REFERENCE</p> <p>REF REFRIGERATOR</p> <p>REQ(D) REQUIRE(D)</p> <p>REV REVISED / REVISION / REVERSE</p> <p>LL LIGHT POLE</p> <p>RFC RADIO FREQUENCY RESIDENTIAL METER CENTER</p> <p>RMS ROOT MEAN SQUARED</p> <p>RVSS REDUCED VOLTAGE SOFT START</p> <p>SA SURGE ARRESTER</p> <p>SC SHORT CIRCUIT</p> <p>SCL SEATTLE CITY LIGHT</p> <p>SF SQUARE FEET</p> <p>SH SUB FEED LUGS SHEET</p> <p>SM SURFACE MOUNT</p> <p>SP SINGLE POLE</p> <p>SPEC(S) SPECIFICATION(S)</p> <p>SPD SURGE PROTECTIVE DEVICE</p> <p>SPDT SINGLE POLE DOUBLE THROW</p> <p>SPST SINGLE POLE SINGLE THROW</p> <p>SPKR SPEAKER</p> <p>SS STAINLESS STEEL</p> <p>SW SWITCH</p> <p>SWB SWITCH BANK</p> <p>SWBD SWITCHBOARD</p> <p>SWGR SWITCHGEAR</p> <p>SYM SYMMETRICAL</p> <p>TC TIME CLOCK</p> <p>TE TOTALLY ENCLOSED</p> <p>TEFC TOTALLY ENCLOSED FAN COOLED</p> <p>TENV NON-VENTILATED</p> <p>TEL TELEPHONE</p> <p>TEMP TEMPORARY</p> <p>TSTAT THERMOSTAT</p> <p>TYP TYPICAL</p> <p>UNO UNLESS NOTED OTHERWISE</p> <p>UPS UNINTERRUPTIBLE POWER SUPPLY</p> <p>V VOLT</p> <p>VA VOLTAMP</p> <p>VIA SEE CONTROL SUMMARY</p> <p>CONTROL'S FOR CONTROL REQMENTS</p> <p>VFD VARIABLE FREQUENCY DRIVE</p> <p>VP VAPOR PROOF</p> <p>W WATT</p> <p>WH WATER HEATER</p> <p>WHF WHOLE HOUSE FAN</p> <p>WP WATER PROOF</p> <p>WT WATER TIGHT</p> <p>XFMR TRANSFORMER</p>	<p>Sheet List Table</p> <table border="1"> <thead> <tr> <th>Sheet Number</th> <th>Sheet Title</th> </tr> </thead> <tbody> <tr> <td>E0.01</td> <td>ELECTRICAL COVER</td> </tr> <tr> <td>E1.01</td> <td>STREET LIGHTING POWER & PHOTOMETRIC PLAN & SCHEDULES</td> </tr> <tr> <td>E2.00</td> <td>ELECTRICAL SITE PLAN</td> </tr> <tr> <td>E2.10</td> <td>ELECTRICAL SITE FOOTCANDLE PLAN</td> </tr> <tr> <td>E5.01</td> <td>ELECTRICAL RISER DIAGRAMS</td> </tr> <tr> <td>E6.00</td> <td>SITE LIGHTING FIXTURE & CONTROL SCHEDULES</td> </tr> <tr> <td>E6.01</td> <td>ELECTRICAL PANEL SCHEDULES</td> </tr> </tbody> </table>	Sheet Number	Sheet Title	E0.01	ELECTRICAL COVER	E1.01	STREET LIGHTING POWER & PHOTOMETRIC PLAN & SCHEDULES	E2.00	ELECTRICAL SITE PLAN	E2.10	ELECTRICAL SITE FOOTCANDLE PLAN	E5.01	ELECTRICAL RISER DIAGRAMS	E6.00	SITE LIGHTING FIXTURE & CONTROL SCHEDULES	E6.01	ELECTRICAL PANEL SCHEDULES
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<p>RECEPTACLES</p> <p>120V SINGLE OUTLET</p> <p>DUPLEX OUTLET</p> <p>4-PLEX OUTLET</p> <p>USB DUPLEX OUTLET</p> <p>SWITCHED DUPLEX OUTLET</p> <p>CONTROLLED DUPLEX OUTLET</p> <p>208V OR 240V OUTLET (AMP SIZE AS NEEDED)</p> <p>GFCI OUTLET - PERSONNEL RATED CLASS A</p> <p>WEATHER PROOF GFCI PROTECTED OUTLET</p> <p>DUPLEX FLOOR OUTLET</p> <p>4-PLEX FLOOR OUTLET</p> <p>ROUND FIRE RATED POKE THROUGH FLOOR BOX</p> <p>DUPLEX CEILING OUTLET</p> <p>JUNCTION BOX</p> <p>SPECIAL OUTLET AS NOTED</p> <p>CORD DROP</p>	<p>EQUIPMENT</p> <p>FAN FORCED ELECTRIC WALL HEATER</p> <p>EXHAUST FAN</p> <p>WHOLE HOUSE FAN</p> <p>HEAT LAMP</p> <p>FUSED DISCONNECT SWITCH MOTOR RATED SNAP SWITCH (WHERE RATED AND ALLOWED BY CODE). SIZE FOR ACTUAL MANE PLATE RATING OF EQUIPMENT OR AS REQUIRED BY CODE (CONFIRM).</p> <p>POWER STRIP</p> <p>HARDWIRE EQUIPMENT CONNECTION</p> <p>POWER METER</p> <p>TIMECLOCK</p> <p>THERMOSTAT</p> <p>TRANSFORMER/REMOTE DRIVER</p> <p>BOOSTER PUMP</p> <p>MOTOR</p>	<p>PANELS & TRANSFORMERS</p> <p>208V/240V PANEL</p> <p>480V PANEL</p> <p>TRANSFORMER (IN PLAN)</p> <p>FACP OR LCP OR OTHER PANEL</p> <p>PANEL SYMBOL FOR RISER DIAGRAM</p> <p>TRANSFORMER SYMBOL FOR RISER DIAGRAM</p> <p>TRANSFER SWITCH SYMBOL FOR RISER DIAGRAM ATS=AUTOMATIC; MTS=MANUAL (USED FOR GENERATOR OR OTHER POWER SOURCES)</p> <p>ENCLOSED FUSE SYMBOL FOR RISER DIAGRAM</p> <p>ELECTRIC METER SYMBOL FOR RISER DIAGRAM</p> <p>CIRCUIT BREAKER SYMBOL FOR RISER DIAGRAM</p> <p>GFI CIRCUIT BREAKER SYMBOL FOR RISER DIAGRAM</p> <p>FEEDER TAG SYMBOL FOR RISER DIAGRAM</p> <p>GROUND CONNECTION</p>	<p>PROJECT SUMMARY</p> <p>THIS PROJECT IS THE BACK PARKING LOT LIGHTING FOR A CAR DEALERSHIP. NEW LIGHT POLES, POLE LIGHTS, AND CONTROLS ARE ADDED TO THE SITE.</p> <p><u>SERVING POWER UTILITY</u></p> <p>PUD SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT</p>	<p>APPLICABLE CODES</p> <p>ELECTRICAL WORK SHALL BE GOVERNED BY THE FOLLOWING CODES:</p> <ul style="list-style-type: none"> 2020 NATIONAL ELECTRIC CODE 2018 WASHINGTON STATE ENERGY CODE OTHER LOCAL & MUNICIPAL CODES IN EFFECT AT TIME OF PERMIT APPLICATION <p>THE EC SHALL SATISFY CODE, AHJ, DRAWINGS AND SPECIFICATIONS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST.</p>															
<p>SWITCHES</p> <p>SINGLE POLE SWITCH OR MANUAL OVERRIDE SWITCH</p> <p>THREE WAY SWITCH</p> <p>THREE WAY SWITCH W/ DIMMING</p> <p>FOUR WAY SWITCH</p> <p>DIMMER SWITCH (PRESET DIMMER)</p> <p>KEYED SWITCH</p> <p>OCCUPANCY SENSOR SWITCH (MOTION & SOUND ACTIVATED)</p> <p>PILOT LIGHT SWITCH</p> <p>TIMER SWITCH</p> <p>DIGITAL SWITCH</p>	<p>SENSORS</p> <p>CARD READER</p> <p>CO SENSOR</p> <p>CARBON MONOXIDE DETECTOR W/SMOKE DETECTOR</p> <p>DAYLIGHT SENSOR</p> <p>OCCUPANCY SENSOR</p> <p>PHOTOELECTRIC CELL</p> <p>PHOTOCELL</p> <p>PHOTO SENSOR</p> <p>SMOKE DETECTOR</p> <p>THERMOSTAT</p> <p>DUCT DETECTOR</p>	<p>DATA/PHONE</p> <p>TELEPHONE JACK(S) (CAT 3 CABLE); X=# OF PORTS</p> <p>DATA JACK(S) (CAT 6 CABLE); X=# OF PORTS</p> <p>DATA/TELEPHONE JACK(S) (CAT 6 CABLE); X=# OF PORTS</p> <p>COAX CABLE; X=# OF PORTS</p> <p>CEILING MOUNTED DATA CABLE; X=# OF PORTS</p> <p>TELEPHONE PANEL</p> <p>COMBINATION FLOOR RECEPTACLE & DATA/PHONE OUTLET</p> <p>HDMI OUTLET</p> <p>TV OUTLET</p>	<p>GENERAL NOTES</p> <ol style="list-style-type: none"> "CONTRACTOR" MEANS "ELECTRICAL CONTRACTOR" WHEN REFERENCED ANYWHERE IN THE ELECTRICAL CONSTRUCTION DOCUMENTS UNLESS COORDINATED WITH THE GENERAL CONTRACTOR. "NEEDED" MEANS ITEMS CALLED OUT IN THE CONTRACT DOCUMENTS PLUS ANY OTHER ITEMS TO MAKE A COMPLETE AND OPERABLE SYSTEM THAT ARE NOT CALLED OUT. "OWNER" MEANS THE OWNER OR THE OWNER'S REPRESENTATIVE(S). "ARCHITECT" MEANS THE ARCHITECT OF RECORD OR THEIR REPRESENTATIVE(S). THE INTENT OF THE SPECIFICATIONS AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE ELECTRICAL WORK. PERMITS AND FEES: THE ELECTRICAL CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES AND INSPECTIONS NECESSARY TO COMPLETE THE ELECTRICAL SCOPE OF WORK PRIOR TO STARTING THE WORK. WARRANTY: THE ELECTRICAL CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY ARCHITECT AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY, WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND WORKMANSHIP. PERFORM ALL WORK IN ACCORDANCE WITH THE CURRENT NATIONAL ELECTRICAL CODE, STATE CODES, CITY ELECTRICAL CODES AND ALL OTHER APPLICABLE CODES INCLUDING ANY STATE OR LOCAL ENERGY CODES. ALL WORK SHALL ALSO BE IN COMPLIANCE WITH BUILDING OWNER'S CRITERIA. IN CASE OF CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, CODES, ORDINANCES AND AUTHORITIES HAVING JURISDICTION, THE MOST STRINGENT STANDARD (IN THE OPINION OF THE ENGINEER) SHALL APPLY. THE EC SHALL SATISFY CODE, AHJ, DRAWINGS AND SPECIFICATIONS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST. THE ELECTRICAL CONTRACTOR SHALL SCHEDULE ALL ELECTRICAL SYSTEM(S) OUTAGES WITH THE GENERAL CONTRACTOR AND LANDLORD/OWNER AT LEAST 24 HOURS IN ADVANCE. UNLESS APPROVED OTHERWISE, ALL OUTAGES SHALL OCCUR BETWEEN 11:00PM AND 5:00AM. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ELECTRICAL WORK WITH OTHER TRADES. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS; USE ACTUAL BUILDING DIMENSIONS. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO DEMOLITION, CUTTING, OR EXCAVATION INCLUDING UNDERGROUND, IN SLAB, AND INSIDE WALLS. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL INTENT OR ARRANGEMENT OF SYSTEM(S). FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITION. MAKE APPROPRIATE ADJUSTMENTS AT ARCHITECT'S DIRECTION. PROVIDE ALL BRANCH CIRCUITING AND DEVICES, EVEN IF NOT SHOWN. PROVIDE ALL WIRING AND WIRE QUANTITIES TO ACCOMPLISH CIRCUITING TO MEET SPEC REQUIREMENTS AND APPLICABLE CODES. SEE ARCH. SHEETS FOR PAINTING AND COLORS FOR ANY EXPOSED J-BOXES, CONDUIT, ETC. COORDINATE THE REQUIREMENTS FOR OVERCURRENT PROTECTIVE DEVICE SIZE, DISCONNECT SWITCH SIZE, AND CONDUCTOR AND CONDUIT SIZES WITH THE REQUIREMENTS OF THE MECHANICAL EQUIPMENT THAT IS ACTUALLY TO BE INSTALLED AND PROVIDE AND INSTALL ALL ELECTRICAL COMPONENTS AS REQUIRED. THE ELECTRICAL COMPONENT SIZING SHOWN ON THESE DRAWINGS IS BASED UPON THE REQUIREMENTS FOR THE SPECIFIED MECHANICAL EQUIPMENT AVAILABLE AT THE TIME OF DESIGN. VARIATIONS IN REQUIREMENTS MAY OCCUR AS A RESULT OF THE PROVISION OF OTHER MANUFACTURER'S EQUIPMENT OR IN CHANGES TO THE SPECIFIED EQUIPMENT. SUCH REVISED REQUIREMENTS ARE A PART OF THIS CONTRACT AND SHALL BE ACCOMMODATED WITHOUT ADDITIONAL CHARGE. 																
<p>MISC.</p> <p>CONDUIT STUB-UP</p> <p>CONDUIT STUB-DOWN</p> <p>CIRCUIT HOMERUN TO PANEL</p> <p>EXTENSION OF CIRCUIT FROM LOCAL DEVICE.</p> <p>FAULT CURRENT VALUE AT PANEL</p>				<p>CITY FILE NO. PA 22-035</p> <p>PROJECT: NEW AUTO DEALERSHIP KENDALL SUBARU - BACK LOT SNOKEY POINT BLVD. MARYSVILLE, WASHINGTON 98223</p> <p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>STREET LTG CHANGES</td> <td>04-22-2024</td> </tr> </tbody> </table> <p>DATE: 10/30/2023</p> <p>SHEET TITLE: ELECTRICAL COVER</p> <p>PERMIT SET</p> <p>DESIGNER: Josh Emery</p> <p>CHECKED BY: Tim Carr</p> <p>SHEET</p> <p>E0.01</p>	NO.	DESCRIPTION	DATE	1	STREET LTG CHANGES	04-22-2024									
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RENSCH ENGINEERING

