

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS												TOTAL THIS SHEET		GRAND TOTAL	
			91		92		93		94		PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL								
630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	3854		4804		4689		2689								16036	16036
630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF	480		136												616	616
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	32		43		35		22								132	132
639-1-122	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR	AS			1												1	1
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-11 SERVICE POLE	EA			1												1	1
715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 8 - 6	LF	15258		17868		16539		9603								59268	59268
715-1-13	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 4 - 2	LF			688												688	688
715-61-352	LIGHT POLE COMPLETE, F&I, STANDARD POLE STANDARD FOUNDATION, 40' MOUNTING HEIGHT, 15' ARM LENGTH	EA	30		27		33		20								110	110
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA			1												1	1
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	30		41		33		20								124	124
715-511-313	LIGHT POLE COMPLETE - SPECIAL DESIGN, F&I, SINGLE ARM SHOULDER MOUNT, CONCRETE, 13'	EA			14												14	14



Consultant	By	Appd	YYYY.MM.DD
Revision	By	Appd	YYYY.MM.DD
Issued	By	Appd	YYYY.MM.DD

Permit/Seal

Client/Project  
 MANATEE COUNTY PUBLIC WORKS DEPARTMENT  
 MOCCASIN WALLOW ROAD SEGMENT 2

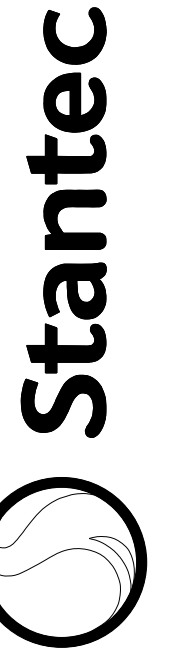
Project No.: 215617221  
 File Name: 215617221-01C-1801  
 Scale: \_\_\_\_\_  
 Drawn: \_\_\_\_\_ Dsgn: \_\_\_\_\_ Ckcd: \_\_\_\_\_  
 Title  
**TABULATION OF QUANTITIES**  
 Revision: \_\_\_\_\_ Sheet: 86 of 117  
 Drawing No.

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**LIGHTING GENERAL NOTES:**

1. THE MAINTAINING AGENCY IS MANATEE COUNTY. ALL MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FDOT STANDARD PLANS, FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE MANATEE COUNTY TRAFFIC ENGINEERING MANUAL.
2. SPARE CONDUIT AT PAVEMENT CROSSINGS SHALL BE CAPPED AT BOTH ENDS.
3. SUBMIT DESIGN DATA AND SHOP DRAWINGS FOR ALL EQUIPMENT TO MANATEE COUNTY FOR REVIEW AND APPROVAL PRIOR TO ORDERING EQUIPMENT:  
 MR. JIM SHULER, P.E.  
 PROJECT ENGINEER  
 MANATEE COUNTY PUBLIC WORKS - PROJECT MANAGEMENT  
 1022 26th AVENUE EAST  
 BRADENTON, FLORIDA 34208-3916  
 PH. 941-708-7450, EXT. 7306
4. PROVIDE SHOP DRAWINGS OF THE PHOTOMETRIC CALCULATIONS FOR LUMINAIRES OTHER THAN THE BASIS OF DESIGN. THE LUMINAIRE BASIS OF DESIGN FOR MOCCASIN WALLOW ROAD, TWO SIGNALIZED INTERSECTIONS, AND THE US-301 ROUNDABOUT IS THE GE EVOLVE LED LUMINAIRE, 4000K COLOR TEMPERATURE WITH EITHER TYPE II (WIDE) OR TYPE IV DISTRIBUTION. SEE POLE DATA AND LEGEND SHEET FOR PHOTOMETRIC CURVES, WATTAGES, AND ADDITIONAL INFORMATION. MEET ALL PHOTOMETRIC REQUIREMENTS IN THE CONTRACT DOCUMENTS.
5. LOCATIONS OF EXISTING UTILITIES, AS SHOWN ON THE PLANS ARE APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE UTILITY OWNERS, AND SERVE AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. NOTIFY UTILITY OWNERS FOR LOCATION AND STAKING OF UNDERGROUND FACILITIES BEFORE EXCAVATING.
6. BEFORE EXCAVATING, IT IS REQUIRED THAT NOTICE BE GIVEN TO SUNSHINE STATE ONE CALL OF FLORIDA, INC. (SSOCOF) AT 800-432-4770 A MINIMUM OF TWO (2) FULL BUSINESS DAYS BEFORE WORK BEGINS. NOT ALL UTILITY OWNERS ARE MEMBERS OF SSOCOF.
7. LOCATIONS OF POLES, CONDUCTORS, CONDUITS, PULL AND JUNCTION BOXES, AND SERVICE POLES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED WITHIN THE RIGHT-OF-WAY BY THE CONTRACTOR WITH APPROVAL FROM THE ENGINEER TO ACCOMMODATE EXISTING CONDITIONS AND UTILITY LOCATIONS.
8. ALUMINUM POLES, LUMINAIRES, AND BASES SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO'S " STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS", AND SHALL HAVE BEEN TESTED BY FHWA APPROVED METHODS (LATEST EDITION). CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
9. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC), THE NATIONAL ELECTRICAL SAFETY CODE (NEC), AND THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER NEC REQUIREMENTS.
10. INSTALL LIGHTNING ARRESTORS, PROPERLY GROUNDED, IN POWER (SECONDARY) ENTRANCES ON THE OUTSIDE OF THE ENCLOSURE.
11. IN ACCORDANCE WITH NEC, IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE ON EACH POLE.
12. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE POWER COMPANY AT LEAST THREE (3) FULL BUSINESS DAYS PRIOR TO ANY INSTALLATION THAT IS WITHIN THE DISTANCE PER OSHA'S CURRENT REQUIREMENTS OF ANY ENERGIZED ELECTRICAL CONDUCTORS. THE POWER COMPANY, AT IT'S OPTION, SHALL ASSIST THE CONTRACTOR TO COVER THE ENERGIZED CONDUCTORS AT INSTALLATION SITES OR TAKE OTHER SAFETY PRECAUTIONS AS NECESSARY. EXREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF WORK AROUND THE PRIMARY HIGH VOLTAGE COMPONENTS.  
  
