

ELECTRICAL SYMBOL LIST	
— E —	EXISTING UNDERGROUND CONDUIT.
	SWITCHBOARD AS NOTED.
	BALLFIELD LIGHTING POLE AND FIXTURE "3" INDICATES NUMBER OF FIXTURES.
	NOTE NUMBER 1 .
	"A" INDICATES ELECTRICAL FIXTURE TYPE. "1070" INDICATES TOTAL FIXTURE WATTAGE.

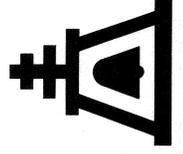
- ① DISCONNECT AND REMOVE WOOD POLES AND POLE TOP FIXTURES. DISPOSE OF ALL POLES AND FIXTURES IN A LEGAL MANNER.
- ② DISCONNECT AND REMOVE CONDUIT BELOW GRADE TO FIRST HORIZONTAL COUPLING. REMOVE EXISTING CONDUCTORS. EXTEND CONDUIT UP THROUGH NEW POLE FT4 AND STEEL POLE.
- ③ ALL EXISTING CONDUIT SHALL BE MANDRELLED AND SWABBED CLEAN PRIOR TO THE INSTALLATION OF NEW CONDUCTORS. IF CONDUIT CANNOT BE CLEANED DUE TO CORROSION OR BROKEN CONDUIT, CONTRACTOR SHALL PROVIDE IN HIS BID AN "ADDITIVE ALTERNATE" OF THE COST PER FOOT OF REPLACING THE CONDUIT.
- ④ PULL NEW 2#8, 2#10 IN EXISTING 1/2" C. CONNECT 2#8 TO SPORTSLIGHTING FIXTURE (TYPE "A") AND 2#10 TO SECURITY (N.L.) FIXTURES (TYPE "B").
- ⑤ REPLACE CIRCUIT BREAKER FOR BALLFIELD LIGHTING POLES "A1" AND "A2" TO 40A-2P.
- ⑥ PULL NEW 2#6, 2#8 IN EXISTING 3/4" C. CONNECT 2#8 TO FIXTURES ON POLES "B1" AND "B2".
- ⑦ PULL NEW 2#6 IN EXISTING 3/4" C. CONNECT TO FIXTURES ON POLES "C1" AND "C2".
- ⑧ PROVIDE NEW 40A-2P CIRCUIT BREAKER AND 60A-2P CONTACTOR FOR EACH OF 2 CIRCUITS (1 EACH FOR CIRCUIT TO POLES "C1" AND "C2").
- ⑨ INSTALL "HAND-OFF-AUTO" SWITCHES IN CONTROL SECTION, ONE FOR BALLFIELD LIGHTS AND ONE FOR SECURITY LIGHTS.
- ⑩ REPLACE 30A-2P CIRCUIT BREAKER FOR BALLFIELD LIGHTING TO 40A-2P.
- ⑪ REPLACE CONDUIT IF GROUND WIRE IS REQUIRED IN EXISTING CONDUIT RUN.

EXISTING LIGHTING STANDARDS TO REMAIN INTACT AND OPERATIVE (TYP)

RELOCATED PUSH-BUTTON STATION SEE DETAIL E3

AREA LT.
3/4" C, 3#2, 1#2 EQ TO MSC CONTROL SECTION.

400A, 120/240V, 1Φ
EXISTING SWITCHBOARD "MSC"
SEE SINGLE LINE DIAGRAM.



