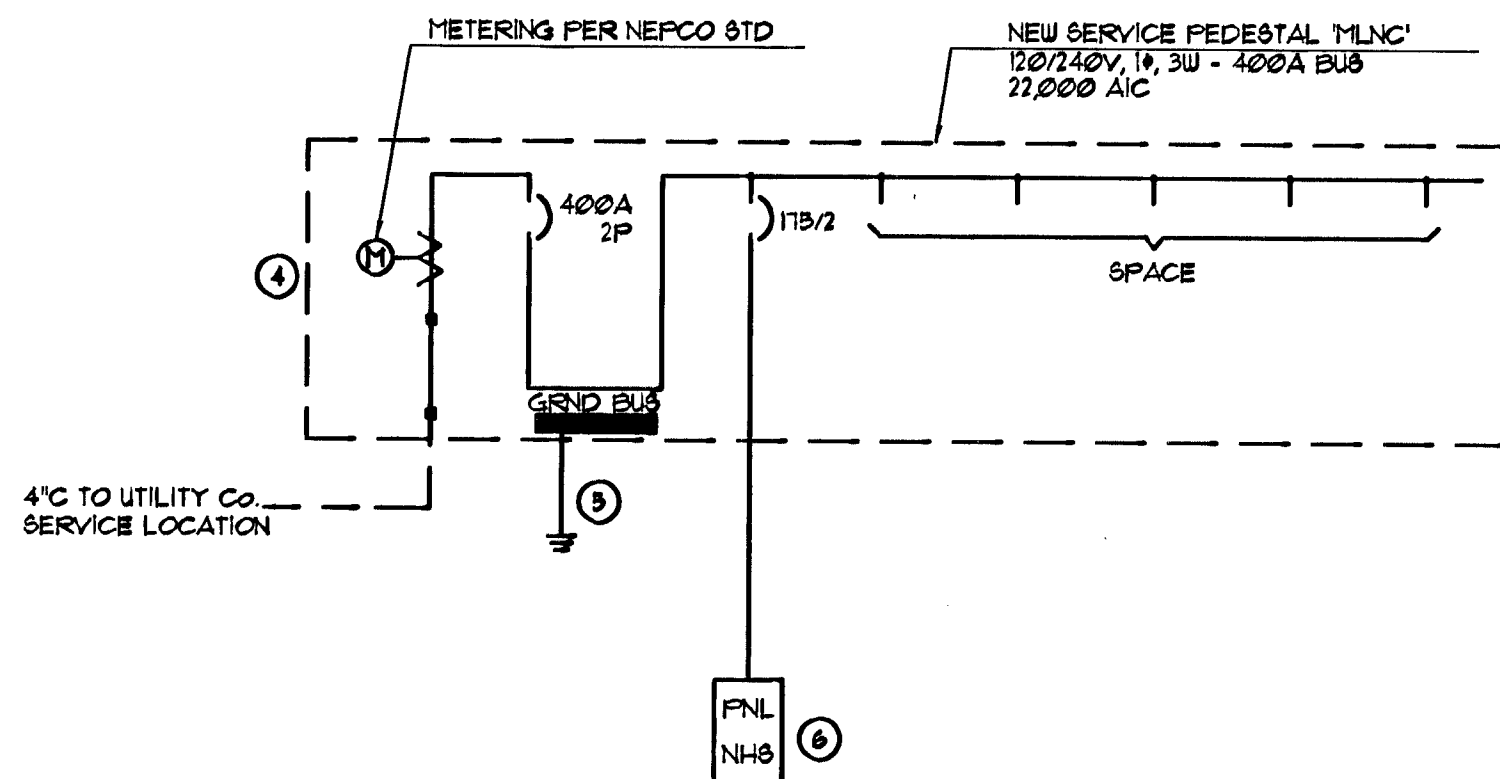
