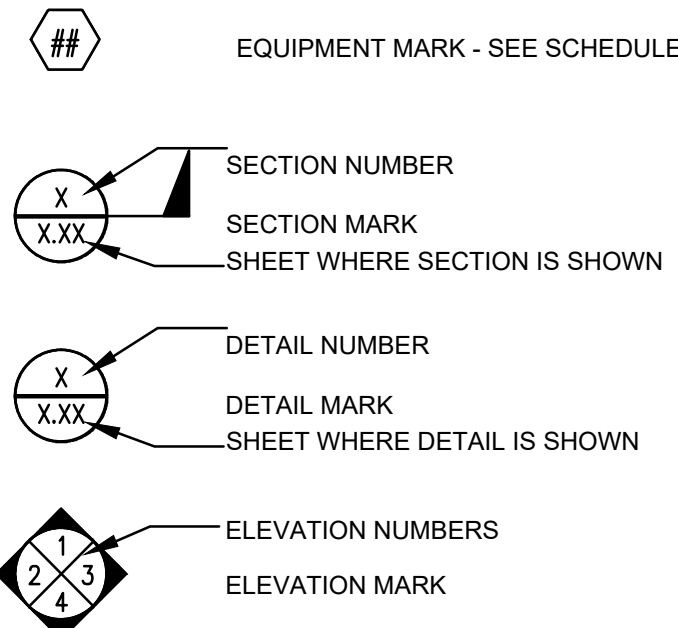
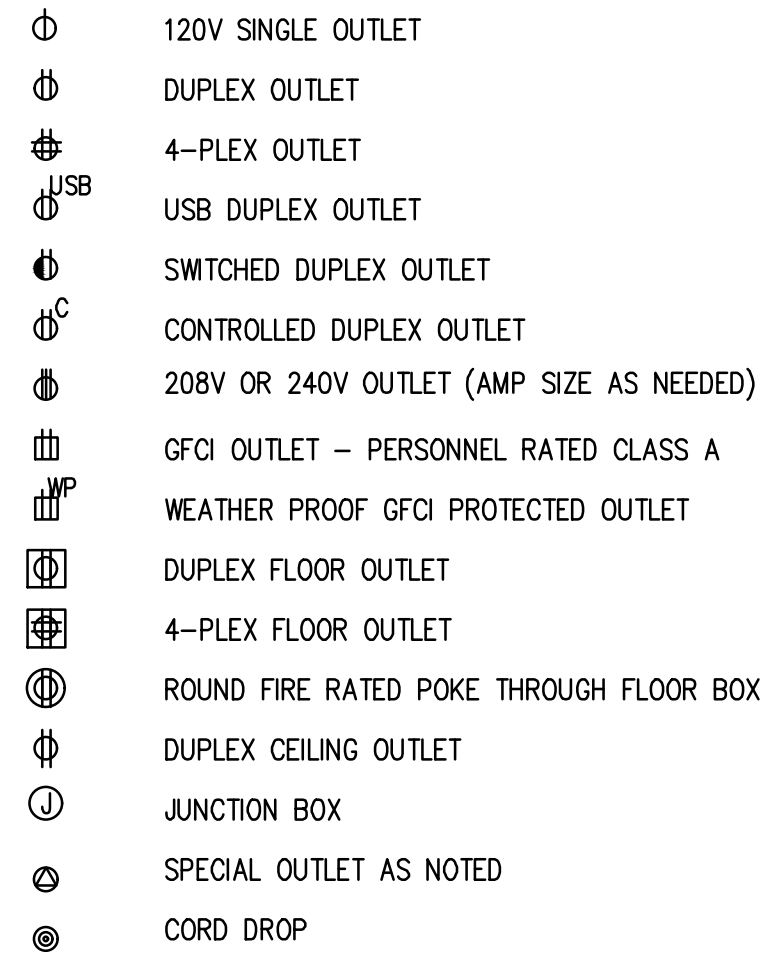


IDENTIFICATION

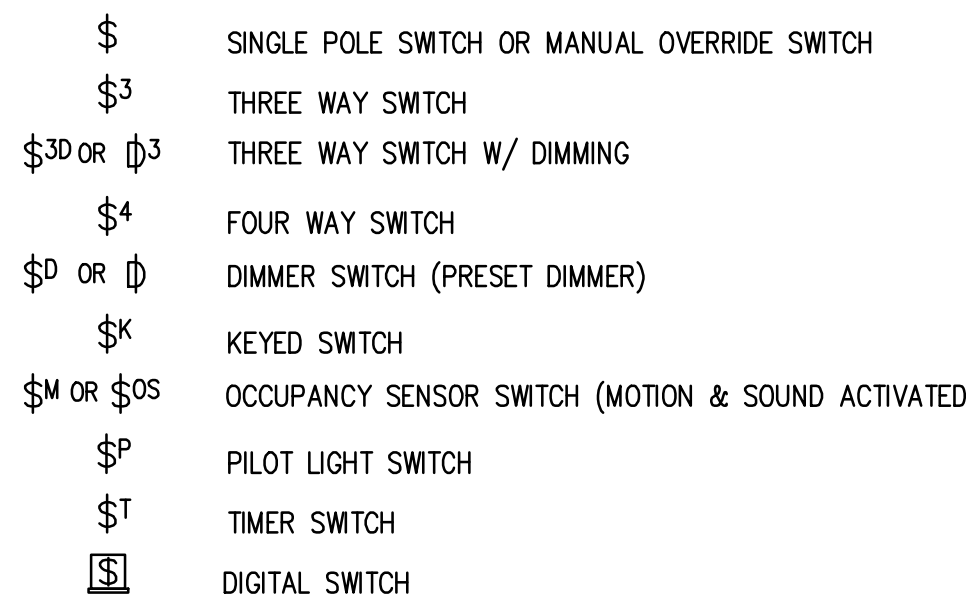
NOTE: NOT ALL SYMBOLS MAY BE USED IN PLAN.



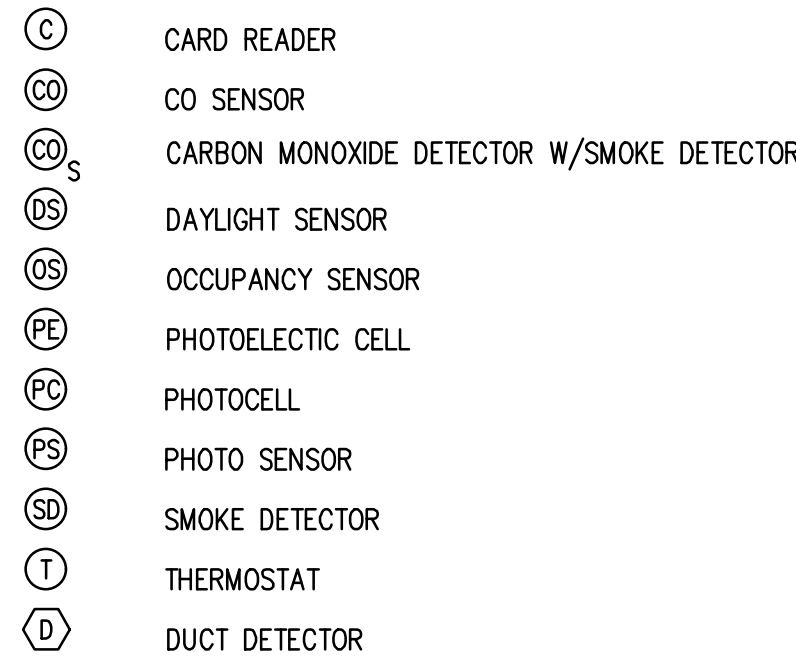
RECEPTACLES



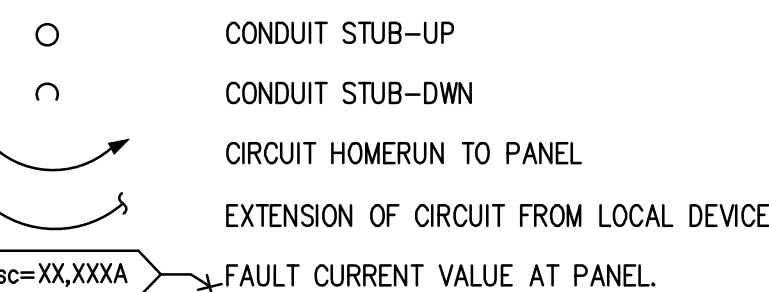
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SENSORS