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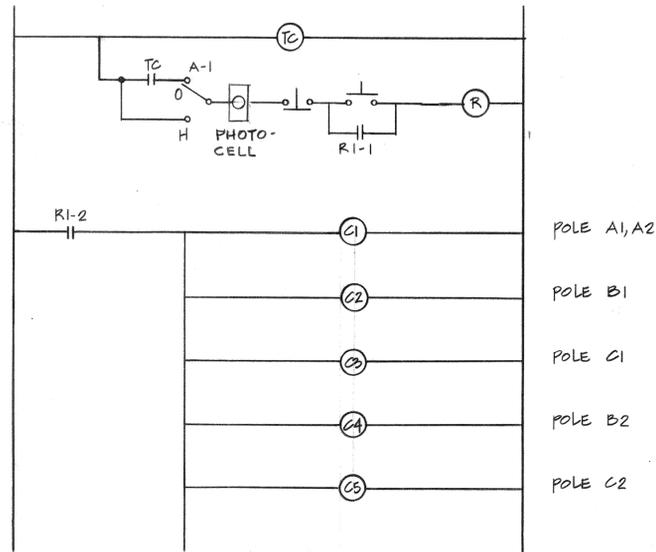
CONTACT: JACK TAMAI



RWR PASCOE
ELECTRICAL ENGINEERS • LIGHTING CONSULTANTS
151 Kalmus Drive, K-1 • Costa Mesa, California 92626 • 714-557-9671
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SCALE
1" = 20'-0" **1**

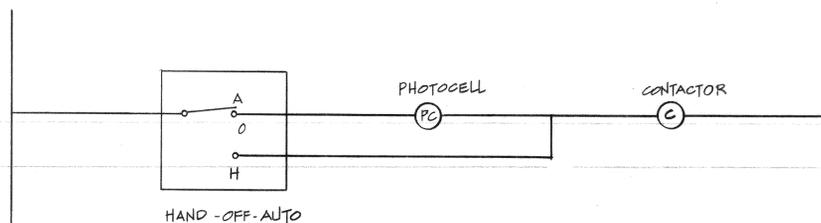


NOTE:

1. REPLACE (R) RELAY WITH MULTIPLE POLE HEAVY DUTY RELAY.
2. BALLFIELD CONTROLS:
 - a. P.B. "ON" WITH PHOTOCELL OVERRIDE
 - b. P.B. "OFF"
 - c. TIME SWITCH "OFF"