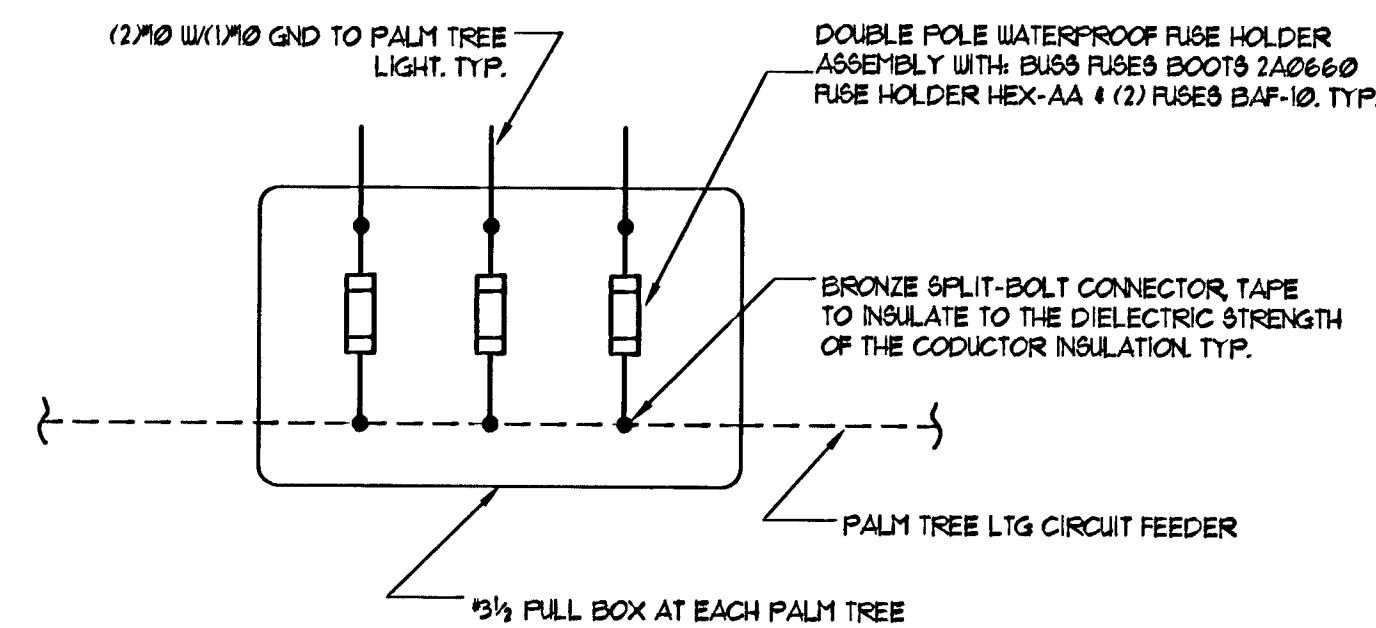