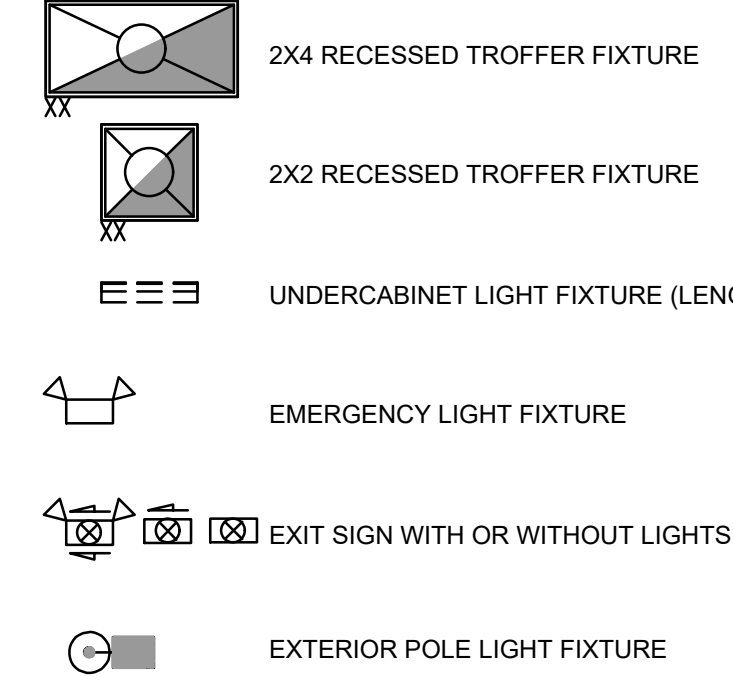
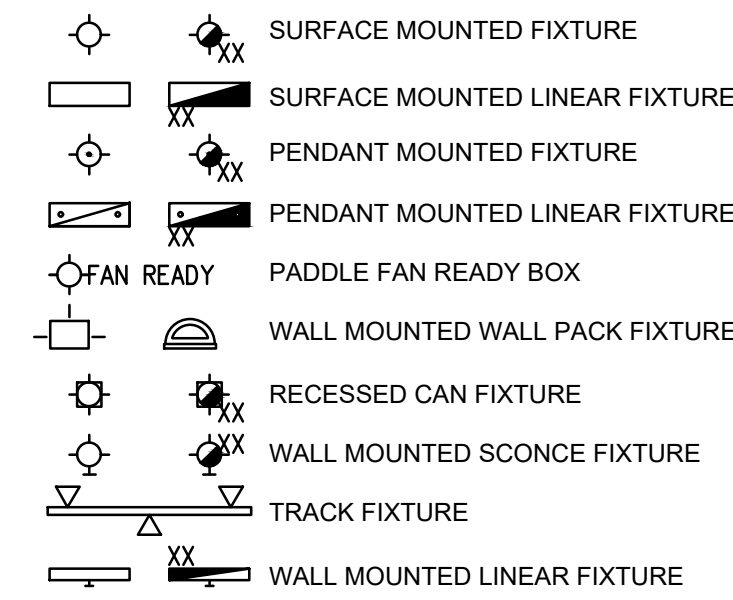


MISC.

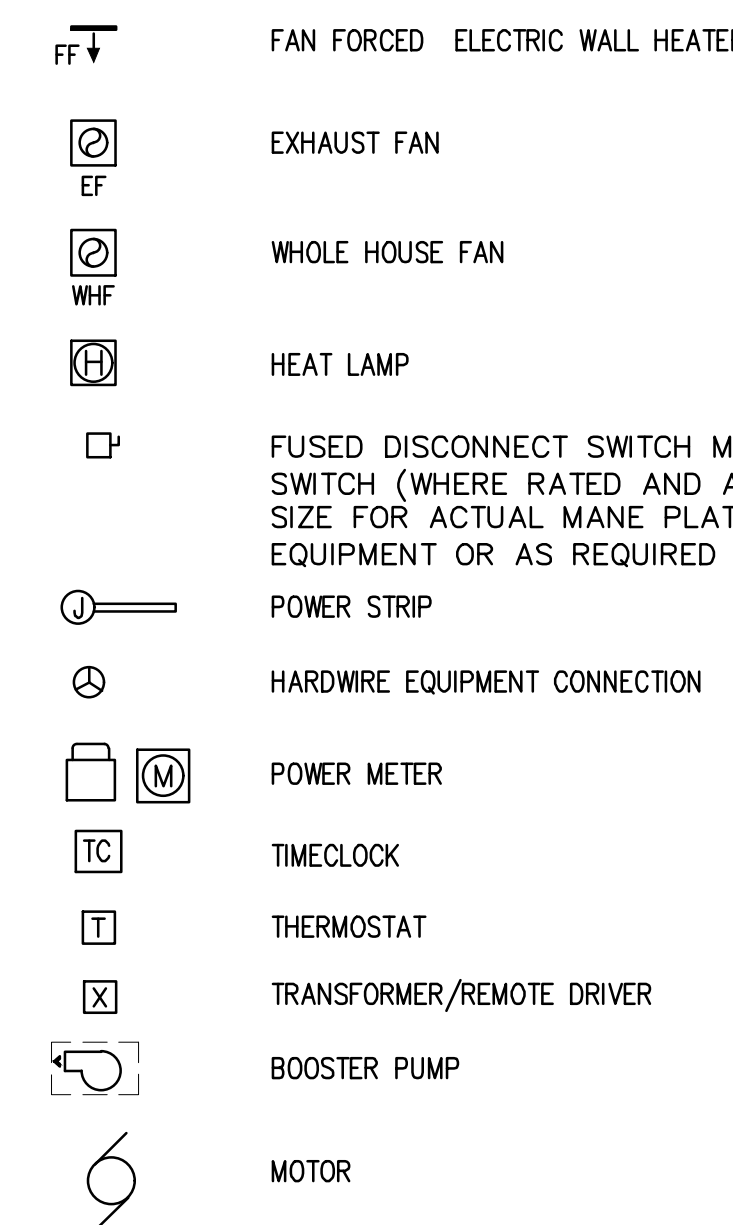


LUMINAIRES

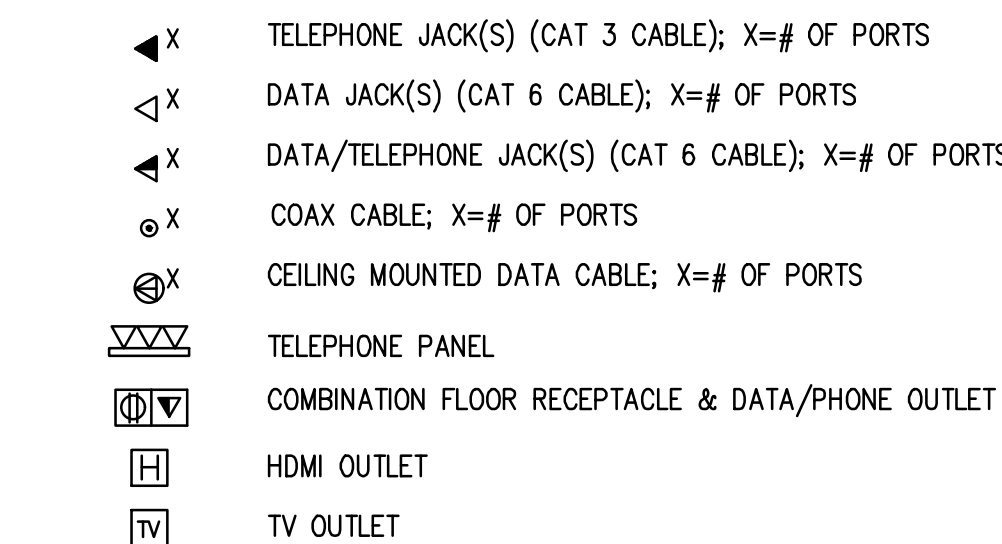
XX = EM (EMERGENCY), NL (NIGHT LIGHT), EMINL (BOTH) EM FIXTURES ARE HALF SHADED, TYPICAL OF ALL FIXTURES.