BALLFIELD CONTROL SCHEMATIC

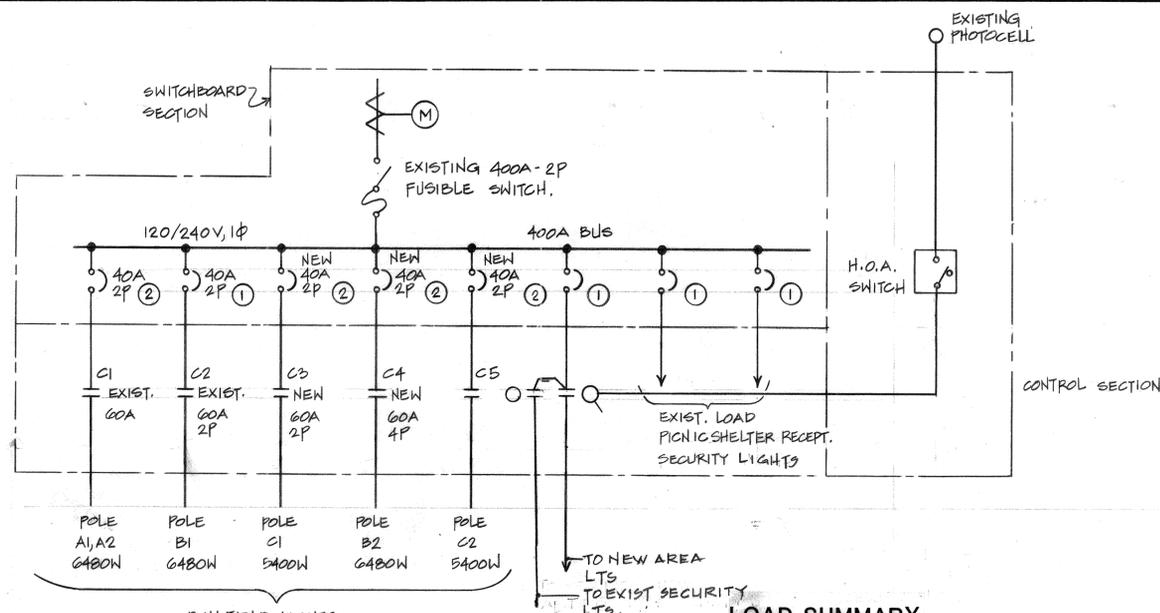
SCALE N.T.S. **3**



NEW AREA LIGHT CIRCUIT

SCALE N.T.S. **4**

LIGHTING FIXTURE SCHEDULE								
SYM	DESCRIPTION	LAMPS			VOLTS	MANUFACTURER	CATALOG NO.	MOUNTING
		No.	Watts	Type				
A 1077	ROUND SPUN ALUMINUM OUTER HOUSING FIXTURE WITH VISOR H.P.F. CWA MULTI-TAP BALLAST (240V) DOUBLE FUSED AND WITH THERMAL SHOCK AND IMPACT RESISTANT LENS. BEAM SPREAD AS REQUIRED.	1	1000	M.H.	240	NORTH STAR	SB-8X1H-240 HXXDF-V	POLE-TOP CROSSARM
B 160	SIMILAR TO TYPE 'A' EXCEPT FOR LAMP AND REGULATED BALLAST.	1	400	HPS	240	NORTHSTAR	SB6X1LS-240 HREG-XX-DF-V	BULLHORN



NOTES:

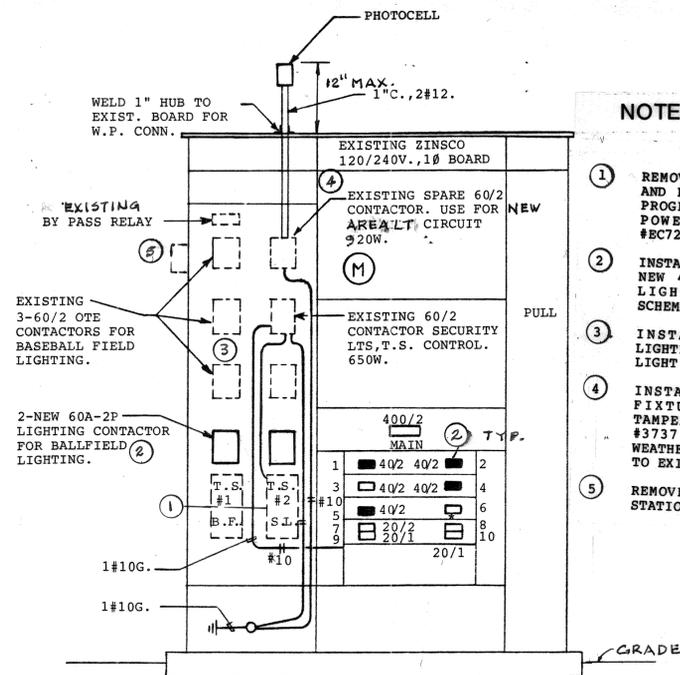
1. ALL CIRCUIT BREAKERS ARE EXISTING EXCEPT AS NOTED.
2. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING MANUFACTURER AND OPERATING CHARACTERISTICS.

LOAD SUMMARY

EXIST. SECURITY & N.L.	= 1200W
EXIST. PICNIC	= 2000
* EXIST. BALLFIELD LTS.	= 21800 (REMOVE)
NEW BALLFIELD LTS.	= 30240
TOTAL	= 33440 W
	OR 139.3A @ 240V.