 TABLE A - MINIMUM CLEARANCE DISTANCES SPECIFIED IN SUBPART CC OF OSHA RULE 1926 (AS THEY PERTAIN TO CRANE/DERRICK OPERATIONS), AND/OR THOSE MINIMUM DISTANCES SPECIFIED IN 29 CFR 1910.333(c)(3)(i)(A) AND iii(i)(A) FOR WORK INPROXIMITY TO POWER LINES NOT COVERED BY THIS SUBPART CC, ARE TO BE MAINTAINED.
13. FINAL OFFSETS FOR THE STREET LIGHT POLES OR ARMS SHALL BE A MINIMUM OF 10 FEET FROM OVERHEAD CONDUCTORS.
14. CONTACT THE APPROPRIATE POWER COMPANY TO DETERMINE IF A SERVICE PROCESSING OR OTHER FEES ARE REQUIRED. ANY FEES SHALL BE INCLUDED AS PART OF THE PAYMENT FOR THE LOAD CENTER. OBTAIN ALL PERMITS AND INSPECTIONS FOR THE POWER SERVICE AND LOAD CENTER. COORDINATE THE CONSTRUCTION INSPECTION AND ENERGIZING OF THE NEW LOAD CENTER IN A TIMELY MANNER IN ORDER TO PROMOTE PROJECT COMPLETION WITHIN THE CONTRACT TIME.
15. COORDINATE WITH THE APPROPRIATE POWER COMPANY REPRESENTATIVE PRIOR TO CONSTRUCTION FOR THE FINAL SERVICE POINT LOCATION.
16. COORDINATE WITH THE APPROPRIATE POWER COMPANY ON SCHEDULES INVOLVING INSTALLATIONS LIGHT POLES AND FOUNDATIONS AT LOCATIONS IN CLOSE PROXIMITY TO OVERHEAD POWER LINES. USE ANY SPECIAL EQUIPMENT NEEDED FOR DRILLING AND/OR INSTALLING THE FOUNDATION AND LIGHT POLE TO AVOID DE-ENERGIZING THE POWER LINES WHERE POSSIBLE. A LOW PROFILE RIG SHALL BE USED AT LOCATIONS WHERE POWER LINES ARE IN CLOSE PROXIMITY BASED ON OSHA REQUIREMENTS.
17. PULLING REQUIREMENTS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET PER MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT NE LESS THAN RECOMMENDED BY THE NEC OR THE NESC FOR CABLE USED.
18. STAKE ALL POLE LOCATIONS AND REQUEST UTILITY COMPANIES TO LOCATE AND STAKE UNDERGROUND UTILITIES PRIOR TO EXCAVATING. THIS INCLUDES NOTIFYING THE APPROPRIATE POWER COMPANY ON REVIEWING THE STAKED LOCATIONS WITH RESPECT TO OVERHEAD POWER LINES.
19. ALL CONDUITS UNDER ROADWAY, CONCRETE DRIVEWAYS AND/OR SIDEWALK SHALL BE INSTALLED PRIOR TO INSTALLATION OF ROADWAY BASE, DRIVEWAY CONCRETE AND SIDEWALK CONCRETE, EXCEPT WHERE OTHERWISE NOTED IN THE PLANS.
20. DIRECTIONAL BORE OPERATIONS SHALL MEET THE REQUIREMENTS OF FDOT'S UTILITY ACCOMMODATION MANUAL, LATEST EDITION.
21. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE WITHIN TWO (2) FEET OF LIGHT POLE FOUNDATIONS OR CONDUIT RUNS, HAND DIG THE FIRST FOUR (4) FEET OF THE HOLE OR TRENCH FOR THE FOUNDATION OR CONDUIT RUN.
22. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE PROVISION THAT REQUIRES THE PREPARATION AND APPROVAL OF AN EROSION CONTROL PLAN THAT ADDRESSES PREVENTION, CONTROL, AND ABATEMENT OF WATER POLLUTION.

23. NO TEST BORINGS WERE MADE WHERE CONDUIT OR PULL BOXES ARE TO BE INSTALLED. CONTRACTOR IS RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS PRIOR TO SUBMITTING BID PROPOSALS.
24. ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY, OR WHENEVER THE WORK ZONE BECOMES INACTIVE. DO NOT OPEN ANY AREA THAT CANNOT BE BACKFILLED IN THE SAME WORKING PERIOD.
25. MAINTAIN ACCESS TO ALL SIDE STREETS, PRIVATE, AND COMMERCIAL DRIVEWAYS AT ALL TIMES.
26. NO SCREW TYPE BASE FOUNDATIONS SHALL BE USED ON THIS PROJECT.
27. NOTIFY MANATEE COUNTY BEFORE AND TRENCHING OR DIGGING AT SIGNALIZED INTERSECTIONS SO THAT ALL UNDERGROUND FACILITIES CAN BE IDENTIFIED AND MARKED APPROPRIATELY.
28. THE LIGHTING SYSTEM WILL BE MAINTAINED BY MANATEE COUNTY UPON FINAL ACCEPTANCE. NOTIFY THE TRAFFIC ENGINEERING DIVISION (MR. VISHAL S. KAKKAD, 941-749-3502) AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE TO SCHEDULE THE FINAL INSPECTION. UPON PASSING THE FINAL INSPECTION, SEND A WRITTEN REQUEST TO TRANSFER MAINTENANCE FROM THE CONTRACTOR TO MANATEE COUNTY TO THE FOLLOWING:  
  
 MR. AARON BURKETT  
 MANATEE COUNTY TRAFFIC OPERATIONS DIVISION  
 1204 12th STREET COURT EAST  
 BRADENTON, FLORIDA 34208  
 EMAIL: AARONBURKETT@MYMANATEE.ORG  
  
 THE COUNTY WILL RESPOND WITHIN FIVE (5) WORKING DAYS TO ESTABLISH A TIME TABLE FOR TRANSFER OF MAINTENANCE RESPONSIBILITY.
29. WHEN CONSTRUCTION IS COMPLETE, A HARD COPY AND ELECTRONIC PDF SET OF AS-BUILT PLANS IS TO BE SUBMITTED TO:  
  
 MANATEE COUNTY PUBLIC WORKS  
 ATTN: MR. VISHAL KAKKAD, PE, PTOE  
 TRAFFIC DESIGN DIVISION MANAGER  
 2101 47th TERRACE EAST  
 BRADENTON, FLORIDA 34203  
 EMAIL: VISHALKAKKAD@MYMANATEE.ORG  
  
 RECORD DRAWINGS AND INSPECTION FORMS MUST BE DELIVERED TO THE COUNTY AT LEAST TWO (2) BUSINESS DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION.
30. HANDHOLE COVERS FOR POLES SHALL BE LOCATED OPPOSITE APPROACHING TRAFFIC EXCEPT FOR POLES LOCATED IN GRAVITY WALLS. THESE POLES SHALL HAVE THE HANDHOLE COVERS LOCATED TOWARDS THE SIDEWALK.
31. ALL EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED IN THE PLANS.
32. THE WIRES AT THE POLE HANDHOLES AND PULL BOXES SHALL BE LOOPED WITH SUFFICIENT LENGTH TO COMPLETELY REMOVE CONNECTORS AND SPLICES ONE (1) FOOT OUTSIDE OF THE HANDHOLE OR PULL BOX. THE SLACK IS FOR MAKING CONNECTIONS AND SPLICES ACCESSIBLE FOR CHANGING FUSES AND TROUBLE SHOOTING THE SYSTEM.
33. LIGHT POLES AND PULL BOXES SHALL NOT BE LOCATED IN DRAINAGE SWALES, DITCHES, WETLANDS, DRIVEWAYS, SURFACE WATER, PAVED SHOULDERS, OR PEDESTRIAN RAMPS. COORDINATE WITH THE ENGINEER FOR AN APPROVED OFFSET ADJUSTMENT IF NECESSARY.
34. FOR LOCATIONS WHERE THE LIGHT POLE IS WITHIN OR ADJACENT TO PROPOSED SIDEWALK, TOP OF POLE FOUNDATION ELEVATION SHALL MATCH THE PROPOSED SIDEWALK GRADE.