EQUIPMENT



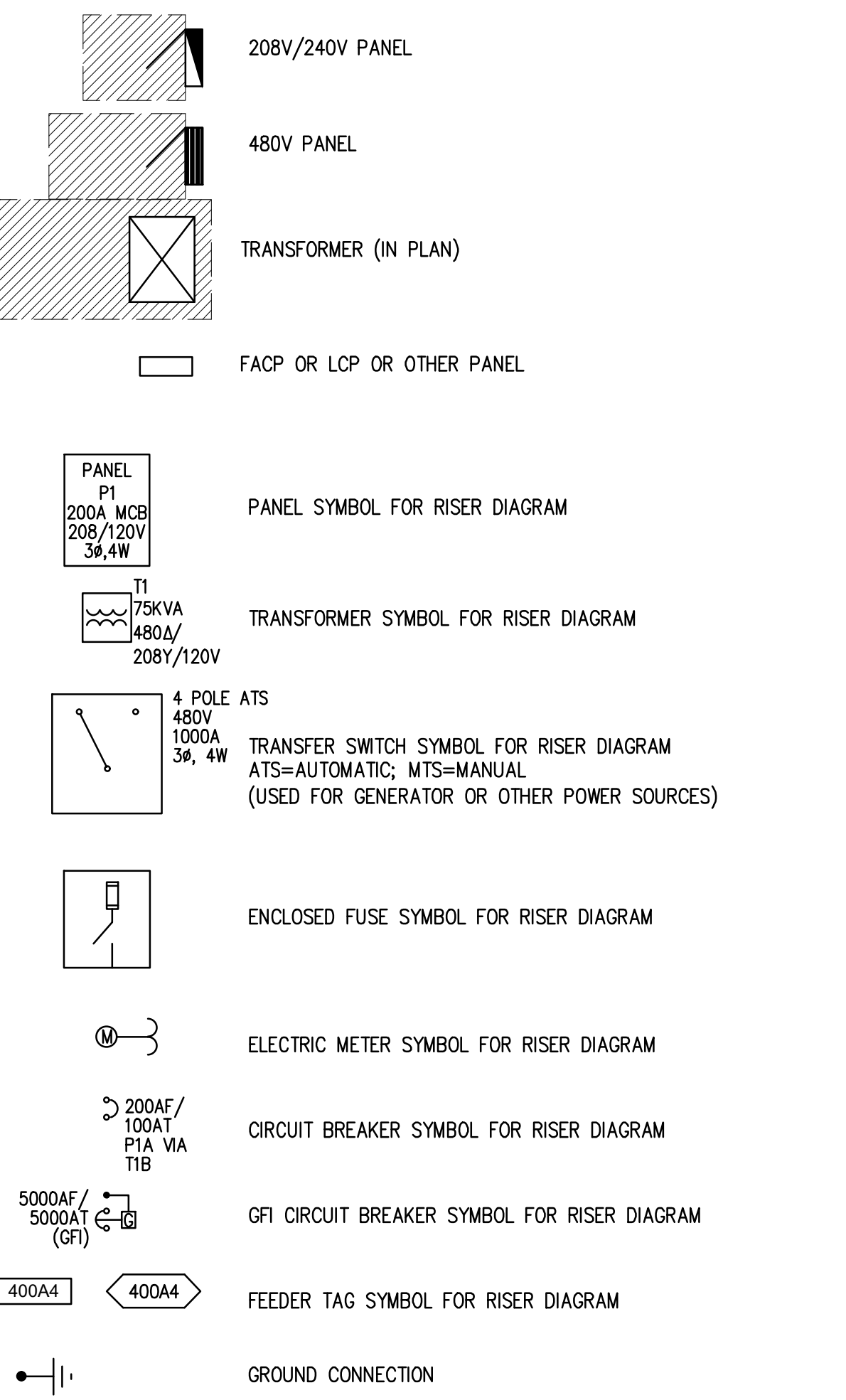
DATA/PHONE



ABBREVIATIONS

Table of abbreviations for electrical symbols, including AMP, AF, AHU, AIC, APPROX, AT, ATS, AV, AWG, BFG, BHP, BLDG, BRF, C, CB, CCW, CLG, CKT, CONST, COM, COMM, CPT, CT, CV, CW, DC, DCS, DEG, DEMO, DISC, DL, DL-X, DM, DN/DWN, DPDT, THROW, DPST, DS, DTL, DW, DWG(S), (E) OR (EX), EA, EC, EF, E/G, EL, EM, EMT, ENCL, ENGS, ENT, EXT, FA, FACP, FDR, FF, FLA, F&I, FO, FWD, G or GND, GC, GEN, GFCI, GFI, GFR, GRC, HP, HPS, HR, HV, HVAC, HW, HZ, IC, IHP, IMC, INST, INT, INTERCOM, J, J-BOX, KA, KV, KVA, KVAR, KW, KWD, KWH, LA, LC, LCP, L-G, L-L, LP, LV, LVL, MA, MAX, MC, MCA, MCC, MDP, MECH, MEP, MFG, MH, MIN, MLO, MRP, MS, MSP, MTS, MV, MVA, MW, N, NC, NEC, NFC, NL, NO, NP, NTS, O, OCP, OHP, OL, OS, P, PA, PB, PC, PE OR PC, PF, PH, PM, PNL, POE, PRI, PSE, PVC, PWR, REC, REFER, REF, TUBING, ENCLOSURE, ABOVE FINISHED FLOOR, ELECTRICAL NON-METALLIC TUBING, EXTERIOR, FIRE ALARM, FIRE ALARM CONTROL PANEL, FEEDER, FAN FORCED, FULL LOAD AMPS, FURNISH & INSTALL, FIBER OPTIC, FOOT / FEET, FREQUENCY, FORWARD, GROUND / EQUIPMENT, GROUND, GENERAL CONTRACTOR, GENERATOR, GROUND FAULT CIRCUIT INTERRUPTER (RECEPTACLE), GROUND FAULT, INTERRUPTER (BREAKER), GROUND FAULT RELAY, GALVANIZED RIGID CONDUIT, HEAT PUMP / HORSE-POWER / HOUSE PANEL, HIGH PRESSURE SODIUM HOUR, HIGH VOLTAGE, HEATING VENTILATION & AIR CONDITIONING, HOT WATER, HERTZ, INTERRUPTING CAPACITY, INDOOR HEAT PUMP, INTERMEDIATE METAL CONDUIT, INSTANTANEOUS, INTERLOCK, INTERCOMMUNICATION, JUNCTION BOX, KILOAMP, KILOVOLT, KILO VOLT-AMP, KILO VAR (REACTANCE), KILOWATT, KILOWATT DEMAND, KILOWATT HOUR, LIGHTNING ARRESTOR, LIGHTING CONTACTOR

PANELS & TRANSFORMERS



PROJECT SUMMARY

THIS PROJECT IS THE BACK PARKING LOT LIGHTING FOR A CAR DEALERSHIP. NEW LIGHT POLES, POLE LIGHTS, AND CONTROLS ARE ADDED TO THE SITE.

SERVING POWER UTILITY

PUD SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT

REQ(D) REQUIRE(D) REV REVISED / REVISION / REVERSE

LL LIGHT POLE LF RADIO FREQUENCY RMC RESIDENTIAL METER CENTER RMS ROOT MEAN SQUARED RVSS REDUCED VOLTAGE SOFT START

SA SURGE ARRESTER SCL SHORT CIRCUIT SCL SEATTLE CITY LIGHT SF SQUARE FEET SFL SUB FEED LUGS SH SHEET SM SURFACE MOUNT SP SINGLE POLE SPEC(S) SPECIFICATION(S) SPD SURGE PROTECTIVE DEVICE SPDT SINGLE POLE DOUBLE THROW SPST SINGLE POLE SINGLE THROW SPKR SPEAKER SS STAINLESS STEEL SW SWITCH SWB SWITCH BANK SWBD SWITCHBOARD SWGR SWITCHGEAR SYM SYMMETRICAL TC TIME CLOCK TE TOTALLY ENCLOSED TEFC TOTALLY ENCLOSED FAN COOLED TENV TOTALLY ENCLOSED NON-VENTILATED TEL TELEPHONE TEMP TEMPORARY TSTAT THERMOSTAT TYP TYPICAL UNO UNLESS NOTED OTHERWISE UPS UNINTERRUPTIBLE POWER SUPPLY V VOLT VA VOLTAMP "VIA" SEE CONTROL SUMMARY CONTROLS" FOR CONTROL REQMENTS VFD VARIABLE FREQUENCY DRIVE VP VAPOR PROOF W WATT WH WATER HEATER WHF WHOLE HOUSE FAN WP WEATHER-PROOF WT WATER TIGHT XFMR TRANSFORMER

ELECTRICAL SHEET INDEX

Sheet List Table with columns for Sheet Number and Sheet Title. Rows include 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.