SINGLE LINE DIAGRAM

SCALE N.T.S. **1**



NOTES

1. REMOVE (2) ELECTRO-MECHANICAL TIME SWITCHES AND REPLACE WITH A NEW 2-CHANNEL ELECTRONIC PROGRAMMABLE UNIT WITH ASTRO-DIAL FEATURE, POWER CARRYOVER. PARAGON SUNTRACKER #EC72ST/120 OR CITY APPROVED EQUAL.
2. INSTALL (2) 60A-2P LIGHTING CONTACTORS AND (4) NEW 40A-2P CIRCUIT BREAKERS FOR BALLFIELD LIGHTING. SEE SINGLE LINE AND CONTROL SCHEMATIC DIAGRAMS.
3. INSTALL TIME METERS FOR EACH BALLFIELD LIGHTING CIRCUIT AND EACH SECURITY AND AREA LIGHT CIRCUIT.
4. INSTALL A WEATHERPROOF 100W INCANDESCENT FIXTURE WITH POLYCARBONATE LENS AND TAMPERPROOF SCREWS AND LIGHT SWITCH. KENALL #3737 OR CITY APPROVED EQUAL. MOUNT IN WEATHERPROOF SWITCHBOARD ENCLOSURE AND CONNECT TO EXISTING RECEPTACLE CIRCUIT.
5. REMOVE AND RELOCATE AN EXISTING PUSHBUTTON STATION IN A LOCKABLE BOX TO POLE A2.

ELEVATION OF EXISTING SWITCHBOARD "MSC"

SCALE N.T.S. **2**

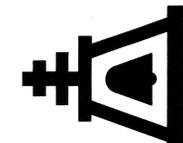


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LA SIERRA PARK
MITCHELL BALL FIELD LIGHTING
SINGLE LINE DIAGRAM, BALL FIELD CONT. SCHEMATIC,
ELEVATION OF EXISTING SWITCHBOARD "MSC",
SECURITY LIGHT (N.L.) CIRCUIT,
LIGHTING FIXTURE SCHEDULE.

city of riverside
park & recreation
department

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(714) 787-7223

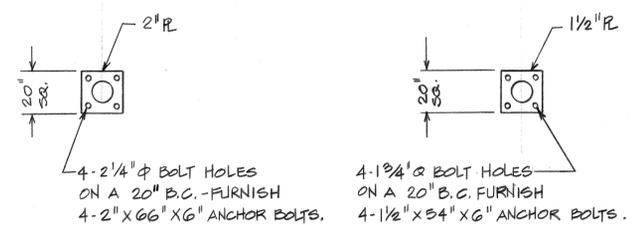
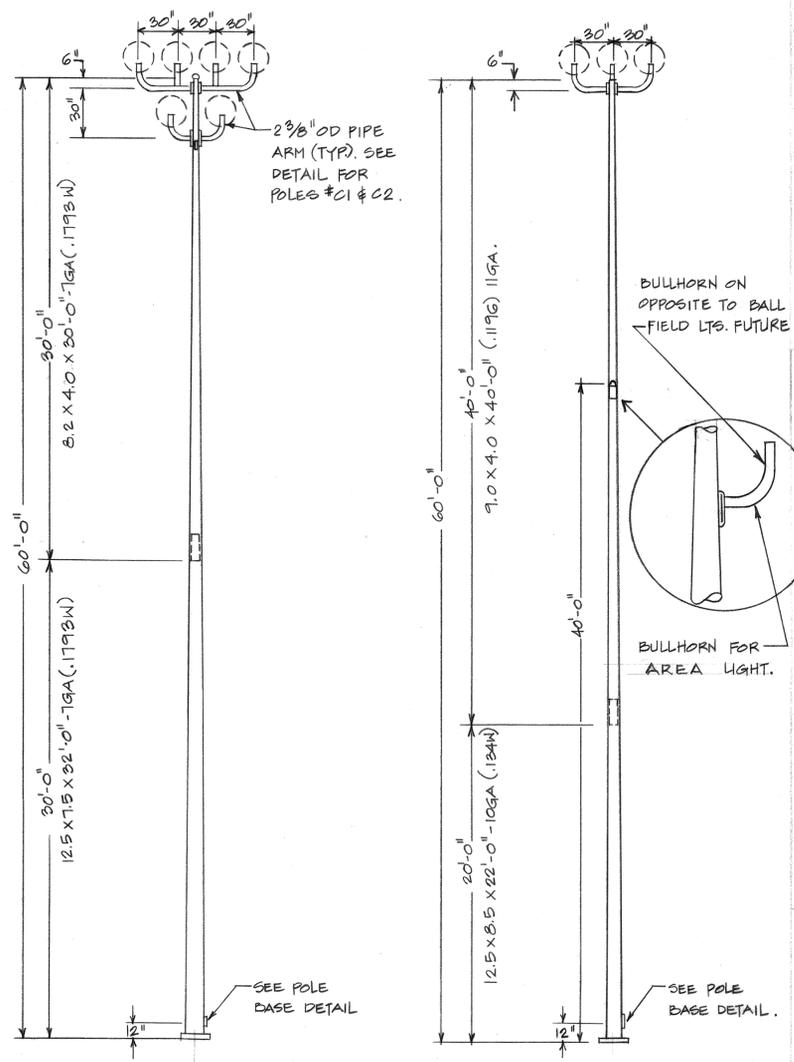