MECHANICAL AND ELECTRICAL BUILDING DESIGN

111 AVE. C, SUITE 104
SNOHOMISH, WA 98290

office: 360-863-6677
fax: 360-863-3565



CITY FILE NO. PA 22-035

PROJECT: NEW AUTO DEALERSHIP
KENDALL SUBARU - BACK LOT
SNOKEY POINT BLVD.
MARYSVILLE, WASHINGTON 98223

REVISIONS

NO.	DESCRIPTION	DATE
1	STREET LTG CHANGES	04-22-2024

DATE: 10/30/2023

SHEET TITLE: ELECTRICAL COVER

PERMIT SET

DESIGNER: Josh Emery

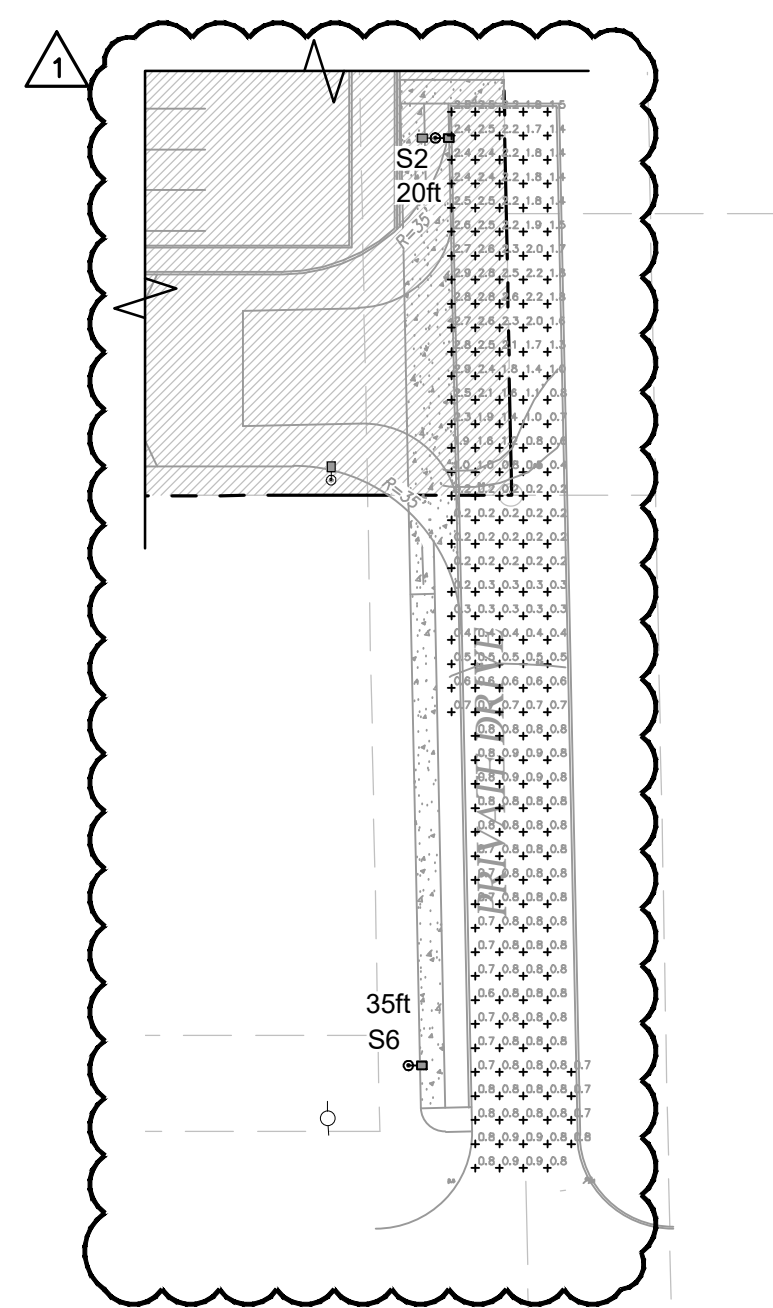
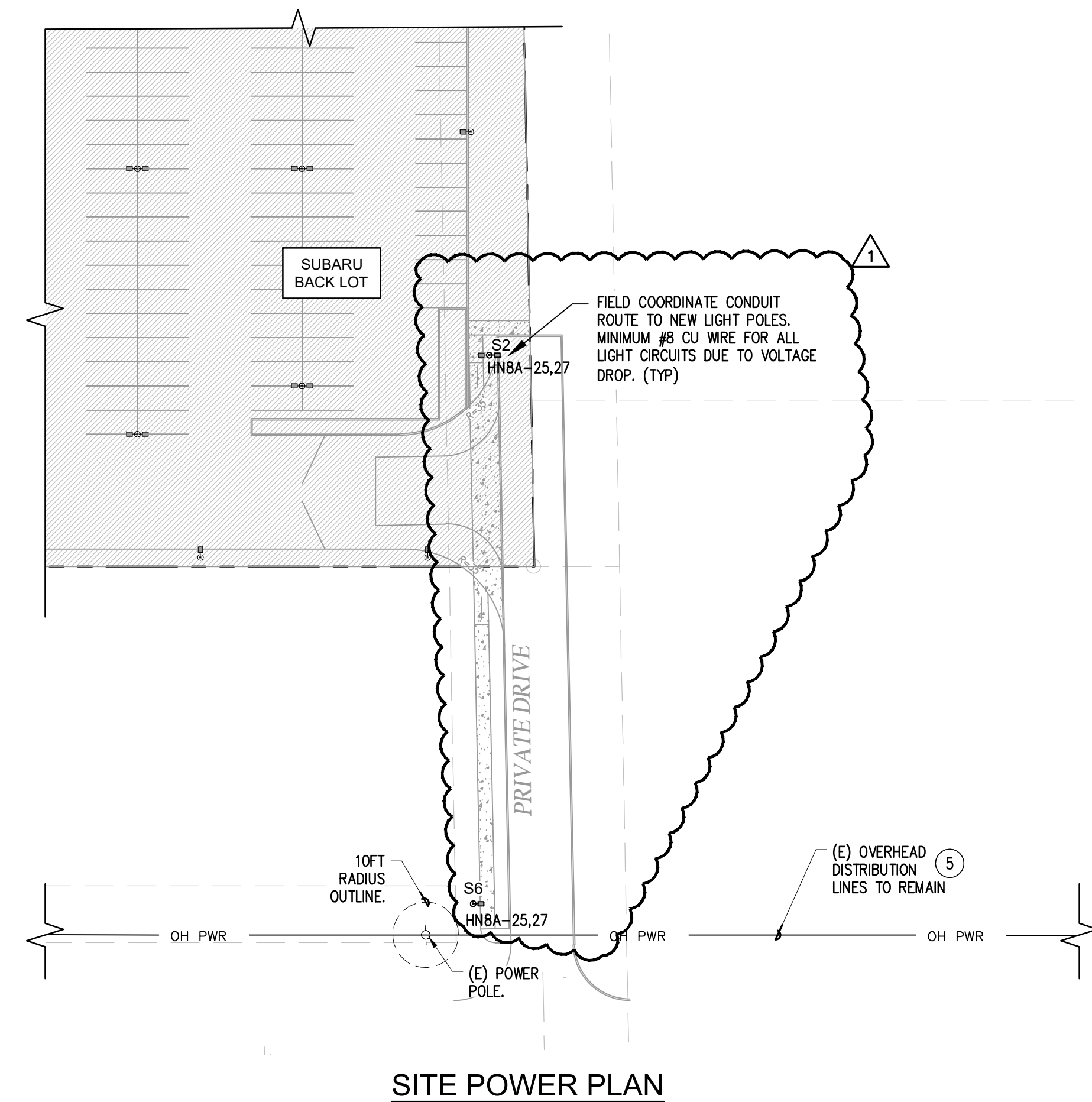
CHECKED BY: Tim Carr