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Consultant

Issued	By	Appd	YYYY-MM-DD
Revision	By	Appd	YYYY-MM-DD

Permit/Seal

Client/Project  
 MANATEE COUNTY PUBLIC WORKS DEPARTMENT  
 MOCCASIN WALLOW ROAD SEGMENT 2

Project No.: 215617221  
 File Name: 215617221-01-C-1801  
 Scale:  
 Drawn: Dgn. Crkd. YYY-MM-DD  
 Title

GENERAL NOTES

Revision: Sheet: 87 of 117  
 Drawing No.

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 ORIGINAL SHEET: ARCH D

LIGHTING PAY ITEM NOTES:

630-2-11:

INCLUDES CONDUIT, ELBOWS, SWEEPS, CONNECTING HARDWARE, TRENCHING, AND BACKFILL AS INDICATED IN THE FDOT DESIGN STANDARDS. THE LINEAR FOOT PRICE FOR CONDUIT SHALL ALSO INCLUDE THE COST OF RESTORING CUT PAVEMENT, SIDEWALK, SOD, ETC., TO IT'S ORIGINAL CONDITION. SOD SHALL BE REPLACED IN LIKE KIND OF THE ADJACENT SURROUNDINGS. CONDUIT SHALL BE SCHEDULE 40 PVC WITH A MINIMUM SIZE OF 2 INCHES. MEET NEC CONDUIT FILL CRITERIA WITH RESPECT TO THE SIZE AND NUMBER OF CONDUCTORS INSIDE.

PAYMENT FOR CONDUIT PLACED UNDERGROUND WILL BE BASED ON THE HORIZONTAL LENGTH OF THE TRENCH MEASURED IN A STRAIGHT LINE BETWEEN THE CENTERS OF PULL BOXES, CABINETS, POLES, ETC., IN LINEAR FEET REGARDLESS OF THE LENGTH OR NUMBER OF CONDUITS INSTALLED. NO ADDITIONAL PAYMENT WILL BE MADE FOR MULTIPLE CONDUITS IN THE SAME TRENCH.

630-2-12:

ALL CONDUITS INSTALLED BY DIRECTIONAL BORE SHALL BE HDPE SDR-11 WITH A MINIMUM SIZE OF 2 INCHES. MEET NEC CONDUIT FILL CRITERIA WITH RESPECT TO THE SIZE AND NUMBER OF CONDUCTORS INSIDE. CONDUIT AND TRANSITION COUPLING SHALL BE UL LISTED. ALL DIRECTIONAL BORES SHALL INCLUDE A SPARE 2 INCH CONDUIT WITH BOTH ENDS SWEEPING UP INTO A STREET LIGHTING PULL BOX. CAP BOTH ENDS OF THE SPARE CONDUIT WITH WATER TIGHT CAPS. SPARE CONDUIT SHALL BE POPULATED WITH A PULL CORD.

PAYMENT FOR CONDUIT PLACED BY DIRECTIONAL BORE WILL BE BASED ON THE HORIZONTAL LENGTH OF THE BORE MEASURED IN A STRAIGHT LINE BETWEEN THE CENTERS OF PULL BOXES, CABINETS, POLES, ETC., IN LINEAR FEET REGARDLESS OF THE LENGTH OR NUMBER OF CONDUITS INSTALLED. NO ADDITIONAL PAYMENT WILL BE MADE FOR MULTIPLE CONDUITS IN THE SAME BORE.

635-2-11:

USE FDOT APPROVED COMPOSITE PULL BOXES MEASURING 24"L x 13"W x 18"D MINIMUM WITH HEAVY DUTY NON-METALLIC COVERS. GROUNDING IS NOT REQUIRED FOR PULL BOXES. COVERS SHALL BE STAMPED "STREET LIGHTING" IN RAISED LETTERS. INCLUDES THE COST OF THE CONCRETE APRON PER FDOT STANDARD PLANS INDEX 715-001. ITEM ALSO INCLUDES THE COST OF MANATEE COUNTY APPROVED SECURITY BOLTS FOR THE COVERS. SECURITY BOLTS SHALL BE INSTALLED UPON FINAL ACCEPTANCE.

639-1-122:

POWER SERVICE ASSEMBLY INCLUDES ALL EQUIPMENT AND MATERIALS NECESSARY FOR A COMPLETE AND ACCEPTABLE INSTALLATION AS INDICATED IN THE FDOT STANDARD PLANS, SPECIFICATIONS, AND POWER COMPANY REQUIREMENTS.

715-1-12:

ITEM INCLUDES CONDUCTORS AS INDICATED IN THE PLANS AND THE FDOT STANDARD PLANS. PAYMENT IS BASED ON THE LINEAR FEET OF A SINGLE CONDUCTOR.

715-61-352:

ITEM INCLUDES A STANDARD ALUMINUM LIGHT POLE, BRACKET ARM, LUMINAIRE WITH LAMP, ANCHOR BOLTS WITH WASHERS AND LOCK NUTS, VIBRATION DAMPENING DEVICE, FRANGIBLE BREAKAWAY TRANSFORMER BASE AND FOUNDATION PER FDOT STANDARD PLANS INDEX 715-002. COST OF BREAK-AWAY WATERTIGHT, IN-LINE FUSE HOLDERS, STRAIN RELIEF, AND SURGE ARRESTOR SHALL BE PAID UNDER ITEM 715-500-1. ITEM ALSO INCLUDES EXTERNAL HOUSE SIDE, AND 6-INCH TALL LIGHT TRESPASS SHIELD ACCESSORIES. UTILITY CONFLICT POLE PER FDOT STANDARD PLANS INDEX 715-003 AND INCLUDES ALL OF THE ABOVE .

LUMINAIRES INCLUDED UNDER THIS ITEM SHALL BE GE EVOLVE LED WITH 4000K CCT AND EITHER TYPE II, TYPE III, OR TYPE IV DISTRIBUTION. SEE LEGEND AND POLE DATA SHEET FOR WATTAGES, PHOTOMETRIC CURVES, AND ADDITIONAL DETAILS.

ITEM ALSO INCLUDES THE MAINTENANCE SLAB AND PULL BOX AS SPECIFIED IN FDOT STANDARD PLANS INDEX 715-001. THE ORIENTATION OF THE SLAB MAY BE ADJUSTED BY THE CONTRACTOR UNDER APPROVAL OF THE ENGINEER. IF THE SLAB CONFLICTS WITH THE PROPOSED SIDEWALK OR RIGHT-OF-WAY LINE, THE SLAB SHALL BE MODIFIED BY ENDING THE SLAB ADJACENT TO THE EDGE OF SIDEWALK OR AT THE RIGHT-OF-WAY LINE. THERE SHOULD BE NO GAP BETWEEN THE SLAB AND THE EDGE OF SIDEWALK. SLAB ELEVATION SHALL MATCH THE BACK OF SIDEWALK ELEVATION.

715-7-11:

THE UNDERGROUND ELECTRICAL POWER SERVICE SHALL BE IN ACCORDANCE WITH THE FDOT STANDARD PLANS AND SPECIFICATIONS TO FURNISH AND INSTALL THE LIGHTING LOAD CENTER. MATERIALS INCLUDE, BUT ARE NOT LIMITED TO: FUSED CONTROL POWER TRANSFORMERS, CABINET, ADDITIONAL ENCLOSURES, PANEL BOARDS, MAIN BREAKER, BRANCH CIRCUIT BREAKERS, FUSES, LIGHTNING ARRESTOR, PHOTO-ELECTRIC ASSEMBLY, CONTACTOR, H.O.A. SWITCH, AND ALL MISCELLANEOUS HARDWARE REQUIRED FOR A COMPLETE INSTALLATION.