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F-2
of 3

GENERAL NOTES AND SPECIFICATIONS

- VERIFY EXISTING SITE CONDITIONS AND EXACT LOCATIONS OF SERVICE FACILITIES, POWER AND SIGNAL, BEFORE SUBMITTING BID. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED.
- THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE AND REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS, STRUCTURAL DETAILS, EXACT EQUIPMENT AND OUTLET LOCATIONS.
- ALL EXTERIOR EQUIPMENT SHALL BE WEATHERPROOF.
- ALL LOCATIONS OF EQUIPMENT SHALL BE VERIFIED PRIOR TO ROUGH-IN.
- EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN COMPLIANCE WITH OSHA.
- P.V.C. CONDUIT, WITH CODE SIZED GROUND, SHALL BE USED UNDERGROUND ONLY, IF APPROVED BY LOCAL CODE. INSTALL PER LOCAL CODE REQUIREMENTS. CONDUIT RISERS AND STUBS ABOVE GRADE SHALL BE I.M.C. WITH HALF-LAPPED TAPE COVERING OR PVC COATING.
- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY OPERATING ELECTRICAL SYSTEM.
- ALL MATERIALS SHALL BE NEW, AND OF THE SAME MANUFACTURER FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES, AND SHALL BEAR THE INSPECTION LABEL WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH THE APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY, AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY A.N.S.I., U.L., N.E.M.A. AND N.B.F.U.. INSTALL PER MANUFACTURERS' RECOMMENDATIONS.
- ALL CONDUIT SHALL BE INSTALLED CONCEALED WHERE PHYSICALLY POSSIBLE. ALL EXPOSED CONDUIT SHALL BE INTERMEDIATE METAL CONDUIT AND INSTALLED PARALLEL TO OR AT RIGHT ANGLES WITH THE BUILDING WALLS. IF VIEWED BY THE PUBLIC, PAINT TO MATCH SURFACE TO WHICH IT IS ATTACHED.
- CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, LOCAL CODES, O.S.H.A., THE PRESENTLY ADOPTED NATIONAL ELECTRICAL CODE (N.E.C.) AND THE OFFICE OF THE STATE ARCHITECT (O.S.A.).
- THE COMPLETE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE PRESENTLY ADOPTED EDITION OF THE N.E.C., ART. #250. CONTRACTOR SHALL MEGGAR RESISTANCE AS DIRECTED.
- PENETRATIONS TO FIRE-RATED MATERIALS SHALL BE RESTORED TO EQUAL RATING AS REQUIRED BY LOCAL ENFORCING AGENCY. FLAME SEAL AS MFG'D BY NELSON ELECTRIC (PH. NO. 213-445-1774 MR. HARRIS) OR EQUAL.
- ELECTRICAL CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS, AND PAY FOR SAME. COORDINATE TEMPORARY CONSTRUCTION REQUIREMENTS WITH ALL TRADES PRIOR TO CONSTRUCTION.
- COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
- CONDUCTORS SHALL BE CODE GRADE, 600 VOLT CLASS, COPPER, MARKED 24" ALONG IT'S LENGTH SHOWING MANUFACTURER'S NAME, MAXIMUM ALLOWABLE VOLTAGE AND SIZE. 600 VOLT CONDUCTORS SHALL BE TYPE "THWN" (WET) OR "THHN" (DRY). DELIVER THE WIRE TO THE SITE IN UNBROKEN PACKAGES.
- USE ONLY COMPETENT AND SKILLED PERSONNEL AND PERFORM ALL WORK, INCLUDING AESTHETIC AS WELL AS ELECTRICAL AND MECHANICAL ASPECTS TO STANDARDS CONSISTENT WITH THE BEST PRACTICES OF THE TRADE.
- ALL ELECTRICAL SYSTEM CONDUCTORS SHALL BE INSTALLED IN APPROVED RACEWAYS.
- PROVIDE ALL LAMPS, HANGERS, LENSES, ETC., FOR A COMPLETE LIGHTING FIXTURE. ALL LAMPS SHALL BE GE, SYLVANIA, OR PHILLIPS.
- ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE OWNER AT JOB COMPLETION.
- ALL SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING TO THE CITY TEN (10) DAYS PRIOR TO BID.
- PROVIDE ENGRAVED PLASTIC NAMEPLATES FOR ALL MAJOR PIECES OF EQUIPMENT. PLATES SHALL BE 3 PLY, BLACK FACE, WHITE CORE WITH 1/4" HIGH CONDENSED GOTHIC LETTERING. SCREW-ON ATTACHMENT ONLY, NO CEMENT.
- PROVIDE THE OWNER WITH ONE (1) SET OF COMPLETE ELECTRICAL "AS-BUILTS" AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DEPTHS AND LOCATIONS.
- ALUMINUM CONDUCTORS OF ANY SIZE OR TYPE SHALL NOT BE USED.
- WHERE A CONFLICT OCCURS BETWEEN THIS SPECIFICATION AND ANOTHER ELECTRICAL SPECIFICATION ISSUED AS A PART OF THESE DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL PREVAIL.