SHEET

E0.01

GENERAL NOTES	KEY NOTES
<p>A. CALCULATIONS ASSUME A 0.90 LIGHTING LOSS FACTOR.</p> <p>B. COLORS AND FINISHES SHALL COMPLY WITH PUD STANDARDS.</p> <p>C. LIGHTING CONTROL SHALL BE BY PE CELL.</p> <p>D. COORD. W/ GC FOR LIGHT STANDARD FOOTING. ELEVATE FOOTING ABOVE GRADE WHERE POSSIBILITY OF BEING HIT BY A CAR. VERIFY HEIGHT.</p> <p>E. ALL SITE LIGHTS TO BE DARK SKY COMPLIANT FIXTURES.</p>	<p>1. OVERHEAD DISTRIBUTION LINES AT 80FT.</p>

STREET LIGHTING ANALYSIS			
EDDS: 3-506 C.D.2 / Table 3-5.01 Collector Arterial - Commercial / Standard Plan 3-506-002			
BASIC	IESNA RECOMMENDED ILLUMINATION LEVEL (IESNA HANDBOOK 10th Edition)	City of Marysville Engineering and Development Standards (EDDS) Requirements	ACTUAL PER PHOTOMETRIC PLAN
Zone		GC (General Commercial)	
Pole Height / Arm Length	--	35ft / 12ft	20ft / 2ft 35ft / 2ft
Minimum Horizontal Illuminance	.2 fc	0.5 fc min.	.2 fc
Uniformity Ratio (AVE:MIN)	--	4:1	5:1
Street Light Ave - Collector Arterial	--	1.2 fc	1.1 fc



ELECTRICAL STREET LIGHTING PLAN

SCALE: 1"=40'

0 10' 20' 40' 80'

LIGHTING FIXTURE SCHEDULE

Type	Description	Manufacturer	Model #	Color Temp	Lamp	Shield	Voltage	Watts	Lumen	BUG	Notes
Exterior Street Lighting Equipment											
S2	LED single Head Pole Light w/ Pole. Tot Ht: 20ft; Type 4 dist	Exo Outdoor Lighting	ASL1-160L-100-3K7-4W-480-A-DBT-BTS-40F	3000k	Integrated LED	NO	480V	88	11138	2 0 3	total pole height: 20ft Provide PE Cell
S6	LED single Head Pole Light w/ Pole. Tot Ht: 35ft; Type 4 dist	Exo Outdoor Lighting	ASL1-160L-100-3K7-4W-480-A-DBT-BTS-40F	3000k	Integrated LED	NO	480V	88	11138	2 0 3	total pole height: 35ft Provide PE Cell

Submitted by Pacific Lighting Systems

PLS | Job Name: Subaru - Kendall Marysville
Contractor: Johnson Electric Inc. (Kirkland)
Distributor: Slusser Electric - Seattle (Seattle)

S2/S6

DATE: _____ LOCATION: _____
TYPE: _____ PROJECT: _____
CATALOG #: _____

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

FEATURES

- Compact sleek design with multiple LED configurations and simple installation
- The SLING includes a universal mounting block for easy pole installation or mast arm option for 2-3/8" OD roadway brackets
- Capable of replacing up to 1000w HID luminaires
- Micro Strike optical distributions of Type 2, 3, 4W or 52W
- Tool-less entry option for easy installation and maintenance
- 15G rated for high vibration applications including bridges and overpasses



CONTROL TECHNOLOGY

WISCAPE

CERTIFICATIONS (CONTINUED)

- DLC DesignLights Consortium Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- 15G rated for ANSI C136.31 high vibration applications
- Meets IESNA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American - Construction Materials under Trade Agreements effective 04/23/2020.

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Separate optical and electrical compartment for improved thermal management and optimum component operation
- TGC thermostat polyester powder paint finish applied at normal 2.5 mil thickness

ELECTRICAL

- Universal 50/277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature: -40° C to 40° C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20KA and 10KV protection meeting ANSIEEE C62.41.2 Category C High and Surge Location Category C3. Automatically takes future off-line for protection when device is consumed

CERTIFICATIONS (CONTINUED)

- Meets IESNA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American - Construction Materials under Trade Agreements effective 04/23/2020.

OPTICS

- Entire optical aperture illuminates to create a large luminous surface area resulting in a low glare appearance without sacrificing optical performance
- Premium engineered individual acrylic lenses deliver IES Type 2, 3, 4W and 52W distributions
- Lens distributions are field rotatable (in 90° increments) or interchangeable for job site
- 3000K, 4000K, or 5000K (70 CRI CCT
- 80, 160, or 320 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

- Tool-less entry to wiring/driver compartment optional
- Arm mounting works with S2 drill pattern
- Fixture ships with slotted mounting block to accommodate wide range of drill patterns for easy retrofit opportunities
- Mast arm filter accessory or option available for 2-3/8" OD brackets with vertical lift of 2", 3" or 4"

KEY DATA

Lumen Range	3,200-36,000
Wattage Range	25-255
Efficacy Range (LPW)	118-148
Weight lbs. (kg)	14.5-175 (6.6-81)

WARRANTY

- 5 Year warranty

CONTROL ACCESSORIES

- Photo control, occupancy sensor and Zigbee wireless available for complete on/off and dimming control
- 7-pin ANSI C136.41-2013 photocell receptacle option available for twist lock photocells or wireless control modules (control accessories sold separately)
- Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6'
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application

CERTIFICATIONS

- Listed to UL598 and CSA C22.2#50.0.24 for wet locations and 40°C ambient temperatures

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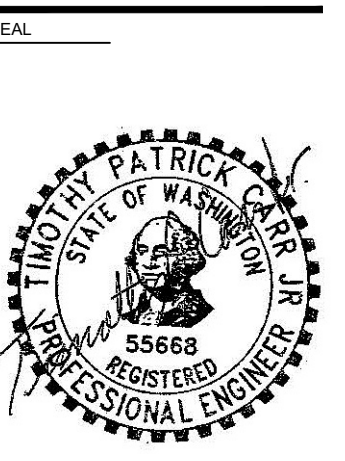
Submitted On: Feb 15, 2023
1/11
Index Page