THE LOAD CENTER SHALL BE THREE WIRE, SINGLE PHASE, 240/480V POWER SERVICE ASSEMBLY.

715-500-1:

INCLUDES COST OF BREAKAWAY WATERTIGHT IN-LINE FUSE HOLDERS, STRAIN RELIEF, AND SURGE ARRESTOR AS INDICATED IN FDOT STANDARD PLANS INDEX 715-001.

715-511-313:

FOR LIGHT POLES LOCATED WITHIN THE FPL TRANSMISSION EASEMENT, UTILIZE THE FOLLOWING PRODUCTS LISTED IN THE FPL LED LIGHTING CATALOG: POLE OPTION NUMBER 1, 20' STANDARD CONCRETE (13' MH) AND BRACKET OPTION NUMBER 1, STANDARD 8' SIDE MOUNTED. SUBMIT SHOP DRAWINGS FOR BOTH THE POLE AND THE BRACKET TO THE ENGINEER FOR APPROVAL.

LUMINAIRES INCLUDED UNDER THIS ITEM SHALL BE AEL ATB0 LED WITH 4000K CCT AND TYPE VS DISTRIBUTION. SEE LEGEND AND POLE DATA TABLES FOR WATTAGE, PHOTOMETRIC CURVE, AND ADDITIONAL DETAILS.

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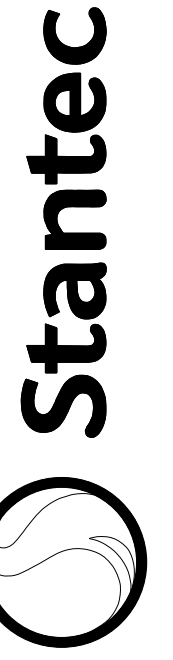
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ORIGINAL SHEET - ARCH D



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Permit/Seal

Client/Project  
MANATEE COUNTY PUBLIC WORKS DEPARTMENT

MOCCASIN WALLOW ROAD SEGMENT 2

Project No.: 215617221

File Name: 215617221-01-C-1801

Scale:

Drawn: Dgn. Ckd. YYY-MM-DD

02/2022

Title

PAY ITEM NOTES

Revision: Sheet: 88 of 117

Drawing No.

88



POLE DATA

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	OFFSET	PAY ITEM
300	B-2	96+71.01	15'	82	40'	49.8' RT	715-61-352
301	B-1	95+98.48	15'	82	40'	87.3' LT	715-61-352
302	B-2	98+16.01	15'	82	40'	50.9' RT	715-61-352
303	B-1	97+43.48	15'	82	40'	85.8' LT	715-61-352
304	B-2	99+61.01	15'	82	40'	54.5' RT	715-61-352
305	B-1	98+88.48	15'	82	40'	87.0' LT	715-61-352
306	B-2	101+06.01	15'	111	40'	50.0' RT	715-61-352
307	B-1	100+33.48	15'	111	40'	86.6' LT	715-61-352
308	B-2	102+51.01	15'	111	40'	54.5' RT	715-61-352
309	B-1	101+78.48	15'	111	40'	86.8' LT	715-61-352
310	B-2	103+95.92	15'	111	40'	54.5' RT	715-61-352
311	B-1	103+23.44	15'	111	40'	93.2' LT	715-61-352
312	B-2	105+40.76	15'	111	40'	54.5' RT	715-61-352
313	B-1	104+68.30	15'	82	40'	92.5' LT	715-61-352
314	B-2	106+85.59	15'	149	40'	54.5' RT	715-61-352
315	B-1	106+13.14	15'	82	40'	92.5' LT	715-61-352
316	B-2	108+30.43	15'	149	40'	57.0' RT	715-61-352
316A	B-2	110+18.55	15'	149	40'	126.6' RT	715-61-352
317	B-1	107+57.99	15'	82	40'	86.9' LT	715-61-352
317A	B-1	108+82.47	15'	149	40'	157.9' LT	715-61-352
318	B-2	111+21.28	15'	82	40'	48.2' RT	715-61-352
319	B-1	110+78.27	15'	111	40'	92.5' LT	715-61-352
320	B-2	112+64.45	15'	82	40'	48.2' RT	715-61-352
321	B-1	111+92.52	15'	111	40'	92.5' LT	715-61-352
322	B-2	114+09.22	15'	82	40'	48.2' RT	715-61-352
323	B-1	113+37.36	15'	111	40'	92.5' LT	715-61-352
324	B-2	115+53.90	15'	82	40'	47.7' RT	715-61-352
325	B-1	114+82.21	15'	111	40'	92.5' LT	715-61-352
326	B-2	116+99.63	15'	82	40'	48.2' RT	715-61-352
327	B-1	116+27.09	15'	82	40'	92.5' LT	715-61-352
328	B-2	118+44.63	15'	82	40'	48.2' RT	715-61-352
329	B-1	117+72.09	15'	82	40'	85.8' LT	715-61-352
330	B-2	119+89.63	15'	82	40'	48.2' RT	715-61-352
331	B-1	119+17.09	15'	82	40'	85.8' LT	715-61-352
332	B-2	121+34.63	15'	82	40'	48.2' RT	715-61-352
333	B-1	120+62.09	15'	82	40'	85.8' LT	715-61-352
334	B-2	122+79.63	15'	111	40'	48.2' RT	715-61-352
335	B-1	122+07.09	15'	82	40'	85.8' LT	715-61-352
336	B-2	124+24.63	15'	111	40'	54.5' RT	715-61-352
337	B-1	123+52.09	15'	82	40'	85.8' LT	715-61-352
338	B-2	125+88.34	15'	111	40'	59.4' RT	715-61-352
339	B-1	124+89.56	15'	111	40'	92.5' LT	715-61-352
340	B-2	127+14.63	15'	111	40'	48.2' RT	715-61-352
341	B-1	126+42.10	15'	111	40'	92.5' LT	715-61-352
342	B-2	128+59.63	15'	82	40'	48.2' RT	715-61-352
343	B-1	127+89.89	15'	82	40'	92.5' LT	715-61-352
344	B-2	130+04.63	15'	82	40'	48.2' RT	715-61-352
345	B-1	129+32.10	15'	82	40'	85.8' LT	715-61-352
346	B-2	131+49.64	15'	82	40'	48.2' RT	715-61-352
347	B-1	130+77.10	15'	82	40'	85.8' LT	715-61-352

CONVENTIONAL LIGHTING DESIGN CRITERIA

Average Horizontal Fc 1.0 Foot Candles  
 Uniformity Ratio Avg./Min. 4:1 Or Less  
 Max./Min. 10:1 Or Less  
 Veiling Luminance Ratio 0.3:1 Or Less  
 Wind Speed 140 mph