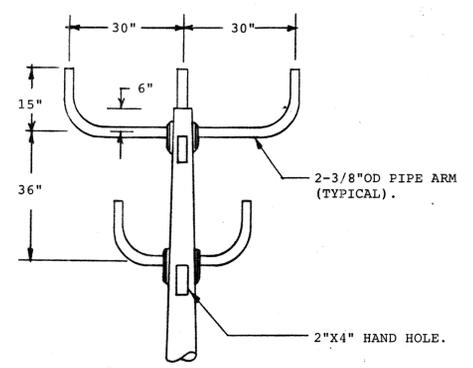


CST60-6 LIGHTING POLE

4- READ POLES #B1, B2, C1, C2 (POLES #B1, B2 AS SHOWN)

CST60-3 LIGHTING POLE

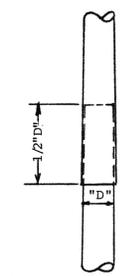
2 POLES - POLES A1 & A2



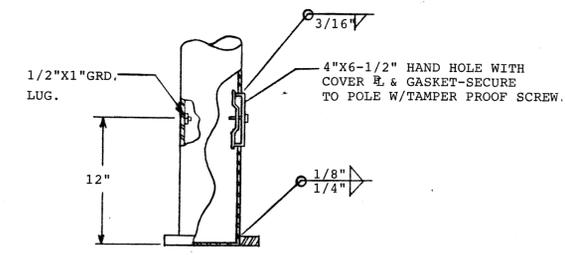
POLE #C1 & C2 CONFIGURATION

GENERAL NOTES:

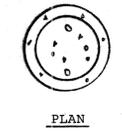
- ALL WELDING TO BE BY ELECTRIC ARC PROCESS AND BY CERTIFIED WELDERS IN AN APPROVED FABRICATION SHOP-LOS ANGELES CITY LICENSE NO.641.
- SHAFT MATERIAL TO BE ASTM-A595 GRDA; ANCHOR BOLTS-ASTM-A307; BASE PLATE-ASTM-A36; PIPE ASTM-A120.
- POLES AND ARMS TO BE GALVANIZED PER ASTM-A123; ANCHOR BOLTS PER ASTM-A153.
- USE E-70 ELECTRODES.