One Line Diagram - "MLNC"

Not To Scale

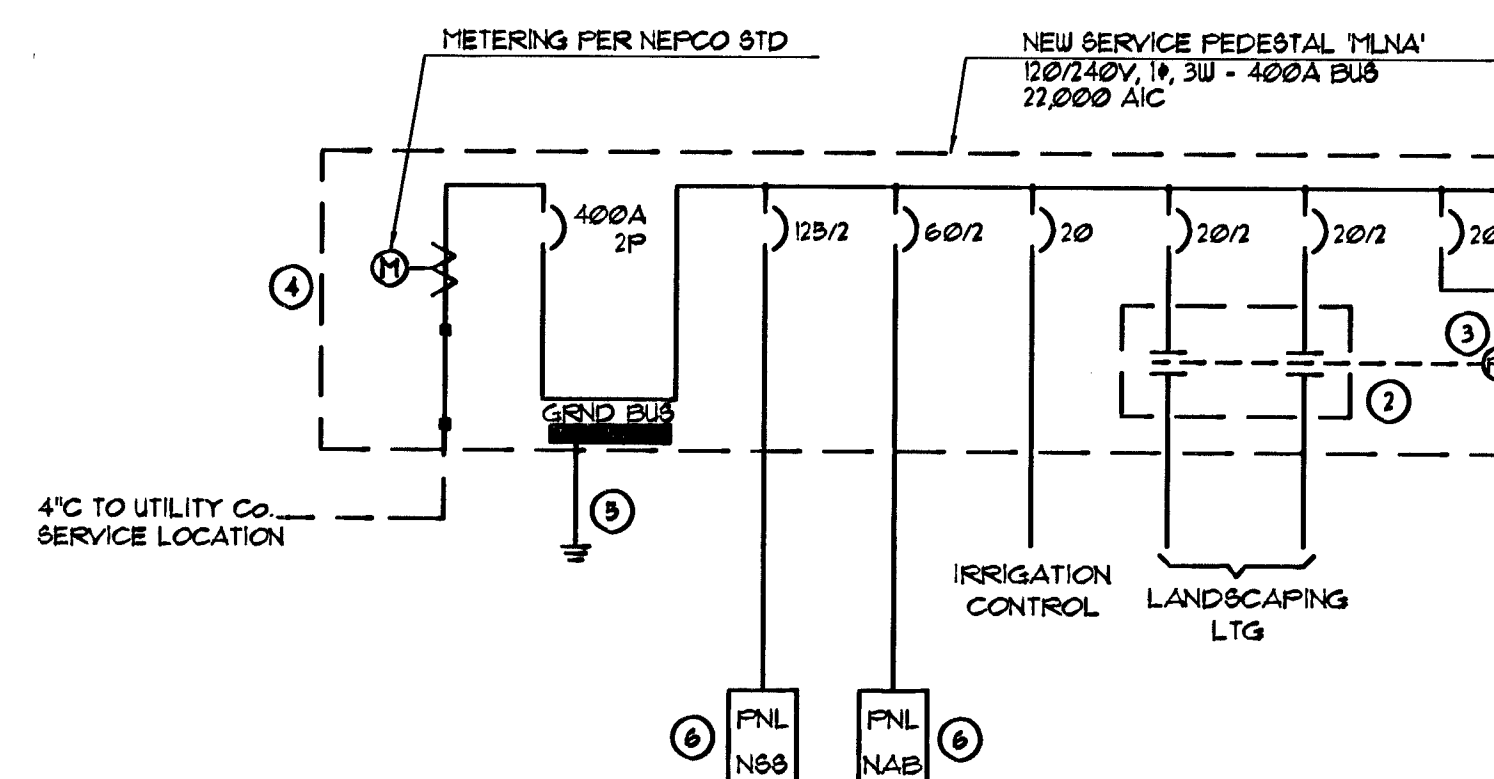
SERVICE PEDESTAL "MLNC" 1 PHASE, 3 WIRE, 120/240 VOLTS 400A MAIN CB MIN INTERRUPTING RATING 22,000 RMS SYM AMPS LOCATION SEE PLAN NEMA 3R					
L = LIGHTS, R = RECEPTACLES, M = MECHANICAL EQUIPMENT, SO = SPACE ONLY, SC = SPARE CIRCUIT, E = EXISTING MLO = MAIN LUGS ONLY, MCB = MAIN CIRCUIT BREAKERS					
POLE SPACE	CIRCUIT USE	CKT BKR RATING	CONNECTED LOAD VA	CKT BKR RATING	CIRCUIT USE
CKT #			A B		POLE SPACE
					CKT #
1	SO				2
3	SO				4
5	SO				6
7	SO				8
9	SO				10
11	SO				12
TOTAL LOAD:			14840 14840	X	
29280VA/240V = 122A @ 125% = 153A			29280		