RENSCH ENGINEERING

MECHANICAL AND ELECTRICAL BUILDING DESIGN

111 AVE. C, SUITE 104
SNOHOMISH, WA 98290

office: 360-863-6677
fax: 360-863-3565



CITY FILE NO.
PA 22-035

PROJECT
NEW AUTO DEALERSHIP
KENDALL SUBARU - BACK LOT
SNOKEY POINT BLVD.
MARYSVILLE, WASHINGTON 98223

REVISIONS

1	STREET LTG CHANGES	04-22-2024
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DATE

10/30/2023

SHEET TITLE

STREET LIGHTING
POWER &
PHOTOMETRIC
PLAN &
SCHEDULES

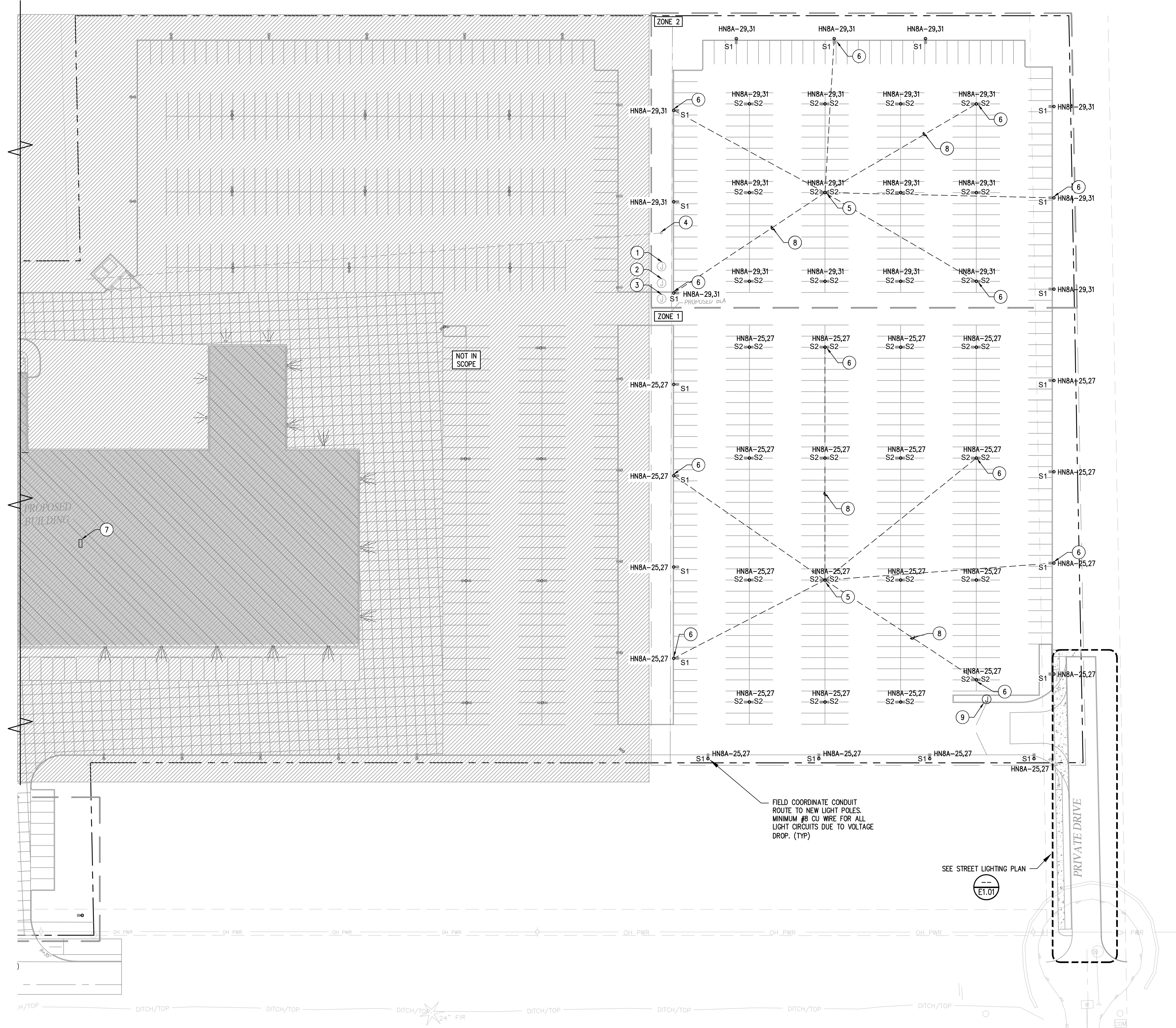
PERMIT SET

DESIGNER: Josh Ennsley
CHECKED BY: Tim Carr
SHEET

E1.01

E:\01 STREET LIGHTING POWER PLAN & SCHEDULES.DWG 4/22/2024 9:15 AM

L2.00 ELECTRICAL SITE POWER PLANING 4/22/2024 9:15 AM



ELECTRICAL SITE PLAN
 SCALE: 1"=40'
 0 20' 40' 80' 120'

GENERAL NOTES

- A. CONTRACTOR IS RESPONSIBLE FOR ALL CODE REQUIRED ELEMENTS, EVEN IF NOT SHOWN IN THESE PLANS INCLUDING, BUT NOT LIMITED TO, GFCL, AFCL, AND DISCONNECTS. CODE COMPLIANCE IS THE MINIMUM REQUIREMENT AND THESE PLANS SUPPLEMENT. BUT DO NOT EXEMPT THE REQUIREMENTS OF THE APPLICABLE CODE.
- B. ALL IS NEW UNLESS NOTED OTHERWISE WITH (E).
- C. CONTRACTOR IS RESPONSIBLE FOR SITE INVESTIGATION PRIOR TO START OF WORK REVEAL FULL SCOPE OF WORK.
- D. A LOCATING SERVICE SHALL BE USED TO LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING.
- E. REVIEW ALL CIVIL DRAWINGS AND COORDINATE WITH G.C. FOR TRENCHING ROUTE, LANDSCAPE REPAIR, ASPHALT PATCHINGS AS NEEDED. CONFIRM BACKFILL AND COMPACTION REQUIREMENTS WITH CIVIL ENGINEERING.

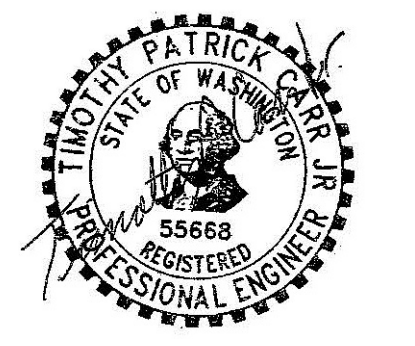
KEY NOTES

- 1. UTILIZE THIS 1" PVC CONDUIT, PROVIDED IN A PREVIOUS PERMIT, FOR THIS EXPANSION TO RUN CIRCUITING FOR SITE LIGHTS.
- 2. UTILIZE THIS 1" CONDUIT, PROVIDED IN A PREVIOUS PERMIT, FOR THIS EXPANSION'S VIDEO CABLING. COORDINATE WITH CAMERA PROVIDER FOR CAMERA LOCATIONS AND PROVIDE ACCORDINGLY.
- 3. UTILIZE THIS 1" CONDUIT, PROVIDED IN A PREVIOUS PERMIT, FOR 120V RECEPTACLE CIRCUIT FOR THE CAMERA BOXES. COORDINATE WITH CAMERA PROVIDER FOR LOCATIONS AND REQUIREMENTS.
- 4. THIS STUBBED CONDUIT FROM THE UTILITY TRANSFORMER IS NOT BEING USED.
- 5. CAMERA BOX LOCATION (CONFIRM). CONFIRM CAMERA BOX LOCATIONS WITH CAMERA PROVIDER. INSTALL 120V RECEPTACLE AT EACH BOX. PROVIDE SMALL BUCK-BOOST TRANSFORMER OFF LIGHTING CIRCUIT TO POWER THE 120V RECEPTACLES AT THESE LOCATIONS.
- 6. CAMERA LOCATION: PROVIDE 1" CONDUIT FROM THIS LOCATION BACK TO THE CAMERA BOX LOCATION AS SHOWN BY DASHED LINES.
- 7. PROVIDE POWER TO THE ROOFTOP MOUNTED WIRELESS TRANSMITTER FOR THE BACK LOT CAMERAS. CONFIRM REQUIREMENTS AND LOCATION WITH CAMERA VENDOR.
- 8. PROVIDE 1" UG CONDUIT FOR CAMERA USE. CONFIRM WITH CAMERA VENDOR. TYPICAL.
- 9. PROVIDE POWER TO GATE OPERATOR. CONFIRM VOLTAGE FROM GATE MANUFACTURER AND PROVIDE ACCORDINGLY. IF 120V, USE CLOSEST POLE LIGHTING CIRCUIT AND BUCK BOOST TRANSFORMER. COORDINATE WITH GATE MANUFACTURER FOR CONTROLS AND PROVIDE ACCORDINGLY.

POLE LIGHTING CONTROLS ZONES MAY BE INDEPENDENTLY DIMMED. TOTAL SITE LIGHTING SHALL BE DIMMED 30% OR MORE OUTSIDE OF BUSINESS HOURS.