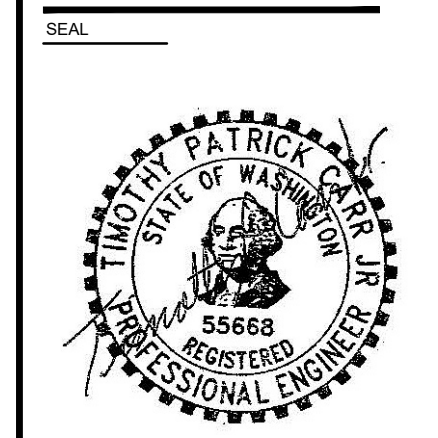
APPLICABLE CODES

- ELECTRICAL WORK SHALL BE GOVERNED BY THE FOLLOWING CODES:
• 2020 NATIONAL ELECTRIC CODE
• 2018 WASHINGTON STATE ENERGY CODE
• OTHER LOCAL & MUNICIPAL CODES IN EFFECT AT TIME OF PERMIT APPLICATION
THE EC SHALL SATISFY CODE, AHJ, DRAWINGS AND SPECIFICATIONS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST.

GENERAL NOTES

- "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 CONDUIT 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.

RENSCH ENGINEERING MECHANICAL AND ELECTRICAL BUILDING DESIGN office: 360-863-6677 111 AVE. C, SUITE 104 SNOHOMISH, WA 98290



CITY FILE NO. PA 22-035

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

REVISIONS table with columns for Date, Description, and Author.