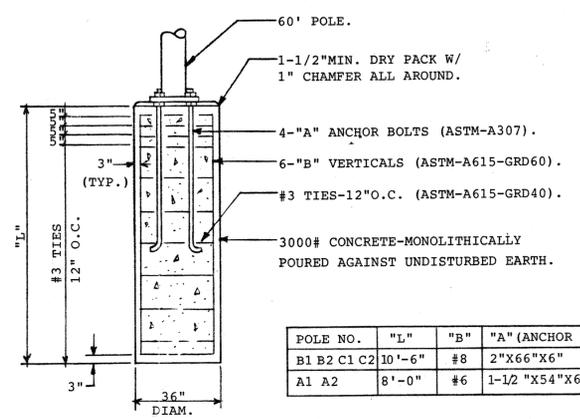
JOINT DETAIL



POLE BASE DETAIL

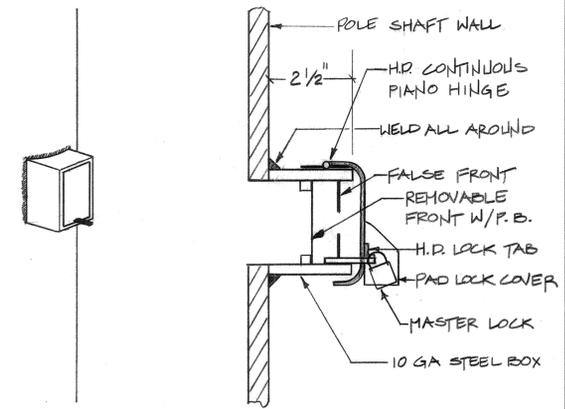


PLAN



POLE NO.	"L"	"B"	"A" (ANCHOR BOLT)
B1 B2 C1 C2	10'-6"	#8	2"X66"X6"
A1 A2	8'-0"	#6	1-1/2"X54"X6"

