

1 SPORTS FACILITY LIGHTING LAYOUT
 SCALE 1 : 500 MTS.

	PREPARED BY:	END USER:	REVIEWED BY:	ENDORSED BY:	REC. APPROVAL:	APPROVED BY:	PROJECT TITLE/ LOCATION:	IMPLEMENTING AGENCY:	SHT NO.:
	R. J. R. SANCHEZ PDU DVPPD	R. P. CUACHIN DEAN CSPEAR	R. P. PENA PROF. ELEC. ENGINEER	S. B. BAYOT JR. HEAD PDU	O. B. DELOS REYES DIRECTOR PLANNING AND DEVT. OFFICE	M. J. D. TEPORA VPPD CVSU	H. D. ROBLES PRES CVSU	IMPROVEMENT OF SPORTS FACILITY PHASE 2 CAVITE STATE UNIVERSITY MAIN CAMPUS	CAVITE STATE UNIVERSITY

GENERAL NOTES AND SPECIFICATIONS:

1. ALL WORK HEREIN SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. ELECTRICAL WORKS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, MUNICIPAL/CITY LAWS AND ORDINANCES AND THE REGULATIONS FOR THE LOCAL POWER AND TELEPHONE COMPANY.
3. THE JOB SHALL BE EXECUTED IN THE MOST THOROUGH PROMPT AND WORKMANLIKE MANNER EMPLOYING STANDARD TOOLS, EQUIPMENT, METHODS AND GOOD ENGINEERING PRACTICE. THE JOB SHALL BE DONE IN ALL ASPECTS AS REQUIRED PER PLANS AND SPECIFICATIONS AND READY FOR OPERATION.
4. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PRESENT A GENERAL LAYOUT AND BROAD OUTLINE/DESCRIPTION OF THE PROJECT, BUT DO NOT NECESSARILY INDICATE OR DESCRIBE ACTUAL LOCATIONS, LEVELS AND DISTANCES OF THE EQUIPMENT. THE CONTRACTOR IS HEREBY REQUIRED TO MAKE SUCH ADJUSTMENTS AT THE JOBSITE THAT ARE GOVERNED BY ACTUAL FIELD CONDITION.
5. SERVICE VOLTAGE TO THE BUILDING FROM THE POWER SOURCE SHALL BE 230V.
6. SERVICE ENTRANCE WIRING SHALL BE RIGID STEEL CONDUIT (RSC).
7. FEEDER WIRING SHALL BE ELECTRICAL METALLIC TUBING (EMT).
8. BRANCH CIRCUIT WIRING ELECTRICAL METALLIC TUBING (EMT).
9. BRANCH CIRCUIT WIRING EMBEDDED IN CONCRETE SHALL BE IN PVC PIPE WITH ADEQUATE GROUND WIRE FOR EQUIPMENT GROUNDING.
10. LIGHT SWITCHES SHALL BE 15A, 230VAC.
11. ALL MATERIALS SHALL BE BRAND NEW AND OF APPROVED TYPE FOR LOCATION AND PURPOSE INTENDED.
12. DEVICES, FIXTURES LOCATED OUTDOOR SHALL BE WEATHERPROOF TYPE.
13. MOUNTING HEIGHTS ARE:

A. LIGHT SWITCHES	1.40M ABOVE FLOOR FINISH
B. CONVENIENCE OUTLETS	0.30M ABOVE FLOOR FINISH
C. COUNTER TOP C.O.	0.40M TO .50M ABOVE THE COUNTER
D. TELEPHONE OUTLETS	0.30M ABOVE FLOOR FINISH
E. PANEL BOARD	1.50M ABOVE FLOOR FINISH
F. EMERGENCY LIGHT	0.30M BELOW CEILING LINE
14. ANY DISCREPANCY BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION OR DECISION.
15. THE ENTIRE WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF DULY REGISTERED ELECTRICAL ENGINEER.
16. REFER TO SHEET E-1 FOR EXACT NUMBER AND LOCATION OF DEVICES/EQUIPMENT FOR ELECTRICAL SYSTEM. ANY CONFLICT ON QUANTITY AND/OR LAYOUT MUST BE VERIFIED AND CONFIRMED TO DESIGNER/CONSULTANT.
17. REFER TO LOAD SCHEDULE FOR THE RATING OF INDIVIDUAL ENCL, ACB'S IN NEMA-3R.
18. ALL ELECTRICAL CONDUITS AND TELEPHONE SERVICE ENTRANCE THAT INSTALLED BELOW THE GROUND SHALL BE IN CONCRETE ENCASEMENT.
19. ANY DEVICES OR EQUIPMENT NOT REFLECTED OR SHOWN ON PLANS BUT REQUIRED TO COMPLETE THE SYSTEM MUST BE INCLUDED ON SCOPE OF WORK.
20. REQUEST FOR TEMPORARY POWER INTERRUPTION SHOULD BE COORDINATED TO OWNER'S REPRESENTATIVE OR DESIGNER.
21. THE SIZE OF GENERATOR IS 40% OF THE TOTAL VA LOAD. THIS IS INTENDED TO SUPPLY ELECTRIC POWER FOR LIGHTINGS AND OTHER IMPORTANT APPLIANCES DURING THE POWER INTERRUPTION OF MAIN POWER SOURCE.