DATE: 10/30/2023 SHEET TITLE: ELECTRICAL COVER

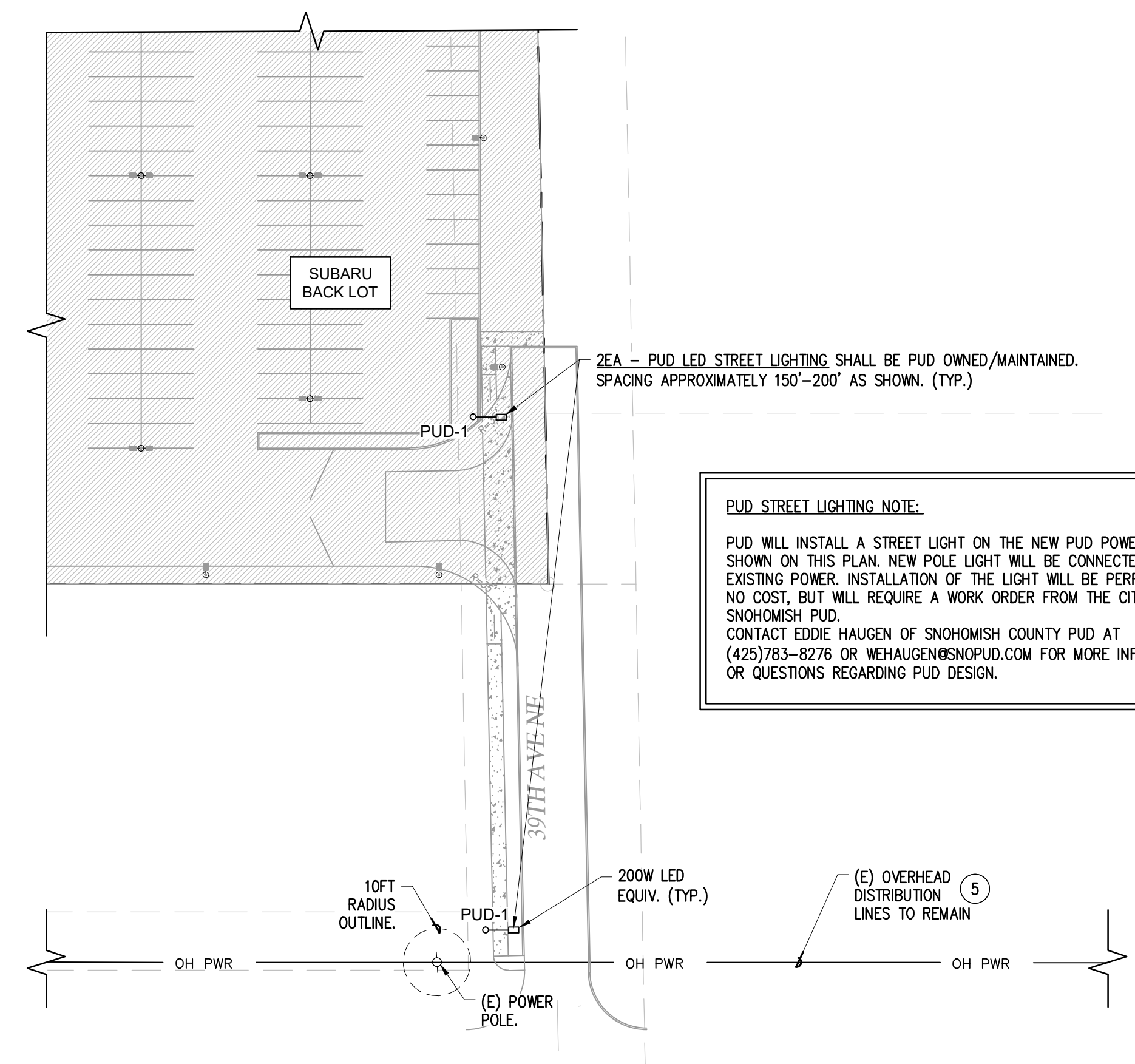
PERMIT SET

DESIGNER: Josh Emery CHECKED BY: Tim Carr SHEET

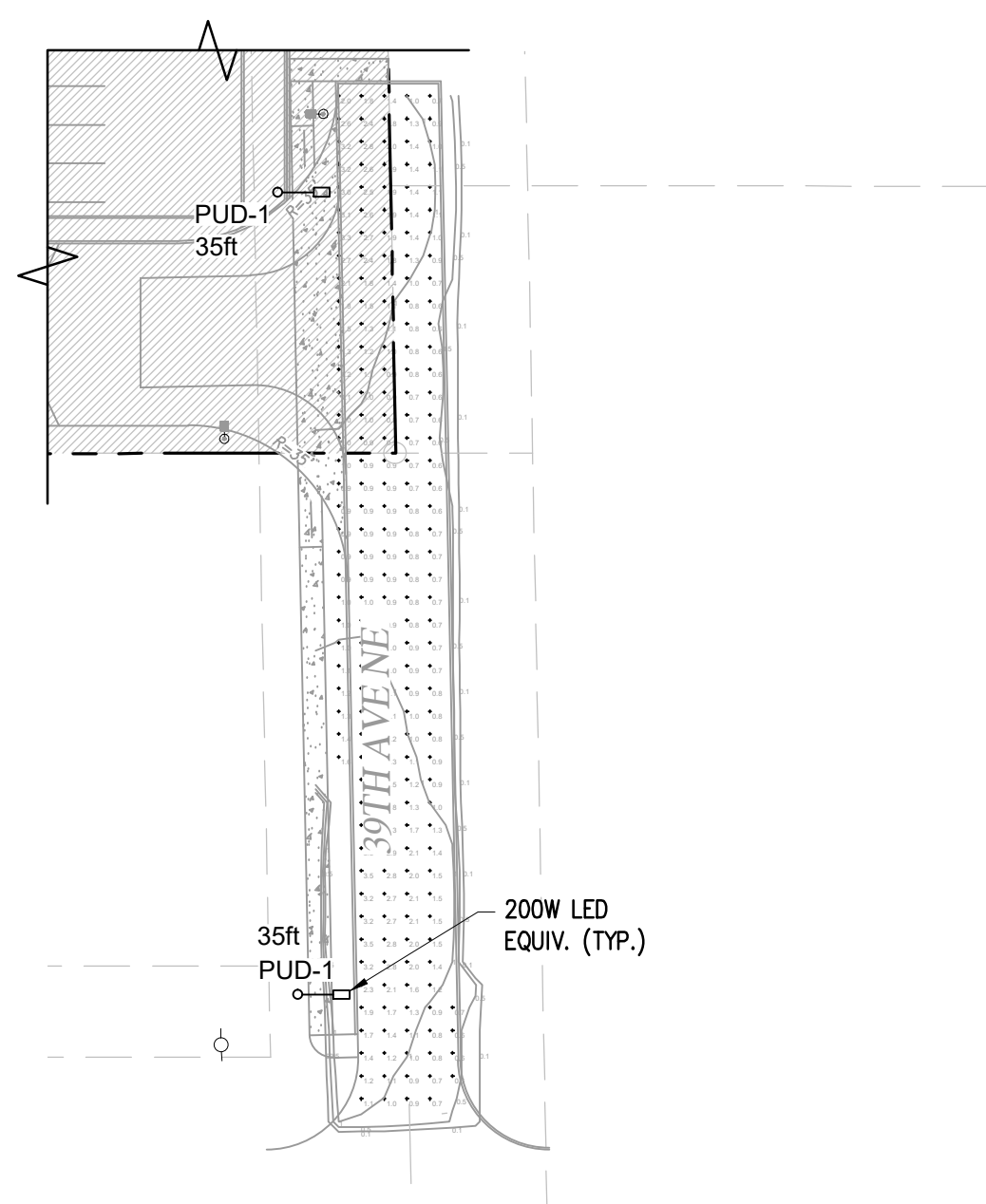
E0.01

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 60FT.</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 Design and Development Standards (EDDS) Requirements	ACTUAL PER PHOTOMETRIC PLAN
Zone	GC (General Commercial)		
Pole Height / Arm Length	--	35ft / 12ft	35ft / 12ft
Minimum Horizontal Illuminance	.2 fc	0.5 fc min.	.6 fc
Uniformity Ratio (AVE:MIN)	--	4:1	3:1
Street Light Ave - Collector Arterial	--	1.2 fc	1.2 fc



SITE POWER PLAN

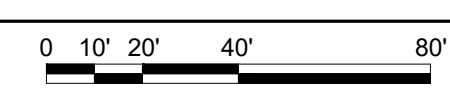


PHOTOMETRIC PLAN



ELECTRICAL STREET LIGHTING PLAN

SCALE: 1"=40'



LIGHTING FIXTURE SCHEDULE											
Type	Description	Manufacturer	Model #	Color Temp	Lamp	Shield	Voltage	Watts	Lumen	BUG	Notes
Exterior Street Lighting Equipment											
PUD-1	PUD LED Street Light - Collector Arterial	---	per PUD requirements	--	Integrated LED	--	--	200w equivalent	--	--	Contact Eddie Haugen of Snohomish PUD for more info.

T&D Compatible Unit L0210 - L0223

LED Luminaires, 3000°K CCT

PAGE 1 OF 1
REV. 5
AUG. 14, 2018

C.U.	ITEM	SIZE CODE	DESCRIPTION	QTY	MID
L0210	A	A	Photocontrol Solid State, 105-305V LED 50W Nom. 120-277V Type II Med. 3000K	1	485020
	B			1	5000622
L0212	A	C	Photocontrol Solid State, 105-305V LED 50W Nom. 120-277V Type IV Med. 3000K	1	485020
	B			1	5000623

C.U.	ITEM	SIZE CODE	DESCRIPTION	QTY	MID
L0216	A	G	Photocontrol Solid State, 105-305V LED 100W Nom. 120-277V Type II Med. 3000K	1	485020
	B			1	5000625
L0217	A	H	Photocontrol Solid State, 105-305V LED 100W Nom. 120-277V Type III Med. 3000K	1	485020
	B			1	5000626

C.U.	ITEM	SIZE CODE	DESCRIPTION	QTY	MID
L0219	A	K	Photocontrol Solid State, 105-305V LED 140W Nom. 120-277V Type II Med. 3000K	1	485020
	B			1	5000627
L0220	A	L	Photocontrol Solid State, 105-305V LED 140W Nom. 120-277V Type III Med. 3000K	1	485020
	B			1	5000628

C.U.	ITEM	SIZE CODE	DESCRIPTION	QTY	MID
L0223	A	P	Photocontrol Solid State, 105-305V LED 275W Nom. 120-277V Type III Med. 3000K	1	485020
	B			1	5000629

Notes:

- When replacing 150W HPS fixtures, check with the Street Lighting Engineer for the correct LED replacement.
- Refer to [T&D Guideline 4-14-1.3](#) for a LED street light size codes, HPS equivalent size cross-reference and IES type light pattern reference.
- Refer to [T&D Guideline 4-14-3.0](#) for identification & placement of District decals.

T&D Assembly Unit 1L902

UG Street Light Installation (120V) Fiberglass Pole with Aluminum Mast Arm

PAGE 1 OF 2
REV. 8
MAR. 20, 2019

Notes:

- Connect the #4 Cu pole ground to the #12 Cu street light equipment ground with a #4 Cu split bolt connector (C.U. Z0404).
- Fuseholder(s) are to be installed inside the pole. Leave enough slack conductor to allow for removing them.
- For 240 volt systems use 2 fuses and 2 hot leg fuseholders (C.U. E0101).
- Because of variations in overall pole length among manufacturers, adjust pole setting depth to place the centerline of the handhole 48" above final grade.
- Backfill the pole hole with crushed rock as needed for stability to ensure that the pole sets straight.
- The preferred method of extending 2" rigid PVC street lighting conduit up into a pedestal or pole is to install a short section of 2" corrugated flexible PVC conduit on each end. Use of 2" rigid PVC bends (C.U. F0602) is an acceptable alternate method.

T&D Assembly Unit 1L902

UG Street Light Installation (120V) Fiberglass Pole with Aluminum Mast Arm

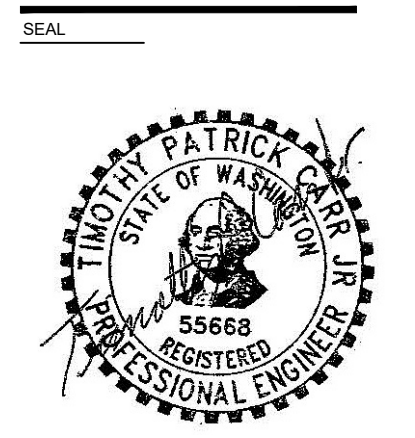
PAGE 2 OF 2
REV. 8
MAR. 20, 2019

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MATERIAL LIST					
QTY	C.U.	DESCRIPTION	QTY	MID	
35	C1200	Wire, #12/2 UF-B	35	1002796	
1	E0101	Fuse, Street Light 6.25A Fuseholder, Street Light Hot Leg 1-Wire	1	312405	
10	F0382	Conduit, PVC Corrugated Flexible Grey 2"	10	250142	
2	F0712	Coupling, Conduit PVC Sch 40 Long 2"	2	250481	
1	L0500	Mast Arm, Street Light 6' Al Fiberglass Pole Type Bolt, Machine 5/8" x 7" Hex Head Washer, Galv Sq 2-1/4" Curved 11/16" Hole Washer, Galv Double Coil Spring Lock 5/8"	1	1000984	
			2	1000985	
			2	1000996	
			2	1001443	
1	N0212	Wire, #4 Cu Bare SD Sol Screw, Self-Drilling SS #8-18 x 3/4" Tag, Grounding Plate, Cu Ground 144 in"	10	848476	
			4	1001615	
			1	1001802	
			1	1001807	
1	PD1000	Pole, 35' Fiberglass Street Light with 6' Al Mast Arm	1	711300	

RENSCH ENGINEERING
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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