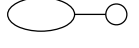



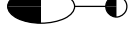


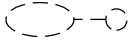

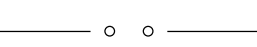


SIGNALIZED INTERSECTION LIGHTING DESIGN CRITERIA

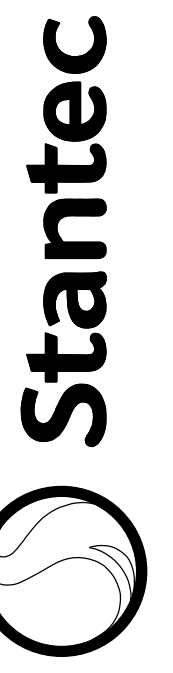
Average Horizontal Fc 3.0 Foot Candles (1.5 fc Min.)  
 Uniformity Ratio Avg./Min. 4:1 Or Less  
 Max./Min. 10:1 Or Less  
 Average Vertical Fc 1.5 Foot Candles (1.2 fc Min.)  
 Wind Speed 140 mph

LEGEND

SYMBOLS

DESCRIPTION

-  82W LED luminaire with single 15' arm. GE Evolve ERLH designed for Type II (Wide) distribution and wired for 480 volt operation. Pole mounting height 40 ft. Use curve ERLH\_10B340 or equal. Symbol includes concrete slab and pull box.
-  111W LED luminaire with single 15' arm. GE Evolve ERLH designed for Type II (Wide) distribution and wired for 480 volt operation. Pole mounting height 40 ft. Use curve ERLH\_13B340 or equal. Symbol includes concrete slab and pull box.
-  149W LED luminaire with single 15' arm. GE Evolve ERLH designed for Type II (Wide) distribution and wired for 480 volt operation. Pole mounting height 40 ft. Use curve ERLH\_16B340 or equal. Symbol includes concrete slab and pull box.
-  58W LED luminaire with single 15' arm. GE Evolve ERL1 designed for Type III (Medium) distribution and wired for 480 volt operation. Pole mounting height 40 ft. Use curve ERL1\_07B340 or equal. Symbol includes concrete slab and pull box.
-  84W LED luminaire with single 15' arm. GE Evolve ERL1 designed for Type III (Medium) distribution and wired for 480 volt operation. Pole mounting height 40 ft. Use curve ERL1\_09B340 or equal. Symbol includes concrete slab and pull box.
-  49W LED luminaire with single 8' arm. AEL ATB0 designed for Type VS (Short) distribution and wired for 480 volt operation. Pole mounting height 13 ft. Use curve ATB0\_P202\_R5\_4K or equal. Symbol includes concrete slab and pull box.
-  305W LED luminaire with single 15' arm. GE Evolve EALP designed for Type IV (Short) distribution and wired for 120 volt operation. Pole mounting height 40 ft. on mast arm uprights. Use curve EALP03\_MH4AH740 or equal. Note: These luminaires are to be powered from the traffic signal controller cabinet disconnect, and have been quantified in the Signalization Plans.
-  Indicates luminaire and pole type listed above to be installed on Standard Spread Footing Foundation detailed on Index 715-002, sheet 5 of 9.
-  Existing single arm pole to remain.
-  Schedule 40 PVC conduit with THW or THWN conductors inside (conduit and conductor size as shown on plan sheets). Run one (1) copper bond conductor (TW green insulation) inside conduit with other conductors.
-  Schedule 40 PVC conduit directional bored under pavement with THW or THWN conductors inside (conduit and conductor size as shown on plan sheets). Run one (1) copper bond conductor (TW green insulation) inside conduit with other conductors.
-  Pull box. For specifications see Section 635 of the FDOT Standard Specifications For Road And Bridge Construction.
-  Service point. For requirements see Standard Plans Index No. 639-001.



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			Yyyy.Mm.Dd

Permit/Seal

Client/Project  
 MANATEE COUNTY PUBLIC WORKS DEPARTMENT  
 MOCCASIN WALLOW ROAD SEGMENT 2

Project No.: 215617221  
 File Name: 215617221-01-C-1801  
 Scale:  
 Drawn: Dgn: Ck'd: Yyyy.Mm.Dd

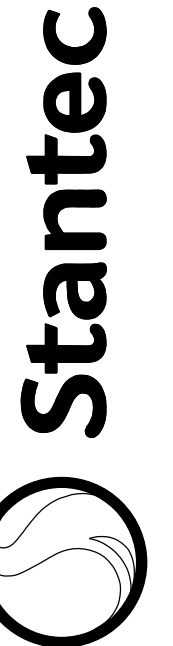
Title  
 POLE DATA & LEGEND

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 Drawing No.

POLE DATA

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	OFFSET	PAY ITEM
348	B-2	132+94.64	15'	82	40'	48.2' RT	715-61-352
349	B-1	132+22.10	15'	82	40'	85.8' LT	715-61-352
350	B-2	133+69.32	8'	49	13'	48.2' RT	715-511-313
351	B-1	132+96.79	8'	49	13'	85.8' LT	715-511-313
352	B-2	134+37.88	8'	49	13'	48.2' RT	715-511-313
353	B-1	133+65.34	8'	49	13'	85.8' LT	715-511-313
354	B-2	135+06.43	8'	49	13'	48.2' RT	715-511-313
355	B-1	134+33.90	8'	49	13'	85.8' LT	715-511-313
356	B-2	135+74.98	8'	49	13'	48.2' RT	715-511-313
357	B-1	135+02.45	8'	49	13'	85.8' LT	715-511-313
358	B-2	136+43.54	8'	49	13'	48.2' RT	715-511-313
359	B-1	135+71.00	8'	49	13'	85.8' LT	715-511-313
360	B-2	137+12.96	8'	49	13'	48.2' RT	715-511-313
361	B-1	136+40.42	8'	49	13'	85.8' LT	715-511-313
362	B-2	137+81.51	8'	49	13'	48.2' RT	715-511-313
363	B-1	137+08.98	8'	49	13'	85.8' LT	715-511-313
364	B-2	138+74.64	15'	82	40'	48.2' RT	715-61-352
365	B-1	138+00.56	15'	82	40'	94.8' LT	715-61-352
366	B-4	140+19.64	15'	82	40'	48.2' RT	715-61-352
367	B-3	139+45.02	15'	82	40'	92.5' LT	715-61-352
368	B-4	141+64.64	15'	82	40'	48.2' RT	715-61-352
369	B-3	140+92.09	15'	82	40'	92.5' LT	715-61-352
370	B-4	143+09.64	15'	82	40'	48.2' RT	715-61-352
371	B-3	142+37.04	15'	82	40'	85.4' LT	715-61-352
372	B-4	144+54.64	15'	82	40'	48.2' RT	715-61-352
373	B-3	143+82.10	15'	58	40'	85.8' LT	715-61-352
374	B-4	145+99.64	15'	82	40'	48.2' RT	715-61-352
375	B-3	145+22.81	15'	58	40'	85.8' LT	715-61-352
376	B-4	147+44.64	15'	82	40'	48.2' RT	715-61-352
377	B-3	146+72.10	15'	82	40'	85.8' LT	715-61-352
378	B-4	148+89.64	15'	82	40'	48.2' RT	715-61-352
379	B-3	148+17.10	15'	82	40'	85.8' LT	715-61-352
380	B-4	150+34.64	15'	82	40'	48.2' RT	715-61-352
381	B-3	149+12.07	15'	58	40'	92.3' LT	715-61-352
382	B-4	151+79.72	15'	82	40'	49.5' RT	715-61-352
383	B-3	150+06.90	15'	58	40'	92.3' LT	715-61-352
384	B-4	153+24.84	15'	82	40'	50.0' RT	715-61-352
385	B-3	151+07.10	15'	82	40'	92.8' LT	715-61-352
386	B-4	154+69.97	15'	82	40'	50.0' RT	715-61-352
387	B-3	152+51.63	15'	82	40'	83.2' LT	715-61-352
388	B-4	156+15.09	15'	82	40'	50.0' RT	715-61-352
389	B-3	153+96.71	15'	82	40'	80.1' LT	715-61-352
390	B-4	157+60.21	15'	82	40'	50.0' RT	715-61-352
391	B-3	155+41.80	15'	82	40'	77.0' LT	715-61-352
392	B-4	159+05.34	15'	82	40'	50.0' RT	715-61-352
393	B-3	156+86.86	15'	82	40'	73.8' LT	715-61-352
394	B-4	160+50.46	15'	82	40'	50.0' RT	715-61-352
395	B-3	158+32.20	15'	82	40'	69.1' LT	715-61-352