FOUNDATION FOOTING DETAIL



POLE PUSH BUTTON STATION

SCALE: N.T.S. 2

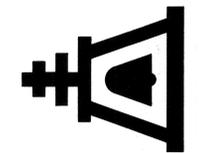
LIGHTING POLE DETAILS

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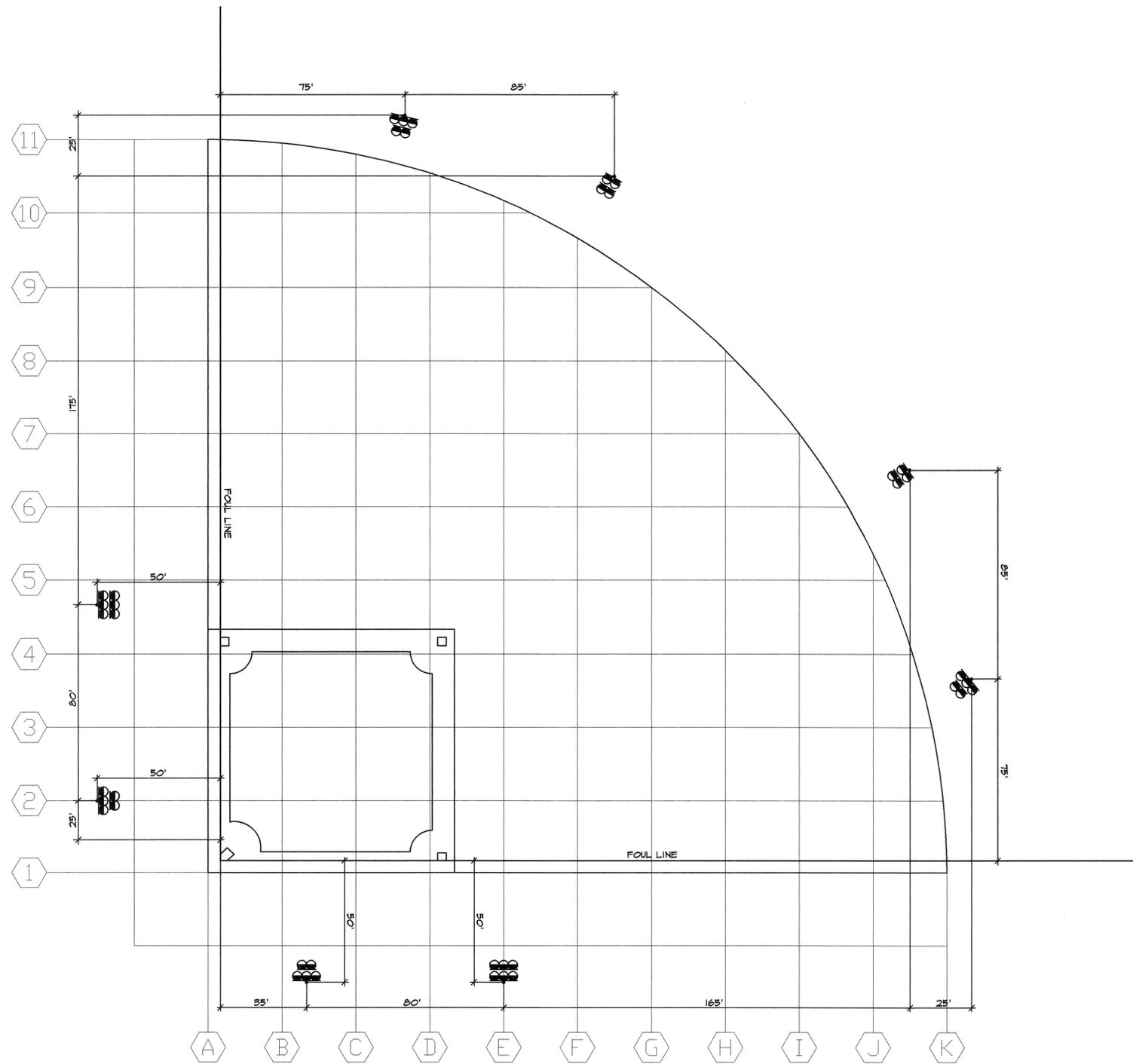
LA SIERRA PARK
 MITCHELL BALL FIELD LIGHTING
 POLE LIGHTING DETAILS
 SPECIFICATIONS

city of riverside
 park & recreation
 department
 (714) 787-7223
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F-3	of 3



COMPUTER GENERATED LIGHT READING

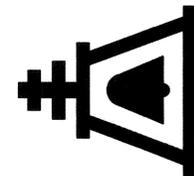
SCALE
1" = 30'-0"

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NOTE:

PHOTOMETRIC STUDY COMPILED UTILIZING 1500 WATT METAL HALIDE SPORTS LIGHTING LUMINAIRES AS MANUFACTURED BY HUBBELL LIGHTING USING A COMBINED LIGHT LOSS FACTOR AND MAINTENANCE FACTOR OF 0.08.

PHOTOMETRIC READINGS											
GRID LINE	A	B	C	D	E	F	G	H	I	J	K
1	41.0	34.5	30.9	28.4	30.7	28.5	26.6	22.2	21.1	23.5	17.4
2	34.9	53.1	54.3	51.3	45.4	43.2	35.4	25.3	23.8	22.8	23.0
3	32.9	53.9	53.3	49.0	43.9	37.8	33.2	25.4	20.2	21.4	24.2
4	29.6	50.1	46.2	40.4	34.9	29.7	26.6	22.2	19.3	24.8	
5	28.8	45.1	39.7	33.4	27.9	21.4	19.8	18.6	19.4	22.0	
6	27.4	42.3	37.8	31.3	23.0	18.3	19.3	26.2	30.8		
7	26.3	34.9	33.4	26.9	21.2	18.9	18.6	25.8	32.1		
8	22.2	24.8	25.5	23.4	19.8	24.6	23.8	18.1			
9	27.6	24.4	20.3	19.3	19.8	27.8	26.8				
10	23.8	23.2	22.1	24.3	21.0						
11	17.4	22.9	23.8								



city of riverside
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department

(909) 715-3469

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