DATE

10/30/2023

SHEET TITLE

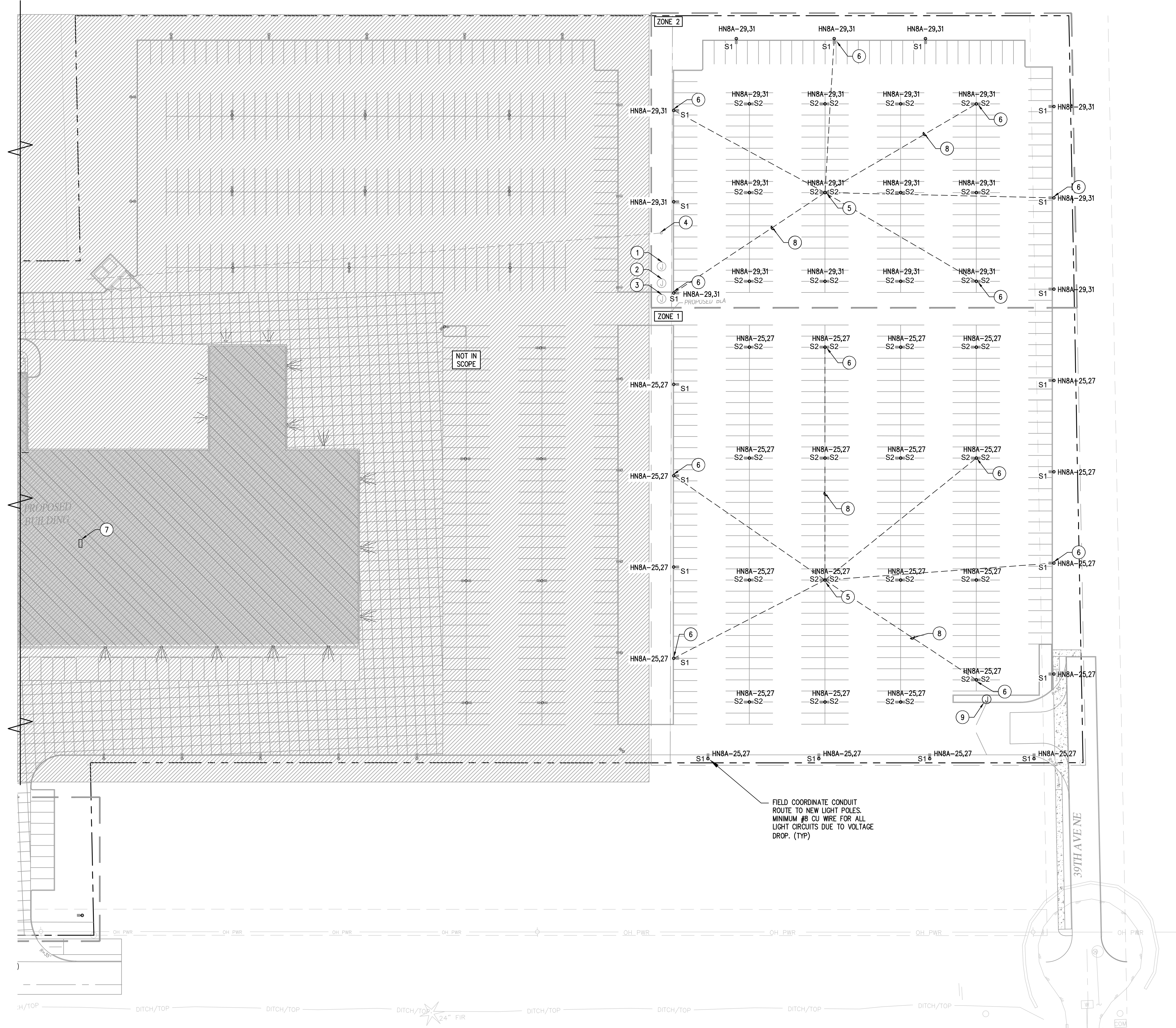
STREET LIGHTING POWER & PHOTOMETRIC PLAN & SCHEDULES

PERMIT SET

DESIGNER: Josh Enslay
CHECKED BY: Tim Carr
SHEET

E1.01

E:\01 STREET LIGHTING POWER PLAN & SCHEDULES.DWG 10/30/2023 4:54 PM



10/30/2023 4:55 PM
L200 ELECTRICAL SITE POWER PLANNING

ELECTRICAL SITE PLAN
SCALE: 1"=40'

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.

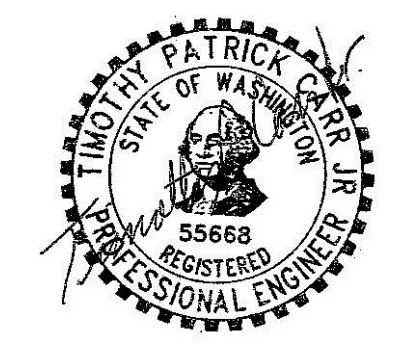
KEY NOTES

- 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

RENSCH ENGINEERING
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111 AVE. C, SUITE 104
SNOHOMISH, WA 98290
fax: 360-863-3585