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	OFFSET	PAY ITEM
396	B-4	161+95.58	15'	82	40'	50.0' RT	715-61-352
397	B-3	159+77.33	15'	82	40'	66.3' LT	715-61-352
398	B-4	163+40.70	15'	82	40'	50.0' RT	715-61-352
399	B-3	161+22.45	15'	82	40'	66.3' LT	715-61-352
400	B-4	164+85.82	15'	82	40'	50.0' RT	715-61-352
401	B-3	162+67.56	15'	82	40'	66.3' LT	715-61-352
402	B-4	166+30.99	15'	82	40'	48.2' RT	715-61-352
403	B-3	164+12.66	15'	82	40'	66.3' LT	715-61-352
404	B-4	167+73.10	15'	82	40'	48.2' RT	715-61-352
405	B-3	165+57.63	15'	82	40'	66.3' LT	715-61-352
406	B-4	169+18.10	15'	82	40'	48.2' RT	715-61-352
407	B-3	167+04.62	15'	82	40'	65.5' LT	715-61-352
408	B-4	170+63.10	15'	111	40'	54.5' RT	715-61-352
409	B-3	168+47.84	15'	82	40'	61.8' LT	715-61-352
410	B-4	172+08.10	15'	111	40'	54.5' RT	715-61-352
411	B-3	170+04.65	15'	82	40'	57.7' LT	715-61-352
412	B-4	173+25.25	15'	58	40'	47.1' RT	715-61-352
413	B-3	171+38.54	15'	82	40'	54.3' LT	715-61-352
414	B-4	174+70.24	15'	58	40'	45.7' RT	715-61-352
415	B-3	172+49.48	15'	84	40'	51.4' LT	715-61-352
416	B-4	176+15.28	15'	58	40'	45.8' RT	715-61-352
417	B-3	173+94.50	15'	84	40'	51.3' LT	715-61-352
418	B-4	177+59.48	15'	58	40'	45.8' RT	715-61-352
419	B-3	175+39.52	15'	84	40'	51.3' LT	715-61-352
420	-	~ NOT USED ~	-	-	-	-	-
421	B-3	176+84.53	15'	84	40'	51.8' LT	715-61-352
422	-	~ NOT USED ~	-	-	-	-	-
423	B-3	176+84.53	15'	84	40'	51.8' LT	715-61-352



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MOCCASIN WALLOW ROAD SEGMENT 2

Project No.: 215617221  
 File Name: 215617221-01-C-1801  
 Scale:  
 Drawn: Dgn. Crkd. YYY-MM-DD  
 Title

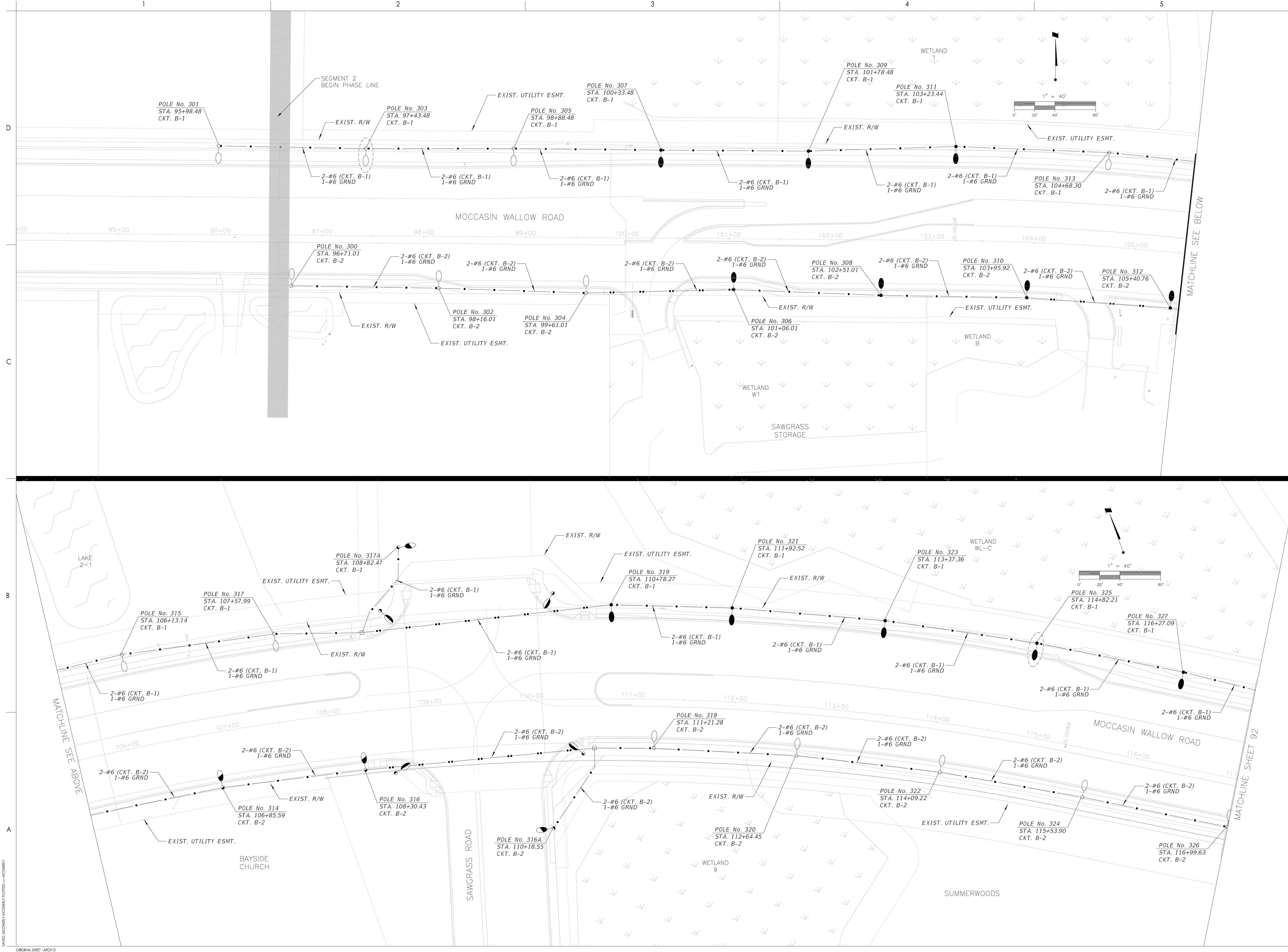
POLE DATA

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MOCCASIN WALLOW ROAD SEGMENT 2 - ARCH D