SEE STREET LIGHTING PLANS FOR STREET LIGHTS

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CITY FILE NO.
 PA 22-035

PROJECT
 NEW AUTO DEALERSHIP
KENDALL SUBARU - BACK LOT
 SMOKEY POINT BLVD.
 MARYSVILLE, WASHINGTON 98223

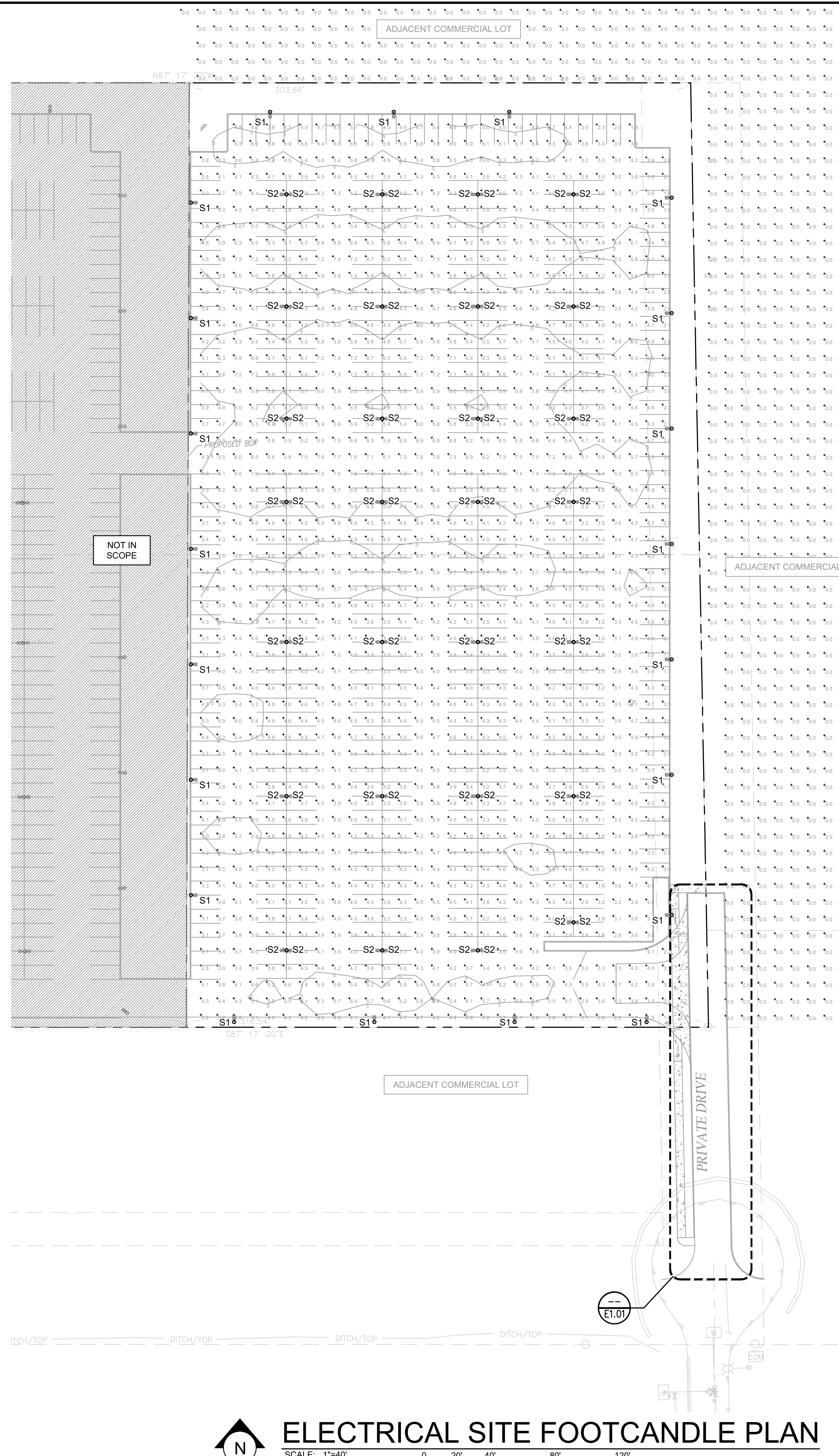
REVISIONS
 1 STREET LTG CHANGES 04-22-2024

DATE
 10/30/2023
 SHEET TITLE
 ELECTRICAL SITE PLAN

PERMIT SET

DESIGNER: Josh Ensky
 CHECKED BY: Tim Carr
 SHEET

E2.00



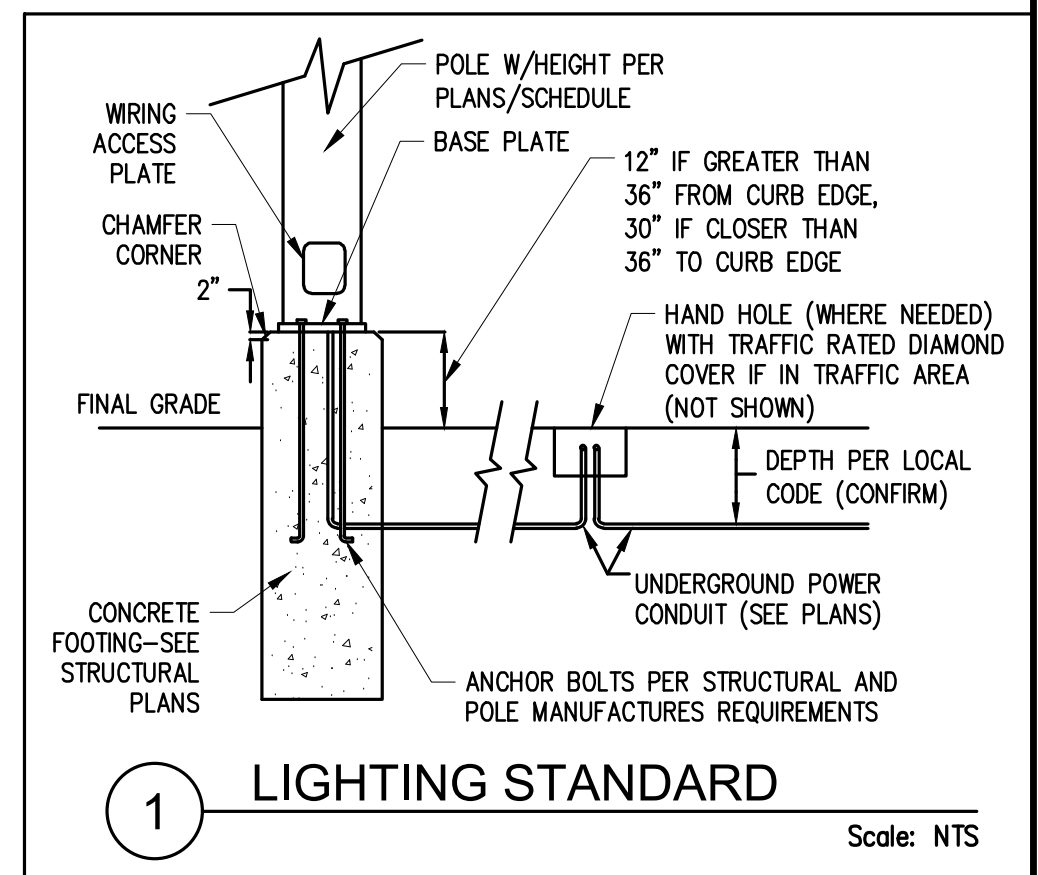
ELECTRICAL SITE FOOTCANDLE PLAN

SCALE: 1"=40'

0 20' 40' 80' 120'

GENERAL NOTES

- CALCULATIONS ASSUME A 0.90 LIGHTING LOSS FACTOR.
- ARCHITECT TO DEFINE ALL COLORS & FINISHES.
- ELECTRICAL CONTRACTOR SHALL DESIGN CONTROLS TO COMPLY WITH 2018 WSEC. SEE LIGHTING CONTROL SCHEDULE ON SHEET E1.20 FOR CONTROL FUNCTIONS.
- COORD. W/ GC FOR LIGHT STANDARD FOOTING. ELEVATE FOOTING ABOVE GRADE WHERE POSSIBILITY OF BEING HIT BY A CAR. VERIFY HEIGHT.
- ALL SITE LIGHTS TO BE DARK SKY COMPLIANT FIXTURES.
- ELECTRICAL POWER DESIGN, CIRCUITING, DISTRIBUTION, METERING, ETC. SHALL BE DESIGNED BY OTHERS. THIS PLAN SHOWS LIGHTING PERFORMANCE AND CONTROLS ONLY.



Submitted by Pacific Lighting Systems

Job Name: Subaru - Kendall Marysville
Contractor: Johnson Electric Inc. (Kirkland)
Distributor: Stussler Electric - Seattle (Seattle)

S-1 / S-2

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

EXO OUTDOOR LIGHTING

SLING Micro Strike AREA/STREET/ROAD LIGHTER

FEATURES

- Compact sleek design with multiple LED configurations and simple installation
- The SLING includes a universal mounting block for easy pole installation or mast arm option for 2.38" OD roadway brackets
- Capable of replacing up to 1000w HD luminaires
- Micro Strike optical distributions of Type 2, 3, 4W or 5QW
- Tool-less entry option for easy installation and maintenance
- 15G rated for high vibration applications including bridges and overpasses

CONTROL TECHNOLOGY

WISCAPE

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Separate optical and electrical compartment for improved thermal management and optimum component operation
- TGC thermostat polyester powder paint finish applied on nominal 2.5 mil thickness

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- Premium engineered individual acrylic lenses
- Lens distributions are field rotatable (in 90° increments) or interchangeable for job site fine-tuning
- 3000K, 4000K, or 5000K (70 CR) CCT
- 80, 90, or 220 milpower LEDs
- 3000K, 4000K or 5000K (70 CR) CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

- Tool-less entry to wiring/driver compartment optional
- Arm mounting works with S2 drill pattern
- Fixture ships with slotted mounting block to accommodate wide range of drill patterns for easy retrofit opportunities
- Must arm filler accessory or option available for 2.38" OD brackets with vertical tilt of +/- 0° or +/- 2°

ELECTRICAL

- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature: -40° C to 40° C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20KA and 10KV protection meeting ANSI/IEEE C52.41.2 Category C High and Surge Location Category C2, Automatically takes fixture off-line for protection when device is consumed

CERTIFICATIONS (CONTINUED)

- DLC (Design Lights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlighting.com
- 15G rated for ANSI C136.31 high vibration applications
- IP65 optical assembly
- Meets ICA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American Construction Materials under Trade Agreements effective 04/23/2020.