CITY FILE NO.
PA 22-035

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

REVISIONS

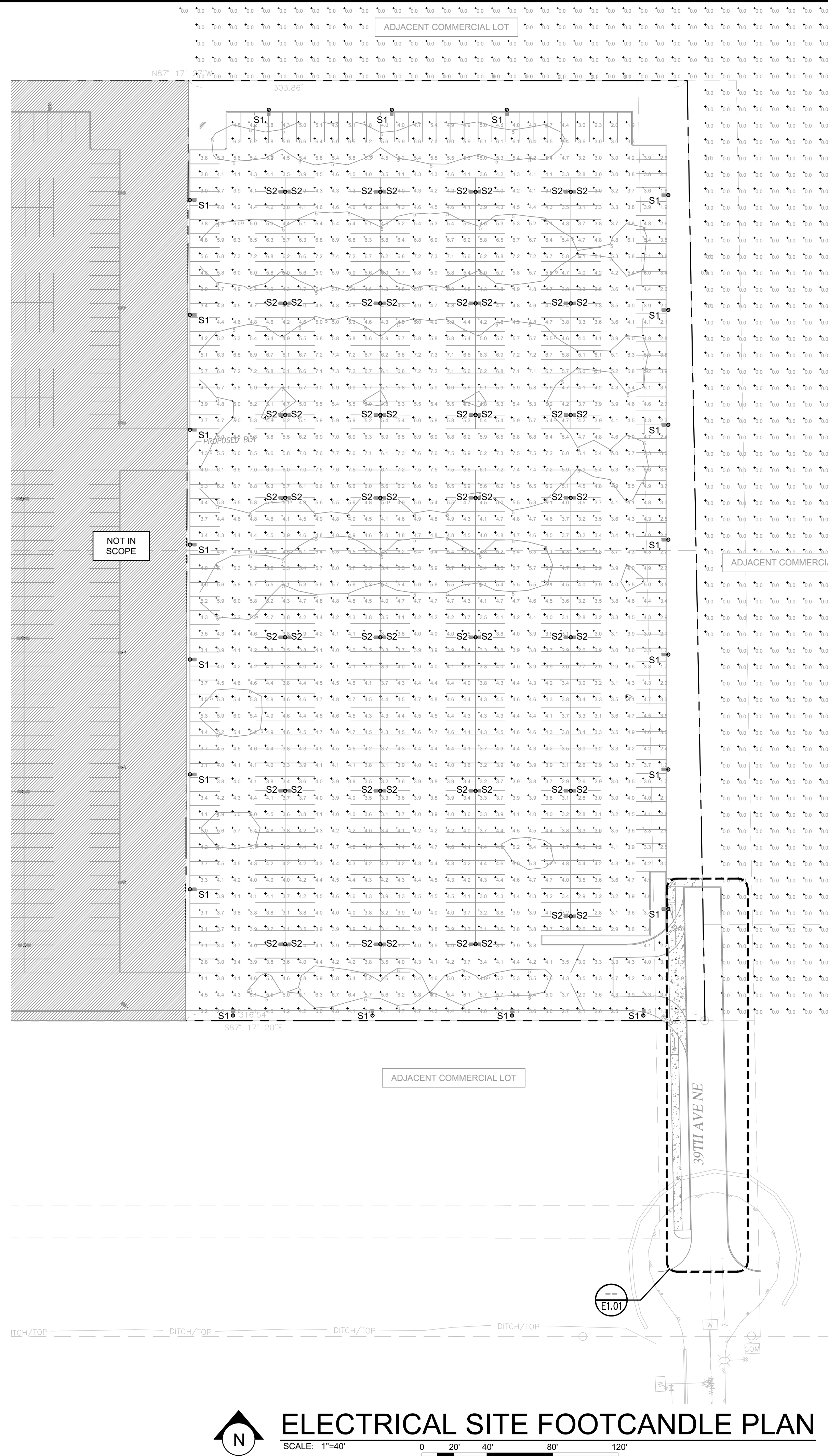
NO.	DATE	DESCRIPTION

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

PERMIT SET

DESIGNER: Josh Ensky
CHECKED BY: Tim Carr
SHEET

E2.00

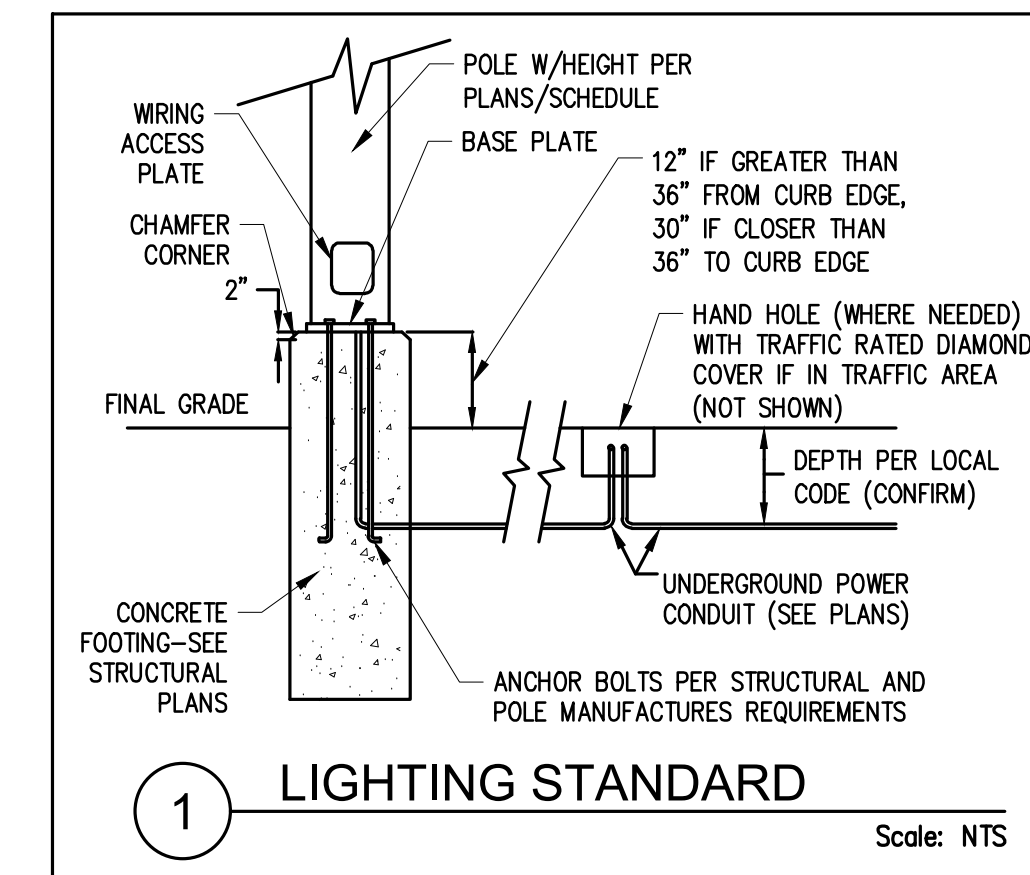


ELECTRICAL SITE FOOTCANDLE PLAN

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

S-1 / S-2

PLS 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

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 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.

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)

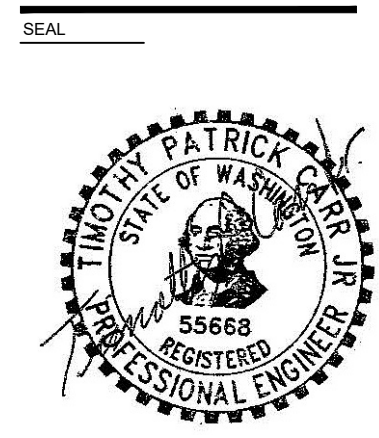
Submitted On: Feb 15, 2023 1/11 Index Page

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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 111 AVE. C, SUITE 104
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 fax: 360-863-3565



CITY FILE NO.
 PA 22-035

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

REVISIONS

DATE

10/30/2023

SHEET TITLE

ELECTRICAL SITE FOOTCANDLE PLAN

PERMIT SET

DESIGNER: Josh Enslay
 CHECKED BY: Tim Carr
 SHEET

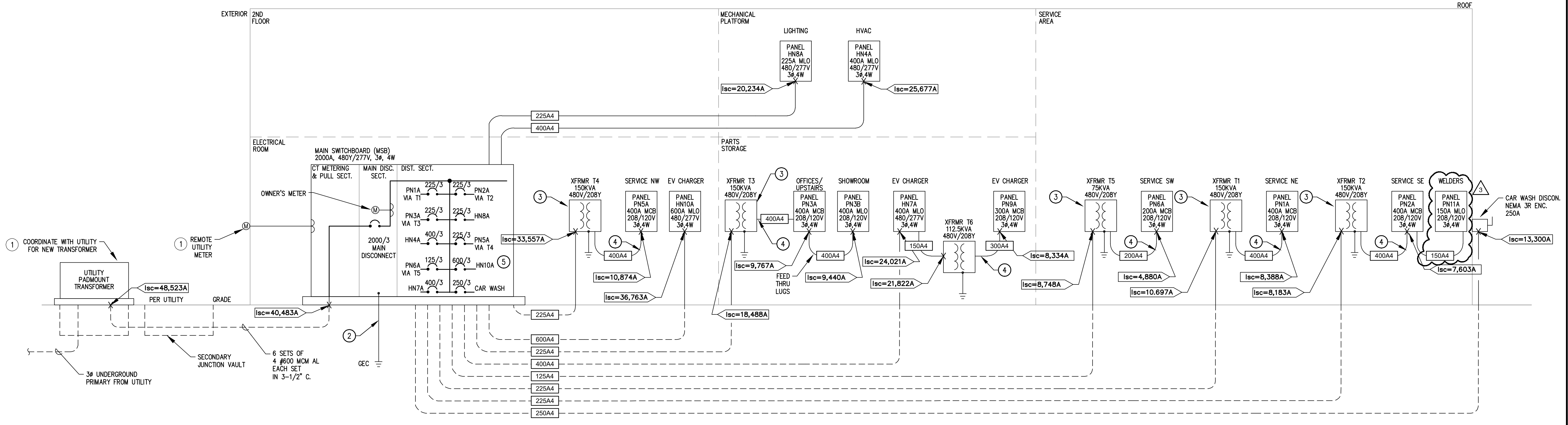
E2.10

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 (THHN, THWN, T	CONDUIT SIZE (per set) - ALUMINUM (THHN, THWN, T	PHASE CONDUCTOR SIZE (COPPER)	PHASE CONDUCTOR SIZE (ALUMINUM)	EQUIPMENT GROUNDING CONDUCTOR (EGC)		GROUNDING ELECTRODE CONDUCTOR, ETC.		COMMENTS
									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	2/0	6	4	200 A	6	
150C4	150A4	150	1	1	1-1/2" / 1-1/2"	2-1/2"	1/0	3/0	6	4	200 A	6	
225C4	225A4	225	1	1	2-1/2" / 2"	3" / 2-1/2"	4/0	300	4	2	300 A	2	1/0
250C4	250A4	250	1	1	2-1/2" / 2-1/2"	3" / 2-1/2"	250	350	4	2	300 A	2	1/0
300C4	300A4	300	1	1	3" / 2-1/2"	3-1/2" / 3"	350	500	4	2	300 A	2	1/0
400C4	400A4	400	1	2	3-1/2" / 3-1/2"	2-1/2" / 2-1/2"	600	250	3	1	400 A	1/0	1/0
600C4	600A4	600	2	2	3" / 2-1/2"	3-1/2" / 3"	350	500	1	2/0	600 A	2/0	4/0

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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SNOHOMISH, WA 98290



CITY FILE NO. PA 22-035

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

REVISIONS

NO.	DESCRIPTION

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

PERMIT SET

DESIGNER: Josh Ensey
CHECKED BY: Tim Carr
SHEET

E5.01

10/30/2023 4:45 PM

10/30/2023 4:45 PM

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

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
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SNOHOMISH, WA 98290
fax: 360-863-3565