Palm Tree Ltg Fuse Holder Connection Schematic

Not To Scale

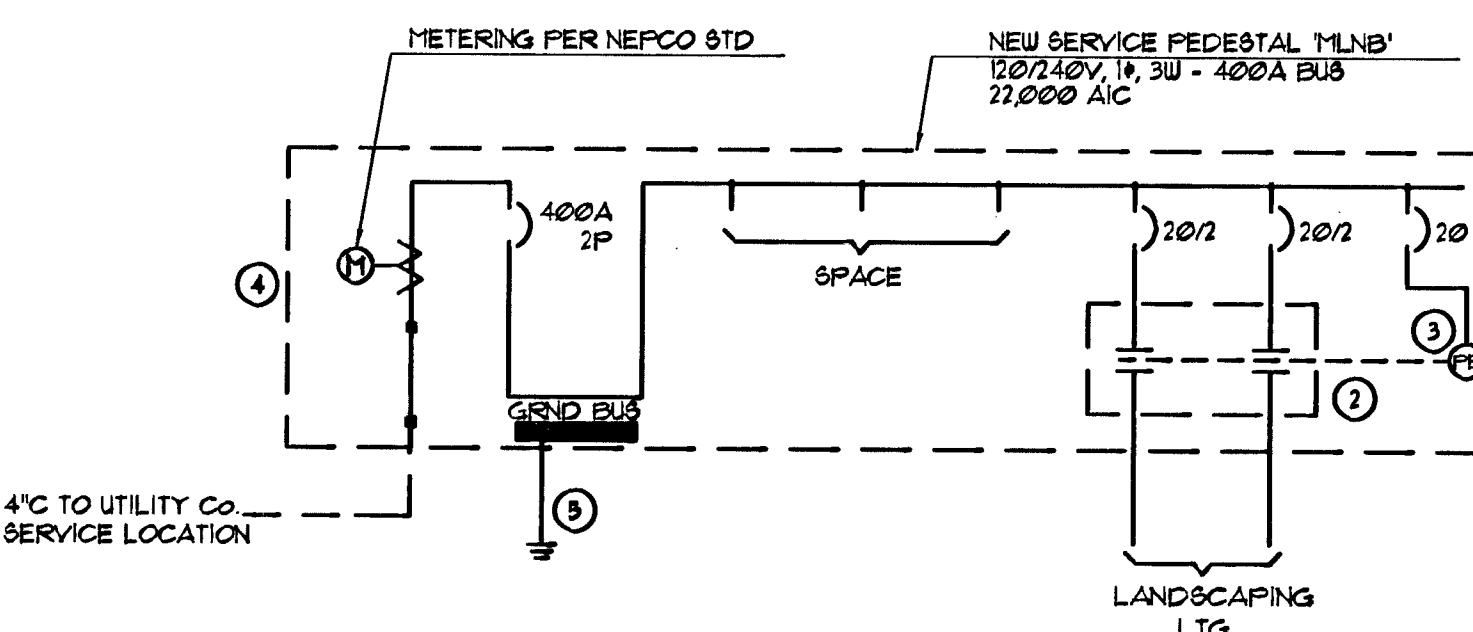
TYPICAL PALM TREE LTG LAYOUT SEE SHEET E1 & E2 FOR CIRCUITING.					
SYMBOL	COMMON NAME	SYMBOL	COMMON NAME	SYMBOL	COMMON NAME
	CAVARY DATE PALM		DATE PALM		BLUE PALM
LEGEND		1. INSTALL IN GROUND MOUNTED LTG FIXTURE HOLOPHANE CAT[®] LT42H060DVCTUL1630GR8 PER MANUFACTURER'S INSTRUCTIONS (TYP). LOCATE FIXTURE APPROXIMATELY 2 FEET FROM TREE TRUNK. FINAL LOCATION & AIMING TO BE VERIFIED IN FIELD BY ENGINEER. 2. 3/4\"/>			



One Line Diagram - "MLNA"