WARRANTY

- 5 Year warranty

KEY DATA	
Lumen Range	3,200 - 36,000
Wattage Range	25 - 255
Efficacy Range (LPW)	110-148
Weight (lbs. (kg))	14.5 - 17.5 (6.6 - 8.0)

currentlighting.com/enr
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Submitted On: Feb 15, 2023 1/11 Index Page

SITE LIGHTING ANALYSIS			
Marysville Municipal Code: 22C.020.250(4)(d) Commercial Ext. Lighting / 22C.130.50(3)(d) Parking Illumination			
BASIC	IESNA RECOMMENDED ILLUMINATION LEVEL (IESNA HANDBOOK 10th Edition)	Marysville CODE (MMC) Requirements	ACTUAL PER PHOTOMETRIC PLAN
Zone	GC (General Commercial)		
Max. Pole Height - Parking Lot	--	25ft Max	25ft Max
Fixture Type	Shielding provided / Full cut-off / Dark Sky Rated		
Minimum Horizontal Illuminance	.2 fc	0.5 fc min.	1 fc
Parking Average Illuminance Range	.5-3 fc ave.	undefined*	3 fc
Parking Uniformity Ratio (AVE:MIN)	2:1	undefined*	4:1
Parking Minimum Illuminance	0.1 fc	undefined*	1.2 fc
Maximum Light Trespass @ Business	--	.5fc	< 0.4 fc

The parking area lighting is designed to prevent glare to motorists on public street and to residents of adjoining properties and are Dark Sky Friendly approved fixtures. The parking area lighting also meets the level of illumination, uniformity ratios and minimum lumen intensities specified in the illumination guidelines set by the Illumination Engineering Society of North America, current edition and AMC title.

* where code requirements are indicated w/ 'undefined', IESNA values shall be used as basis of design.

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CITY FILE NO. PA 22-035
 PROJECT: NEW AUTO DEALERSHIP
 KENDALL SUBARU - BACK LOT
 SMOKEY POINT BLVD.
 MARYSVILLE, WASHINGTON 98223

REVISIONS

NO.	DESCRIPTION	DATE
1	STREET LTG CHANGES	04-22-2024

DATE: 10/30/2023
 SHEET TITLE: ELECTRICAL SITE FOOTCANDLE PLAN

PERMIT SET

DESIGNER: Josh Enns
 CHECKED BY: Tim Carr
 SHEET

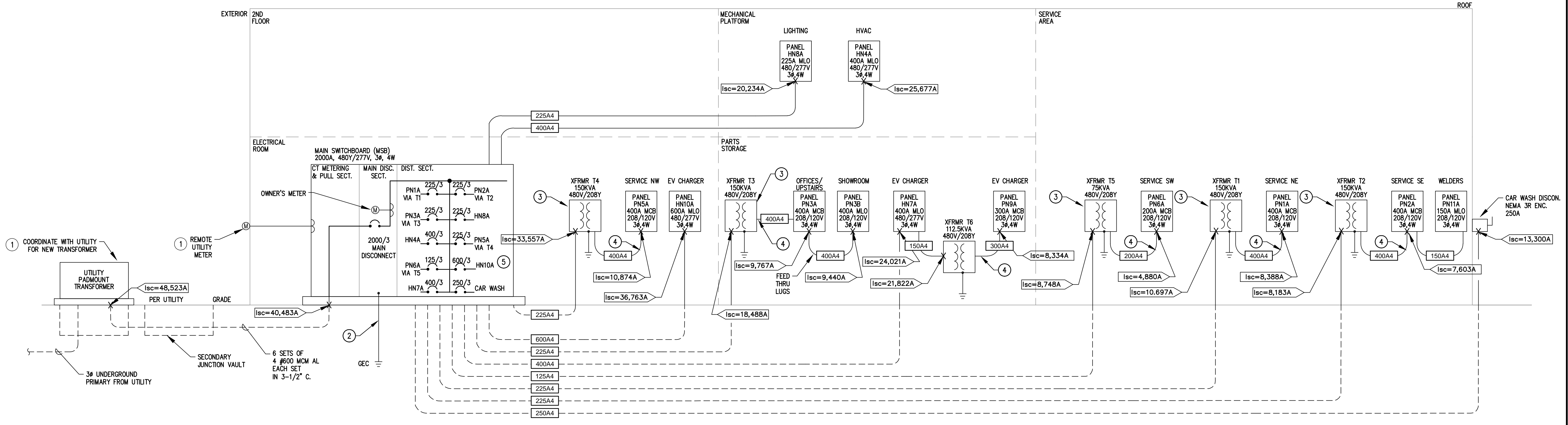
E2.10

3 PHASE/4W - FEEDER SCHEDULE (SERVICE ENTRANCE CONDUCTORS MAY HAVE ADDITIONAL REQUIREMENTS PER CODE) FEEDER SIZES BASED ON 2020 NEC TABLE 310.16 75 °C COLUMN (NOTE 1)																	
COPPER CONDUCTOR TAG	ALUMINUM CONDUCTOR TAG	FEEDER AMPACITY (NOTE 2,3)	QTY OF COPPER SETS	QTY OF ALUM. SETS	CONDUIT SIZE (per set) - COPPER			CONDUIT SIZE (per set) - ALUMINUM			PHASE CONDUCTOR SIZE (COPPER)	PHASE CONDUCTOR SIZE (ALUMINUM)	EQUIPMENT GROUNDING CONDUCTOR (EGC)		GROUNDING ELECTRODE CONDUCTOR, ETC.		COMMENTS
					(THHN, THWN, T)	(THHN, THWN, T)	(THHN, THWN, T)	(THHN, THWN, T)	(THHN, THWN, T)	(THHN, THWN, T)			EGC SIZE - COPPER (NEC 250.122) (NOTE 4)	EGC SIZE - ALUMINUM (NEC 250.122) (NOTE 4)	EGC (NOT GEC) SIZE BASED ON UPSTREAM OVERCURRENT PROTECTION RATED AT:	Copper GEC, GC, SSB, MBL, SBL (NEC 250.66 & 250.102) (C)(1) (NOTE 9)	
125C4	125A4	125	1	1	1-1/2" / 1-1/2"	2-1/2"	1	1	2-1/2"	1	2/0	6	200 A	6	4		
150C4	150A4	150	1	1	1-1/2" / 1-1/2"	2-1/2"	1	1	2-1/2"	1	3/0	6	200 A	6	4		
225C4	225A4	225	1	1	2-1/2" / 2"	3" / 2-1/2"	1	1	3"	1	3/0	4	300 A	2	1/0		
250C4	250A4	250	1	1	2-1/2" / 2-1/2"	3" / 2-1/2"	1	1	3"	1	350	4	300 A	2	1/0		
300C4	300A4	300	1	1	3" / 2-1/2"	3-1/2" / 3"	1	1	3"	1	500	4	300 A	2	1/0		
400C4	400A4	400	1	2	3-1/2" / 3-1/2"	2-1/2" / 2-1/2"	1	1	3"	1	600	3	400 A	1	1/0		
600C4	600A4	600	2	2	3" / 2-1/2"	3-1/2" / 3"	1	1	3"	1	350	500	1	2/0	40		

NOTES
1. ALL RESTRICTIONS, ADJUSTMENTS, AND CORRECTION FACTORS DEFINED FOR TABLE 310.15(B)(16) IN NEC MUST BE FOLLOWED WHEN APPLYING THIS TABLE INCLUDING TEMP CORRECTION FACTORS.
2. CONDUCTOR SIZING IS BASED ON NO MORE THAN 3 CURRENT CARRYING CONDUCTORS IN A RACEWAY. IF ADDITIONAL CONDUCTORS ARE USED, DERATING PER CODE SHALL BE APPLIED.
3. FEEDERS ROUTED ABOVE A ROOF AND EXPOSED TO SUNLIGHT SHALL BE DERATED ACCORDING TO NEC.
4. EQUIPMENT GROUNDING CONDUCTOR (EGC) SHALL BE FULL SIZE IN EACH PARALLELED CONDUIT PER NEC. SIZING BASED ON UPSTREAM OVERCURRENT PROTECTION. NOT TO BE USED FOR GEC.
5. GROUNDED CONDUCTOR(S) (NEUTRAL) SHALL BE THE SAME SIZE AND QUANTITY AS THE PHASE CONDUCTORS. DE-RATING THE GROUNDED (NEUTRAL) CONDUCTOR SHALL NOT BE ALLOWED.
6. THE CONDUCTORS SHOWN ARE MINIMUM SIZE AND CAN BE UPSIZED, FOR EXAMPLE FROM #700 TO #750, DUE TO AVAILABILITY OR OTHER CONSIDERATIONS.
7. WHERE SERVICE CONDUCTORS ARE USED, CONFIRM GROUND WIRE REQUIREMENTS WITH POWER COMPANY AND CONFIRM POWER COMPANY ALLOWABLE WIRE SIZES AT THE SERVICE POINT OF CONNECTION. NOTIFY RENSCH ENGINEERING OF ANY CONDUCTOR SIZE ADDITIONAL TABLE NOTES IN CODE.
8. CONDUIT SIZES SHOWN ARE MINIMUM. EC TO CONFIRM INSTALLATION & INCREASE CONDUIT SIZES SHOWN AS MAY BE NEEDED TO ALLOW WIRE TO BE PULLED.
9. GEC SIZE BASED ON NEC TABLE 250.66 (SEE ADDITIONAL TABLE NOTES IN CODE), GROUNDED CONDUCTOR (GC), MAIN BONDING JUMPER (MBJ), SYSTEM BONDING JUMPER (SBJ), AND SUPPLY-SIDE BONDING JUMPER (SSBJ) BASED ON NEC TABLE 250.102(C)(1) (SEE ADDITIONAL TABLE NOTES IN CODE).
10. CONDUCTOR SIZES SHOWN ARE MINIMUM SIZES ALLOWED. IF FEEDER TAG IS USED FOR SERVICE ENTRANCE CONDUCTORS, CONTRACTOR SHALL COORDINATE WITH POWER UTILITY FOR THEIR LUG SIZES, # OF PARALLEL RUNS, AND CONDUCTOR SIZES IF CONDUCTORS ARE PROVIDED BY UTILITY. THE USE OF A FEEDER TAG ON SERVICE LATERAL SHALL NOT RELIEVE CONTRACTOR OF THE RESPONSIBILITY TO COORDINATE WITH UTILITY AND PROVIDE CONDUIT AND CONDUCTORS ACCORDINGLY.