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	CKT	PHASE LOADS	CKT	CKT BRKR	TYPE	SERVES	NOTES	LOAD	AMP	POLE	LOAD
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	69,282		NC						
TOTAL PHASE CONNECTED VA = 374,051 408,001 391,679 USED TO SHOW PHASE BALANCE ONLY														
TOTAL PHASE CONNECTED AMPS = 1350 1473 1414														
LOAD TYPE KEY: SP = SUBPANEL K = KITCHEN LOAD L = LIGHTING LOAD NC = NON-CONTINUOUS LOAD R = RECEPTACLE LOAD CL = CONTINUOUS LOAD H = HVAC LOAD LM = LARGEST MOTOR LOAD EV = ELECTRIC VEHICLE CHARGING USR1 = USER DEFINED														
TOTAL KITCHEN LOAD = 27.20 X 0.65 = 17.68														
TOTAL LIGHTING LOAD = 61.93 X 1.25 = 77.41														
TOTAL NON-CONT. LOAD = 544.01 X 1.0 = 544.01														
TOTAL RECEPTACLE LOAD * = 79.20 * see below = 44.60 OVER 10KW														
TOTAL CONTINUOUS LOAD = 42.84 X 1.25 = 53.56														
TOTAL HVAC LOAD = 128.85 X 1.0 = 128.85														
LARGEST MOTOR LOAD** = 44.89 X 1.25 = 56.12														
ELECTRIC VEHICLE CHARGING = 244.80 X 1.25 = 306.00														
USER DEFINED = 0.00 X 1.0 = 0.00														
TOTAL KVA = 1173.73 DEMAND KVA = 1228.23														
CONNECTED AMPS = 1413.45 DEMAND AMPS = 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.														

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	CKT	PHASE LOADS	CKT	CKT BRKR	TYPE	SERVES	NOTES	LOAD	AMP	POLE	LOAD
	LIGHTING - EX SITE ZONE 1	L	20 /2	1	1,865	2,659		L	LIGHTING - EX SITE ZONE 2					
		L		3	1,865	2,659		L						
	LIGHTING - EX SITE ZONE 3	L	20 /2	5	1,864	4,067		L	LIGHTING - EX SITE ZONE 4					
		L		7	1,864	4,067		L						
	LIGHTING - EXTERIOR BUILDING	L	20 /1	9	1,957	3,457		L	FRONT PYLON SIGN					
		L		11		0		L						
	LIGHTING - EXPRESS SERVICE	L	20 /1	13	1,864	4,750		L	LIGHTING - SERVICE DRIVE					
	LIGHTING - SHOWROOM NORTH	L	20 /1	15	3,120	6,319		L	LIGHTING - SERVICE SOUTH 1					
	LIGHTING - SHOWROOM SOUTH	L	20 /1	17	3,300	6,972		L	LIGHTING - SERVICE SOUTH 2					
	LIGHTING - UPSTAIRS, OFFICES	L	20 /1	19	3,530	6,730		L	LIGHTING - SERVICE CENTER					
	LIGHTING - PARTS NORTH, ELEC	L	20 /1	21	2,841	5,047		L	LIGHTING - SERVICE WEST/CNTR					
	LIGHTING - PARTS SOUTH	L	20 /1	23	3,458	7,334		L	LIGHTING - SERVICE NORTH 2					
NEW	LIGHTING - BACK PARKING LOT	L	20 /2	25	1,822	4,814		L	LIGHTING - SERVICE NORTH 1					
		L		27	1,822	1,822		L						
		L		31	1,367	1,367		L						
		L		33		0		L						
		L		35		0		L						
		L		37		0		L						
		L		39		0		L						
		L		41		0		L						
PANEL PHASE CONNECTED VA = 24,386 19,304 19,739 64% OF BREAKER SPACES USED (SPARES NOT COUNTED)														
TOTAL PHASE CONNECTED AMPS = 88 70 71 USED TO SHOW PHASE BALANCE ONLY														
LOAD TYPE KEY: SP = SUBPANEL K = KITCHEN LOAD L = LIGHTING LOAD NC = NON-CONTINUOUS LOAD R = RECEPTACLE LOAD CL = CONTINUOUS LOAD H = HVAC LOAD LM = LARGEST MOTOR LOAD EV = ELECTRIC VEHICLE CHARGING USR1 = USER DEFINED														
TOTAL KITCHEN LOAD = 0.00 X 0.65 = 0.00														
TOTAL LIGHTING LOAD = 61.93 X 1.25 = 77.41														
TOTAL NON-CONT. LOAD = 0.00 X 1.0 = 0.00														
TOTAL RECEPTACLE LOAD * = 0.00 X 1.0 = 0.00 UNDER 10KW														
TOTAL CONTINUOUS LOAD = 1.50 X 1.25 = 1.88														
TOTAL HVAC LOAD = 0.00 X 1.0 = 0.00														
LARGEST MOTOR LOAD** = 0.00 X 1.25 = 0.00														
ELECTRIC VEHICLE CHARGING = 0.00 X 1.25 = 0.00														
USER DEFINED = 0.00 X 1 = 0.00														
TOTAL KVA = 63.43 DEMAND KVA = 79.29														
CONNECTED AMPS = 76.38 DEMAND AMPS = 95.48 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 LOAD														

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

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CITY FILE NO.
PA 22-035

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

REVISIONS

DATE: 10/30/2023
SHEET TITLE: ELECTRICAL PANEL SCHEDULES

PERMIT SET

DESIGNER: Josh Ensky
CHECKED BY: Tim Carr
SHEET

E6.01

LIGHTING COMPLIANCE SUMMARY

2018 WSEC Compliance Forms for Commercial Buildings including Group R2, R3 & R4 over 3 stories and all R1

Administered by: ©2023 NEEA, All rights reserved

Project & Applicant Information	Project Title	Marysville Kendall Subaru - Back Lot - 2018 WSEC		For Building Department Use:	Date: Oct 25, 2023
	Project Address	16115 Smokey Point Blvd Marysville, WA 98271			
	Applicant Name	Josh Ensley			
	Applicant Phone	360-863-6677			
	Applicant Email	Josh.E@renschengineering.com			
For questions about this report, contact WSEC Commercial Technical Support at 360-539-5300 or via email at com.techsupport@waenergycodes.com					

General Occupancy	All Commercial		General Building Use Type	Retail, Automobile Dealership	Building Cond. Floor Area	62,745
General Project Types	New Building	New Building or Addition Lighting Scope	Exterior Lighting	Alteration Lighting Scope	Project Cond. Floor Area	62,745
					Floors Above Grade	1
					Compliance Method	Compliance Method 1 - General
Lighting Project Description	New LED Pole lights with WSEC controls.					

Lighting Compliance Scope and Method	Project Type	Interior / Exterior <small>(Interior includes both interior & parking)</small>	Luminaire Replacement Scope	Compliance Method	LPA Calculation Adjustment	Compliance Verification
	New Building	Exterior Lighting			Not applicable to exterior	COMPLIES

Project Title	Marysville Kendall Subaru - Back Lot - 2018 WSEC	Date	Oct 25, 2023
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Lighting Power Calculation	NEW BUILDING - EXTERIOR LIGHTING	Compliance Verification	COMPLIES
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Exterior Lighting Zone	ZONE 2	Base Site Allowance	400
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Exterior Tradable Lighting Power Allowance								
Tradable Surface	Tradable Surface Sub-Type	Surface Area (SF)	LPA (Watts/SF)	Linear Feet (LF)	LPA (Watts/LF)	Total Watts Allowed (LPA x SF) or (LPA x LF)	Total Tradable Proposed Watts	Tradable Compliance Status
Uncovered parking areas and drives		160,138	0.04			6,406		
Base Site Allowance						400		
Totals						6,806	6,377	COMPLIES

Proposed Tradable Lighting Power Density							
Fixture Type	Fixture ID	Tradable Surface Type	Quantity of Fixtures (#F)	Watts or Wattage Limit per Fixture (WpF)	Total Linear Feet (LF)	Watts per Linear Foot (WpLF)	Total Watts Proposed (#F x WpF) or (LF x WpLF)
Individual Fixtures							
Pole-mounted	S2	Uncovered parking areas and drives -	56	88			4,928
Pole-mounted	S1	Uncovered parking areas and drives -	21	69			1,449
Tradable Proposed Total							6,377