Not To Scale

SERVICE PEDESTAL "MLNA" 1 PHASE, 3 WIRE, 120/240 VOLTS 400A MAIN CB MIN INTERRUPTING RATING 22,000 RMS SYM AMPS LOCATION SEE PLAN NEMA 3R					
L = LIGHTS, R = RECEPTACLES, M = MECHANICAL EQUIPMENT, SO = SPACE ONLY, SC = SPARE CIRCUIT, E = EXISTING MLO = MAIN LUGS ONLY, MCB = MAIN CIRCUIT BREAKERS					
POLE SPACE	CIRCUIT USE	CKT BKR RATING	CONNECTED LOAD VA	CKT BKR RATING	CIRCUIT USE
CKT #			A B		POLE SPACE
					CKT #
1	IRRIGATION CONTROL		200		2
3	L-LANDSCAPING	20/2	1280		4
5		X	1280		6
7	L-LANDSCAPING	20/2	1280		8
9		X	1280		10
11	PHOTOCELL	20	200		12
TOTAL LOAD:			11880 19920	X	
39840VA/240V = 166A @ 125% = 208A			39840		



One Line Diagram - "MLNB"

Not To Scale

SERVICE PEDESTAL "MLNB" 1 PHASE, 3 WIRE, 120/240 VOLTS 400A MAIN CB MIN INTERRUPTING RATING 22,000 RMS SYM AMPS LOCATION SEE PLAN NEMA 3R					
L = LIGHTS, R = RECEPTACLES, M = MECHANICAL EQUIPMENT, SO = SPACE ONLY, SC = SPARE CIRCUIT, E = EXISTING MLO = MAIN LUGS ONLY, MCB = MAIN CIRCUIT BREAKERS					
POLE SPACE	CIRCUIT USE	CKT BKR RATING	CONNECTED LOAD VA	CKT BKR RATING	CIRCUIT USE
CKT #			A B		POLE SPACE
					CKT #
1	SO				2
3	L-LANDSCAPING	20/2	1140		4
5		X	1140		6
7	L-LANDSCAPING	20/2	710		8
9		X	710		10
11	PHOTOCELL	20	200		12
TOTAL LOAD:			1850 2050		
3900VA/240V = 16.3A @ 125% = 20.4A			3900		

General Notes

- DO NOT SCALE DRAWINGS, VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.
- FINAL CONNECTIONS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
- ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A #2 FULLWIRE OR EQUAL AND SHALL BE IDENTIFIED AT ALL JUNCTION, FULL AND TERMINATION POINTS USING PERMANENT METALLIC TAGS. TAG SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION AND TERMINATION POINTS OF EACH INDIVIDUAL.
- IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY. THE ENGINEER RESERVES THE RIGHT TO VERBALLY APPROVE METHODS AND MATERIALS NOT REFLECTED HEREIN.
- CONTRACTOR SHALL REVIEW CIVIL AND OTHER DRAWINGS PRIOR TO BID.
- CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL INCLUDE IN HIS BID FOR COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.
- WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ENGINEER.
- WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE OF NEVADA AND NATIONAL CODES AND ORDINANCES.
- PROVIDE PERMITS AND INSPECTIONS AS REQUIRED.
- SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO CITY OF LAS VEGAS.
- PROVIDE ELECTRICAL DEMOLITION REQUIRED. REFER TO CIVIL DRAWINGS FOR LOCATIONS AND EXTENT OF DEMOLITION REQUIRED. CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO DETERMINE EXTENT OF WORK INVOLVED. PROVIDE LABOR AND MATERIALS AS REQUIRED TO MAINTAIN AND/OR RESTORE CONTINUITY OF SERVICE TO EXISTING CIRCUITS.
- WIRE SHALL BE COPPER, TYPE THW-2, MINIMUM 90°C RATED. WIRE SIZES INDICATED AT BRANCH CIRCUIT HOTTERMIN SHALL BE USED THROUGHOUT CIRCUIT.
- SPLICES IN EXTERIOR PULL BOXES SHALL BE MADE WATERPROOF, USING "SCOTCH CAST" SPLICE KIT OR APPROVED EQUAL. SEAL ENDS OF CONDUITS WITH "DUCT SEAL" OR APPROVED EQUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.
- CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS, EQUIPMENT OR INSTALLATION METHODS.
- VERIFY EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACK FILL, EXCAVATION SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULL BOXES, SAW CUTTING AND PATCHING, CONCRETE/PAVING, ETC. AS REQUIRED. BACK FILL TRENCHES TO 90% COMPACTING AND PATCH TO MATCH EXISTING. ALL UNDERGROUND INSTALLATION SHALL MEET NEC 300.5 REQUIREMENTS.
- FULL BOXES, CABINETS, ETC. MOUNTED ON THE EXTERIOR AT GRADE LEVEL SHALL BE WEATHERPROOF TYPE WITH HINGED LOCKABLE COVERS SECURED WITH TAMPERPROOF SCREWS. ALL FULL BOXES INSTALLED IN UNDEVELOPED AREA SHALL HAVE CONCRETE COLLAR AROUND PULL BOX AS PER CAUSED 404143.
- NEW BREAKERS SHALL BE SUITABLE TYPE AS PER SERVICE PEDESTAL MANUFACTURER'S SPECIFICATIONS.
- EXTERIOR CONDUIT EXPOSED TO DAMAGE SHALL BE TYPE RGS. EXTERIOR BURIED CONDUIT SHALL BE SCHEDULE 40 PIVOT SEAL WITH PVC COATED SEALS WHEN PENETRATING THROUGH SLABS. CONDUIT FITTINGS SHALL BE STEEL OR MALLEABLE IRON TYPE.
- LANDSCAPING LIGHTING INSTALLATION SHALL BE PER MANUFACTURER'S INSTALLATION RECOMMENDATIONS.
- ALL ELECTRICAL SYSTEMS AND COMPONENTS SHALL BE LISTED OR LABELED BY UL OR OTHER RECOGNIZED TESTING INSTITUTE.
- NEON SIGN AND PALM TREE LIGHTING CONDUIT SHALL BE ROUTED ALONG ONE SIDE OF MEDIAN, BUT WITHIN MEDIAN CONDUIT SHALL NOT BE ROUTED BELOW PLANTING. MAXIMUM 12" FROM BACK OF CURB ON OPPOSITE SIDE OF WATER LINES.