FAULT CURRENTS UPDATED PER PUD TRANSFORMER AVAILABLE FAULT CURRENT.

RISE R IS FOR REFERENCE ONLY. RISE R IS ON PREVIOUS PERMIT.



ELECTRICAL PARTIAL RISER DIAGRAM

NTS

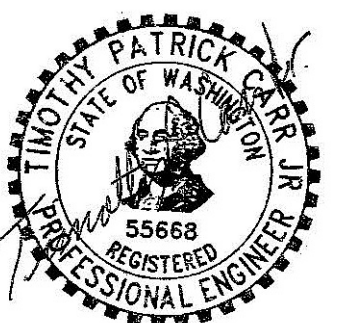
GENERAL NOTES

- ALL CONTENT ON THIS SHEET IS ON ANOTHER PERMIT UNLESS NOTED OTHERWISE.
- ALL PANELS/EQUIPMENT SHALL BE PERMANENTLY LABELED FOR "ARC FLASH HAZARD" AS REQUIRED BY NEC. 110.16 OF THE NEC.
- COORDINATE ALL SERVICE EQUIPMENT AND INSTALLATION REQUIREMENTS WITH THE SERVING POWER UTILITY.
- ALL ELECTRICAL PANELS & EQUIPMENT SHALL HAVE AIC/SCCR RATINGS WHICH EXCEED AVAILABLE FAULT CURRENTS INDICATED. SERIES RATING MAY NOT BE USED WITHOUT SPECIFIC CONSENT BY RENSCH ENGINEERING.
- AVAILABLE FAULT CURRENTS ARE SHOWN ON THIS REVISION BASED ON INFORMATION PROVIDED BY PUD AND ESTIMATED DISTANCES FROM DESIGN PLANS. CONTRACTOR SHALL PROVIDE DEVICES AND EQUIPMENT WITH AIC OR SCCR RATINGS IN EXCESS OF THE FAULT CURRENT SHOWN.

KEY NOTES

- UTILITY: COORDINATE WITH UTILITY FOR THEIR REQUIREMENTS.
- GROUNDING: INSTALL GROUNDING SYSTEM PER CODE. REFER TO GROUNDING DETAILS ON ELECTRICAL DETAILS SHEET.
- XFMR DISCONNECT: PRIMARY DISCONNECTING MEANS SHALL BE IMPLEMENTED AT THE MAIN SWITCH GEAR. DISCONNECT SHALL BE LOCKABLE OPEN AND ITS LOCATION SHALL BE FIELD MARKED ON THE XFMR.
- TAP CONDUCTORS SHALL MEET 10' TAP RULE REQUIREMENTS.
- INSTALL NEW 600A BREAKER IN SWITCHBOARD. CONFIRM BREAKER PROVISION AVAILABLE AND PROVIDE ACCORDINGLY.

RENSCH ENGINEERING
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CITY FILE NO. PA 22-035

PROJECT: NEW AUTO DEALERSHIP
KENDALL SUBARU - BACK LOT
SMOKEY POINT BLVD.
MARYSVILLE, WASHINGTON 98223

REVISIONS:
1 STREET LTG CHANGES 04-22-2024

DATE: 10/30/2023
SHEET TITLE: ELECTRICAL RISER DIAGRAMS

PERMIT SET

DESIGNER: Josh Ensky
CHECKED BY: Tim Carr
SHEET

E5.01

10:00 PM LIGHTING SCHEDULE AND CONTROL SCHEDULES.DWG 4/22/2024 9:16 AM

HATCHED FIXTURES ARE NOT USED IN THIS SET

EXTERIOR LIGHTING FIXTURE SCHEDULE												
Type	Description	Manufacturer	Model #	Color Temp	Lamp	Shield	Voltage	Watts	Lumen	BUG	Notes	
Exterior Site Lighting Equipment												
S1	LED single Head Parking Pole Light w/ Pole. Tot Ht: 20ft; Type 4 dist & Backlight control	Exo Outdoor Lighting	ASL1-160L-70-3K7-4W-480-A-DBT-BC-BTS-40F	3000k	Integrated LED	YES	480V	69	8,822	2 0 3	total pole height: 20ft Provide PE Cell	
S2	LED single Head Parking Pole Light w/ Pole. Tot Ht: 25ft; Type 4 dist	Exo Outdoor Lighting	ASL1-160L-100-3K7-4W-480-A-DBT-BTS-40F	3000k	Integrated LED	NO	480V	88	11,138	2 0 3	total pole height: 25ft Provide PE Cell	
S3	LED single Head Parking Pole Light w/ Pole. Tot Ht: 25ft; Type 4 dist	Exo Outdoor Lighting	ASL2-320L-145-3K7-4W-480-A-DBT-BTS-40F	3000k	Integrated LED	NO	UNV	145	19,669	3 0 5	total pole height: 25ft Provide PE Cell	
S4	LED single Head Parking Pole Light w/ Pole. Tot Ht: 20ft; Type 4 dist	Exo Outdoor Lighting	ASL2-320L-255-3K7-4W-480-A-DBT-BTS-40F	3000k	Integrated LED	NO	UNV	261	33,910	4 0 5	total pole height: 20ft Provide PE Cell	
S5	LED Head ONLY, Type 4 dist	Exo Outdoor Lighting	ASL2-320L-255-3K7-4W-480-A-DBT-BTS-40F	3000k	Integrated LED	NO	UNV	261	33,910	4 0 5	Provide PE Cell	
P1	LED Pedestrian Pole-top Light w/ Pole. Tot Ht: 14ft; SYM dist	Kim Lighting	UR20-192L-45-3K7-5W-480-FM44-DBT-NXOFM1R1D-UNV	3000k	Integrated LED	NO	UNV	45	4,931	3 2 1	total pole height: 14ft Provide PE Cell	
B1	LED Building Light	Lithonia	DSXW1 LED 10C 1000 30K T4M MVOLT	3000k	Integrated LED	NO	UNV	39	3,534	1 0 2	Control via Timeclock and Building Mounted PE Cell	
B2	LED Building Light	Lithonia	DSXW2 LED 20C 1000 30K T4M MVOLT	3000k	Integrated LED	NO	UNV	73	7,076	1 0 2	Control via Timeclock and Building Mounted PE Cell	
B3	LED Building Light @ Doors (1,163 LM)	Beacon	RWL1-48L-10-3K7-4W-UNV-DBT-E	3000k	Integrated LED	NO	277V	10	1,163	0 0 0	with Emergency Backup	
B4	LED Storefront Door Light	Barron Extronix	NFS-WB-20L-MWM-BA-G2	3000k	Integrated LED	NO	UNV	20			Normally ON	

GENERAL NOTES

1. ALL FINISH/COLOR BY OTHERS
2. CONFIRM ALL FIXTURE TYPES WITH ARCHITECT AND ENSURE FIXTURES INSTALLED DO NOT EXCEED INPUT WATTS INDICATED.
3. EC SHALL BE RESPONSIBLE TO INSTALL ALL CONTROL COMPONENTS AND WIRING PER MANUF'S REQUIREMENTS. SEE LIGHTING CONTROL REQUIREMENT.
4. PROVIDE CONNECTIONS AND ACCESSORIES AS NEEDED.
5. PROVIDE MATCHING POLE AND MOUNTING HARDWARE. POLE STYLE SHALL BE APPROVE BY OWNER.

EXTERIOR LIGHTING CONTROL

CODE 2018 WSEC C405.2.6

section	Title	How achieved (1)	Control Function Required
C405.2.6.1	Daylight Shutoff	via Pole and Building Mounted PE Sensors	configured to automaticall turn OFF when daylight is present and satisfies the lighting needs.
C405.2.6.3	Lighting Setback	via Timeclock, option #2	Wattage to automatically reduce by no less than 30% one hour after business close until one hour before business open. Timeclock shall comply with C405.2.6.4

GENERAL NOTES

1. SEE LIGHTING FIXTURE SCHEDULE
2. EC SHALL BE RESPONSIBLE TO INSTALL ALL CONTROL COMPONENTS AND WIRING PER MANUF'S REQUIREMENTS. SEE LIGHTING CONTROL REQUIREMENT.



CITY FILE NO.
PA 22-035

PROJECT
NEW AUTO DEALERSHIP
KENDALL SUBARU - BACK LOT
SMOKEY POINT BLVD.
MARYSVILLE, WASHINGTON 98223

REVISIONS

1	STREET LTG CHANGES	04-22-2024
---	--------------------	------------

DATE
10/30/2023
SHEET TITLE
SITE LIGHTING
FIXTURE &
CONTROL
SCHEDULES

PERMIT SET

DESIGNER: Josh Ensky
CHECKED BY: Tim Carr
SHEET

E6.00

RENSCH ENGINEERING
MECHANICAL AND ELECTRICAL BUILDING DESIGN
 office: 360-863-6677
 111 AVE. C, SUITE 104
 SNOHOMISH, WA 98290
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NOTE: PANEL, BREAKERS AND LOADS ARE ALL ON A PREVIOUS PERMIT UNLESS NOTED OTHERWISE