ORIGINAL SHEET - ARCH D



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			YYYY.MM.DD

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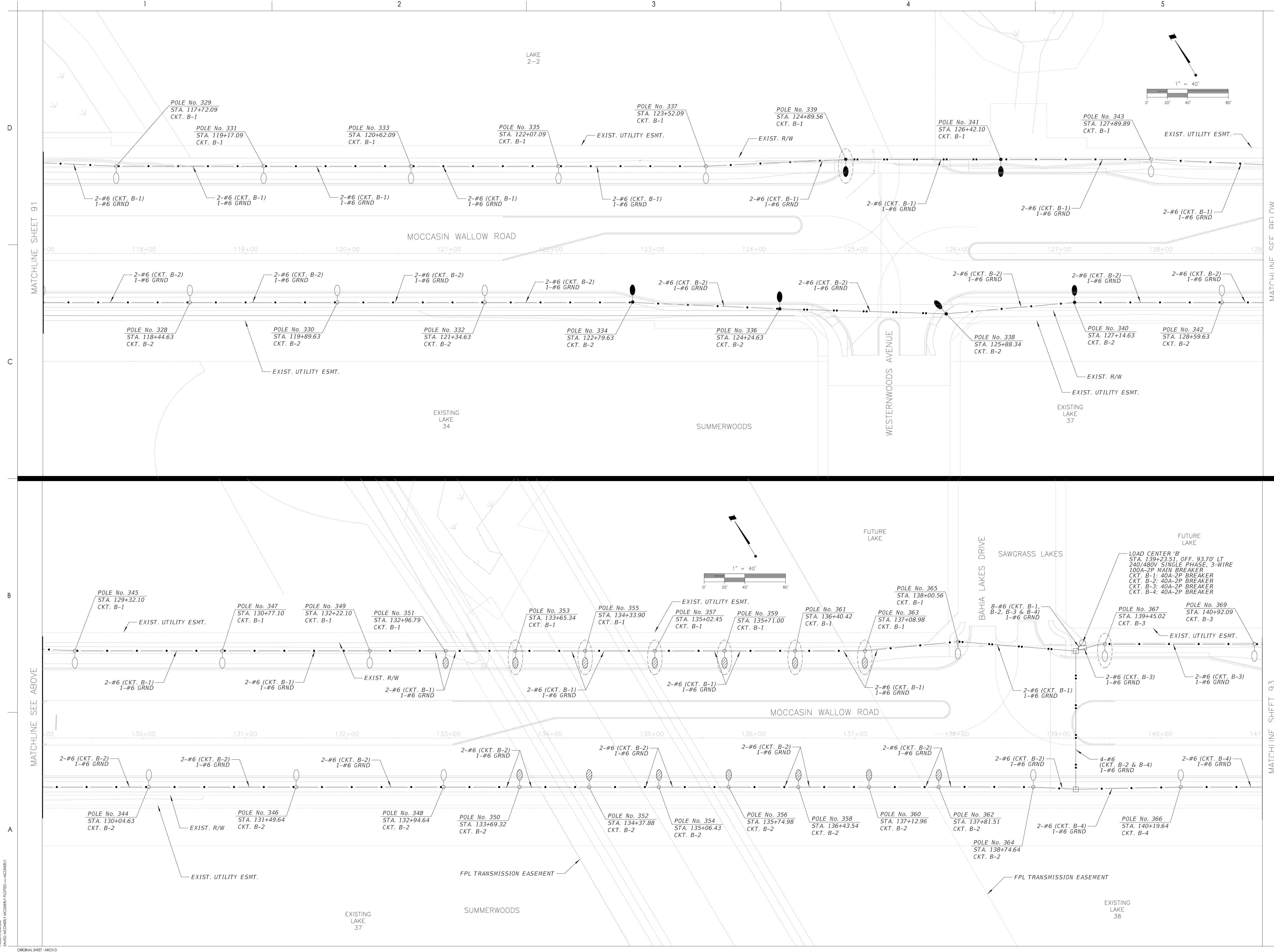


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 Date: 02/2022  
 Title  
**LIGHTING PLAN**  
 Revision: \_\_\_\_\_ Sheet: 92 of 117  
 Drawing No.  
**92**



ORIGINAL SHEET - ARCH D  
 MODIFIED BY: \_\_\_\_\_  
 SAVED: \_\_\_\_\_

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Revision	By	App'd	YYYY/MM/DD
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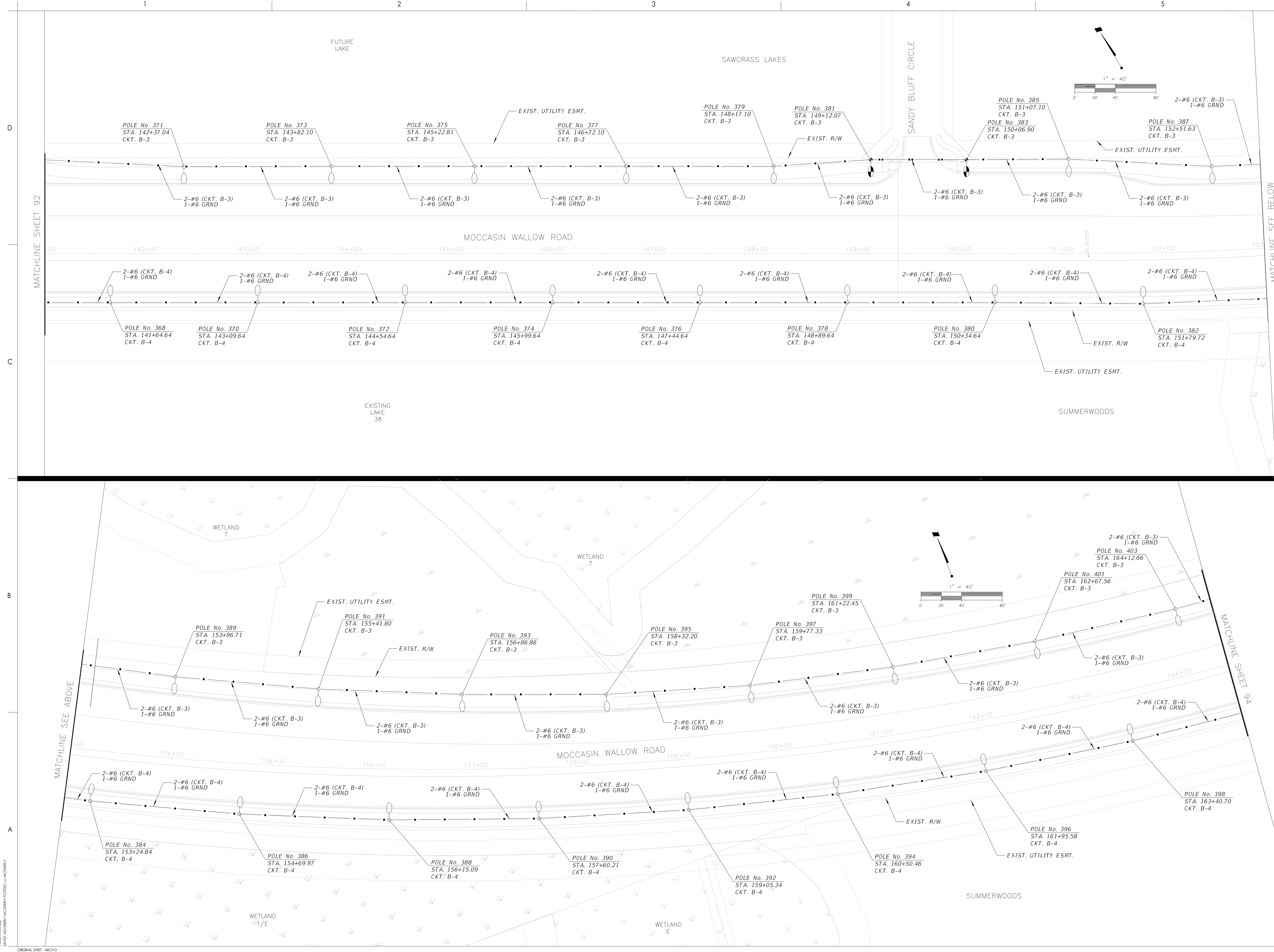
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Project No.: 215617221  
 File Name: 215617221-01-C-1801  
 Scale: 1" = 40'