Sheet Notes

- SEE RESPECTIVE ELECTRICAL LIGHTING PLAN FOR CONDUIT & WIRE SIZES.
- INSTALL NEW CONTACTOR IN PEDESTAL. SEE CONTACTOR SCHEDULE THIS SHEET FOR REQUIREMENTS.
- INSTALL NEW PHOTOCELL IN PEDESTAL, FACING NORTH.
- NEW SERVICE PEDESTAL FURNISH NEW CIRCUIT BREAKER.
- GROUNDING PER NEC 250.30.
- PANEL BOARD WITH MAIN CIRCUIT BREAKER FOR NEON SIGN BY OTHERS.

Electrical Structure List

- 3/4\"/>

Short Circuit Calculations

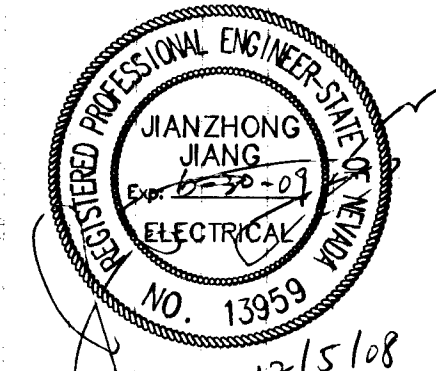
$$\begin{aligned} \text{TRANS FLA} &= \frac{75\text{KVA} \times 1000}{240} = 312.5 \\ M &= \frac{100}{16\%} = 625 \\ \text{AIC} &= \text{TRANS, SECONDARY: } 18\text{CA} = 19831 \text{ A 5711} \\ \text{MAX. AIC} &= \text{NEON SIGN FNL: } 18\text{Cap} = 3416 \text{ A 5711} \end{aligned}$$



REVISIONS
CONSULTANT

DEPARTMENT OF PUBLIC WORKS

Las Vegas Boulevard
Neon Signs & Median Island Improvement
Electrical General Notes & One Line Diagrams



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