SWITCHBOARD MSB																			
VOLTAGE: 480V / 277V 3 Ph/4 W FED FROM: UTILITY TRANSFORMER BUS RATING: 2000 AMP HIGH LEG? No										MOUNTING: SURFACE OPTIONS: # OF SPACES: 15					MAINS DEVICE: MCB MAIN OCPD RATING: 2000 AMPS AIC RATING: SEE RISER LOCATION:				
NOTES	SERVES	TYPE	CKT BRKR	LOAD	POLE	CKT LOAD (VA)	PHASE LOADS			CKT LOAD (VA)	CKT BRKR	TYPE	SERVES	NOTES					
							A	B	C										
SECTION 1, BUS RATING XX AMPS, SECTION RATING XX AMPS																			
LOCK	PN1A VIA T1	SP	225 /3	30,325		68,786				38,461	225 /3	SP	PN2A VIA T2	LOCK					
		SP		28,921		69,668				40,747		SP							
		SP		26,680	65,207					38,527		SP							
LOCK	PN5A VIA T4	SP	225 /3	30,038		51,587				21,549	125 /3	SP	PN6A VIA T5	LOCK					
		SP		29,144		49,415				20,271		SP							
		SP		27,374	49,241					21,867		SP							
	HN4A HVAC	SP	400 /3	62,825		87,210				24,386	225 /3	SP	HN8A LIGHTING						
		SP		62,825		82,128				19,304		SP							
		SP		62,825	82,564					19,739		SP							
LOCK	PN3A VIA T3	SP	225 /3	38,335		91,135				52,800	400 /3	SP	HN7A EV CHARGERS						
		SP		40,385		81,185				40,800		SP							
		SP		36,557	67,757					31,200		SP							
	HN10A EV FAST CHARGERS	SP	600 /3	40,000		109,282				69,282	250 /3	NC	CAR WASH						
		SP		40,000		109,282				69,282		NC							
		SP		40,000	109,282							NC							
TOTAL PHASE CONNECTED VA =						374,051	408,001	391,679	USED TO SHOW PHASE BALANCE ONLY										
TOTAL PHASE CONNECTED AMPS =						1350	1473	1414											

	CONN. KVA	DEMAND FACTOR	DEMAND KVA	LOAD TYPE KEY:
TOTAL KITCHEN LOAD	= 27.20	X 0.65	= 17.68	SP = SUBPANEL
TOTAL LIGHTING LOAD	= 61.93	X 1.25	= 77.41	K = KITCHEN LOAD
TOTAL NON-CONT. LOAD	= 544.01	X 1.0	= 544.01	L = LIGHTING LOAD
TOTAL RECEPTACLE LOAD *	= 79.20	* see below	= 44.60	NC = NON-CONTINUOUS LOAD
TOTAL CONTINUOUS LOAD	= 42.84	X 1.25	= 53.56	R = RECEPTACLE LOAD
TOTAL HVAC LOAD	= 128.85	X 1.0	= 128.85	CL = CONTINUOUS LOAD
LARGEST MOTOR LOAD**	= 44.89	X 1.25	= 56.12	H = HVAC LOAD
ELECTRIC VEHICLE CHARGING	= 244.80	X 1.25	= 306.00	LM = LARGEST MOTOR LOAD
USER DEFINED	= 0.00	X 1.0	= 0.00	EV = ELECTRIC VEHICLE CHARGING
TOTAL KVA	= 1173.73		= 1228.23	USR1 = USER DEFINED
CONNECTED AMPS	= 1413.45		= 1479.08	
TOTAL AMPS	= 1413.45		= 1479.08	AMPS @480/277 3 Ph/4 W

NOTES:
 * IF RECEPTACLE LOAD IS OVER 10KW THEN THE AMOUNT OVER 10KW IS COUNTED AS 50% FOR NON-DWELLING UNITS PER 2014 NEC 220.44.
 ** THE LARGEST MOTOR OF THIS PANEL OR THE LARGEST MOTOR OF ANY SUBPANEL IS TAKEN AT 125%, ANY OTHER MOTORS ARE TAKEN AT 100%.
 LOCK - BREAKER SHALL BE LOCKABLE OPEN.

PANELS ARE ON PREVIOUS PERMIT
 SEE NEW ITEMS IN BOLDED TEXT.

NOTE: PANEL, BREAKERS AND LOADS ARE ALL ON A PREVIOUS PERMIT UNLESS NOTED OTHERWISE.

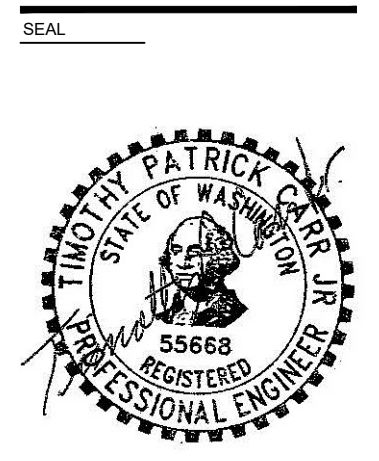
PANEL HN8A																			
VOLTAGE: 480V / 277V 3 Ph/4 W FED FROM: MSB BUS RATING: 225 AMP HIGH LEG? No										MOUNTING: SURFACE OPTIONS: # OF SPACES: 42					MAINS DEVICE: MLO MAIN OCPD RATING: 225 AMPS AIC RATING: SEE RISER LOCATION: FEED THRU LUGS: No				
NOTES	SERVES	TYPE	CKT BRKR	LOAD	POLE	CKT LOAD	PHASE LOADS			CKT LOAD	CKT BRKR	TYPE	SERVES	NOTES					
							A	B	C										
	LIGHTING - EX SITE ZONE 1	L	20 /2	1		1,865	2,659			794	2		LIGHTING - EX SITE ZONE 2						
		L		3		1,865				794	4								
	LIGHTING - EX SITE ZONE 3	L	20 /2	5		1,864			4,067	2,203	6		LIGHTING - EX SITE ZONE 4						
		L		7		1,864	4,067			2,203	8								
	LIGHTING - EXTERIOR BUILDING	L	20 /1	9		1,957		3,457		1,500	10		FRONT PYLON SIGN						
		L		11					0		12								
	LIGHTING - EXPRESS SERVICE	L	20 /1	13		1,864	4,750			2,886	14		LIGHTING - SERVICE DRIVE						
	LIGHTING - SHOWROOM NORTH	L	20 /1	15		3,120		6,319		3,199	16		LIGHTING - SERVICE SOUTH 1						
	LIGHTING - SHOWROOM SOUTH	L	20 /1	17		3,300			6,972	3,672	18		LIGHTING - SERVICE SOUTH 2						
	LIGHTING - UPSTAIRS, OFFICES	L	20 /1	19		3,530	6,730			3,200	20		LIGHTING - SERVICE CENTER						
	LIGHTING - PARTS NORTH, ELEC	L	20 /1	21		2,841		5,047		2,206	22		LIGHTING - SERVICE WEST/CNTR						
	LIGHTING - PARTS SOUTH	L	20 /1	23		3,458			7,334	3,876	24		LIGHTING - SERVICE NORTH 2						
	NEW LIGHTING - BACK PARKING LOT	L	20 /2	25		1,910	4,902			2,992	26		LIGHTING - SERVICE NORTH 1						
	NEW LIGHTING - BACK PARKING LOT	L	20 /2	27		1,910		1,910			28								
		L		29		1,367					30								
		L		31		1,367	1,367				32								
		L		33				0			34								
		L		35				0			36								
		L		37			0				38								
		L		39				0			40								
		L		41				0			42								
TOTAL PHASE CONNECTED VA =						24,474	19,392	19,739	64% OF BREAKER SPACES USED (SPARES NOT COUNTED)										
TOTAL PHASE CONNECTED AMPS =						88	70	71	USED TO SHOW PHASE BALANCE ONLY										

	CONN. KVA	DEMAND FACTOR	DEMAND KVA	LOAD TYPE KEY:
TOTAL KITCHEN LOAD	= 0.00	X 0.65	= 0.00	SP = SUBPANEL
TOTAL LIGHTING LOAD	= 62.10	X 1.25	= 77.63	K = KITCHEN LOAD
TOTAL NON-CONT. LOAD	= 0.00	X 1.0	= 0.00	L = LIGHTING LOAD
TOTAL RECEPTACLE LOAD *	= 0.00	X 1.0	= 0.00	NC = NON-CONTINUOUS LOAD
TOTAL CONTINUOUS LOAD	= 1.50	X 1.25	= 1.88	R = RECEPTACLE LOAD
TOTAL HVAC LOAD	= 0.00	X 1.0	= 0.00	CL = CONTINUOUS LOAD
LARGEST MOTOR LOAD**	= 0.00	X 1.25	= 0.00	H = HVAC LOAD
ELECTRIC VEHICLE CHARGING	= 0.00	X 1.25	= 0.00	LM = LARGEST MOTOR LOAD
USER DEFINED	= 0.00	X 1	= 0.00	EV = ELECTRIC VEHICLE CHARGING
TOTAL KVA	= 63.60		= 79.51	USR1 = USER DEFINED
CONNECTED AMPS	= 63.60		= 79.51	
TOTAL AMPS	= 76.59		= 95.74	AMPS @480/277 3 Ph/4 W (42% OF BUS RATING)

NOTES:
 * IF RECEPTACLE LOAD IS OVER 10KW THEN THE AMOUNT OVER 10KW IS COUNTED AS 50% FOR NON-DWELLING UNITS PER 2014 NEC 220.44.
 ** THE LARGEST MOTOR OF THIS PANEL OR THE LARGEST MOTOR OF ANY SUBPANEL IS TAKEN AT 125%, ANY OTHER MOTORS ARE TAKEN AT 100%.
 NEW - NEW BREAKERS AND LOADS

4/22/2024 9:16 AM
 10/01 ELECTRICAL PANEL SCHEDULES.DWG

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CITY FILE NO.
 PA 22-035

PROJECT
 NEW AUTO DEALERSHIP
 KENDALL SUBARU - BACK LOT
 SMOKEY POINT BLVD.
 MARYSVILLE, WASHINGTON 98223

REVISIONS
 1 STREET LTG CHANGES 04-22-2024

DATE
 10/30/2023

SHEET TITLE
 ELECTRICAL PANEL SCHEDULES

PERMIT SET

DESIGNER: Josh Ensky
 CHECKED BY: Tim Carr
 SHEET

E6.01