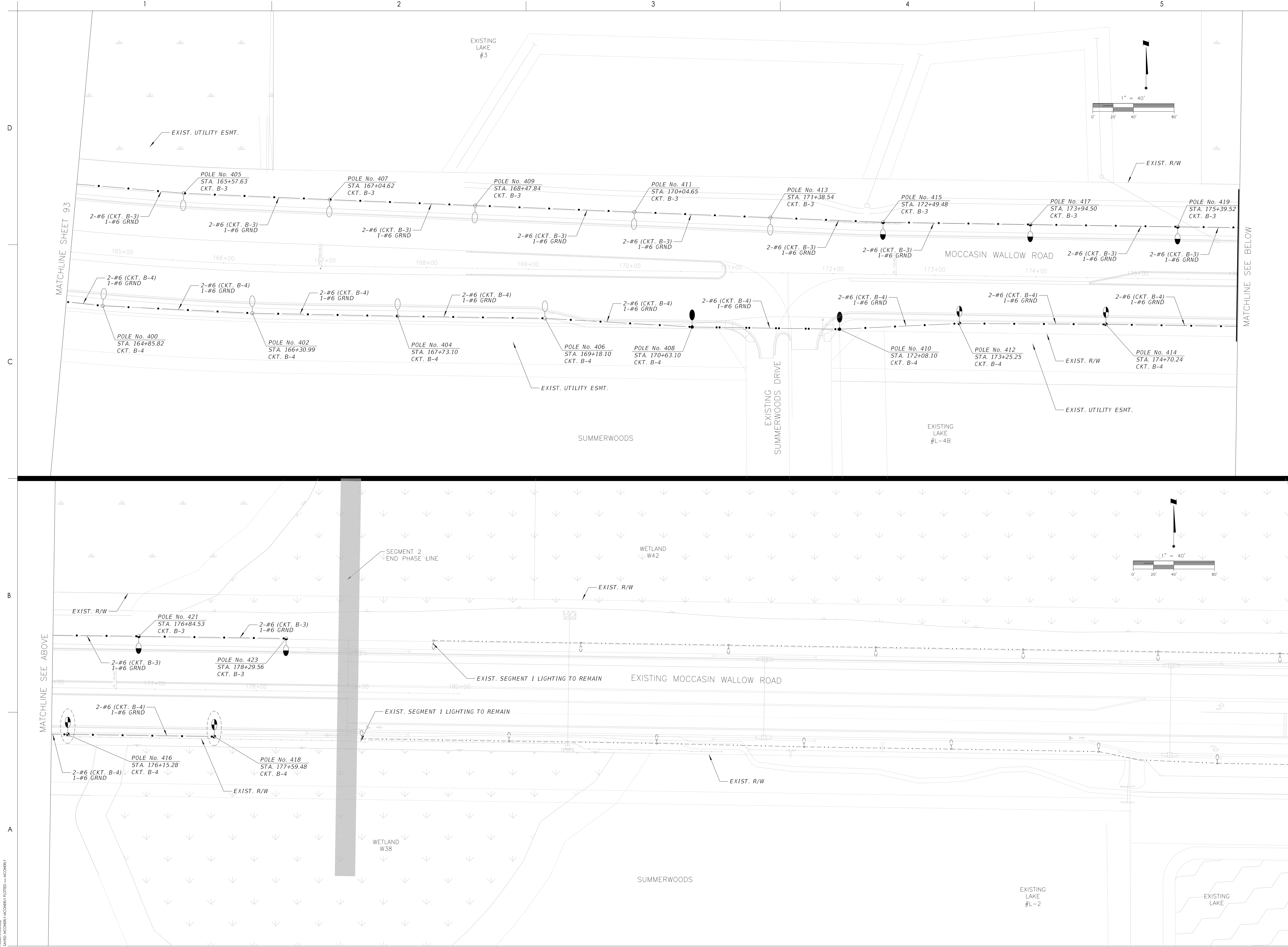
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 Date: 02/2022  
 Title: LIGHTING PLAN

Revision: [ ] Sheet: 93 of 117  
 Drawing No. 93



MOCCASIN WALLOW ROAD SEGMENT 2  
 LIGHTING PLAN  
 02/2022  
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Title  
 LIGHTING PLAN

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 94

D

C

B

A

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ORIGINAL SHEET - ARCH D

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The Contractor and I hereby certify that the information contained in this drawing is true and correct to the best of my knowledge and belief.

PANEL SCHEDULE B					
NEMA-4X SST: 1Ø,3W, 240/480V (2P - 100A Main Ckt. Breaker)					
CKT.	SERVING	KVA	AMPS	CKT. BKR.	WIRE / CONDUCT
B-1	LIGHTING	2.90	6.05	2P/ 40	(2) - 6 AWG. (1) - 6 AWG.
B-2	LIGHTING	2.97	6.19	2P/ 40	(2) - 6 AWG. (1) - 6 AWG.
B-3	LIGHTING	2.34	4.88	2P/ 40	(2) - 6 AWG. (1) - 6 AWG.
B-4	LIGHTING	1.93	4.03	2P/ 40	(2) - 6 AWG. (1) - 6 AWG.

**DEMAND LOAD ANALYSIS**  
**BASED ON 240V/480V, 1Ø, 3W**

CONTINUOUS LOAD = 10.15 KVA  
 25% CONT. LOAD = 2.54 KVA  
**TOTAL = 12.69 KVA**

**TOTAL DEMAND LOAD:**

$$AMP = \frac{KVA}{KV} = \frac{12.69 \text{ KVA}}{0.480 \text{ KV}} = 26 \text{ AMPS}$$


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**PANEL SCHEDULE**

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