LEGEND AND SYMBOLS :			
	200W LED FLOOD LIGHT, DAYLIGHT		CIRCUIT BREAKER WITH NEMA 3R METAL ENCLOSURE
	STEEL POST WITH CONCRETE PEDESTAL		ACU CONDENSER OUT DOOR UNIT WITH NEMA 3R CIRCUIT BREAKER
	36W LED PANEL LIGHTING, 4 FT. LENGTH (FL)		ACU WALL/FLOOR MOUNTED, SPLIT TYPE, INDOOR UNIT
	LED EXT/FIRE EXIT SIGN (FEL)		2.0 mm ² THHN
	LED SPOT LIGHT, 100W, IP65 (SL)		3.5 mm ² THHN
	EMERGENCY LIGHT (EL)		CIRCUIT HOMERUN
	ONE GANG SWITCH		CIRCUIT NUMBER
	TWO GANG SWITCH		PANEL BOARD
	THREE GANG SWITCH		SERVICE ENTRANCE
	THREE WAY SWITCH		KILOWATT HOUR METER
	TWO GANG CONVENIENCE OUTLET		CONCRETE ENCASEMENT
	CEILING FAN OUTLET		CABLE CHAMBER
	TWO GANG CONVENIENCE OUTLET (FLOOR MOUNTED)		DISTRIBUTION TRANSFORMER
	TWO GANG SPECIAL POWER OUTLET (FLOOR MOUNTED)		CONCRETE POLE
	THREE PIN ACU OUTLET		SERVICE ENTRANCE PEDESTAL WITH DISCONNECTING SWITCH
	ACU WINDOW TYPE		SECONDARY LINE

SCHEDULE OF LOADS AND COMPUTATIONS

PANEL : MDP		CABLE : 2 - 14.0 SQMM THHN + 1 - 8.0 SQMM THW		MAIN : 100 AT, 200 AF, 2P, 230V, MCCB						
PHASE : 1		CONDUIT : RSC, 32 MM DIA.		ENCLOSURE : NEMA 1						
VOLTS : 230		LOCATION : BLEACHERS		MOUNTING : SURFACE						
CKT NO.	CIRCUIT DESCRIPTION	NUMBER OF OUTLET	LOAD IN RATING			CIRCUIT PROTECTION	Size of Conductor		Size of Conduit in MM ^ø	Color Code
			Volt-Amp	VOLT	AMPERES		THHN	THW		
1	200 W LED FLOOD LIGHT	6	1320	230	5.74	30 AT, 2P, 230V, 10 KAIC	2 - 3.5		PVC, 20	1R, 1B
2	200 W LED FLOOD LIGHT	12	2640	230	11.48	30 AT, 2P, 230V, 10 KAIC	2 - 3.5		PVC, 20	1R, 1B
3	200 W LED FLOOD LIGHT	12	2640	230	11.48	30 AT, 2P, 230V, 10 KAIC	2 - 3.5		PVC, 20	1R, 1B
4	200 W LED FLOOD LIGHT	18	3960	230	17.22	30 AT, 2P, 230V, 10 KAIC	2 - 3.5		PVC, 20	1R, 1B
5	200 W LED FLOOD LIGHT	12	2640	230	11.48	30 AT, 2P, 230V, 10 KAIC	2 - 3.5		PVC, 20	1R, 1B
	SPARE									
TOTAL			13200	230	57.39	100 AT, 200 AF, 2P, 230V, MCCB	2 - 14.0 + 1 - 8.0 G		RSC, 32	1R, 1B, G

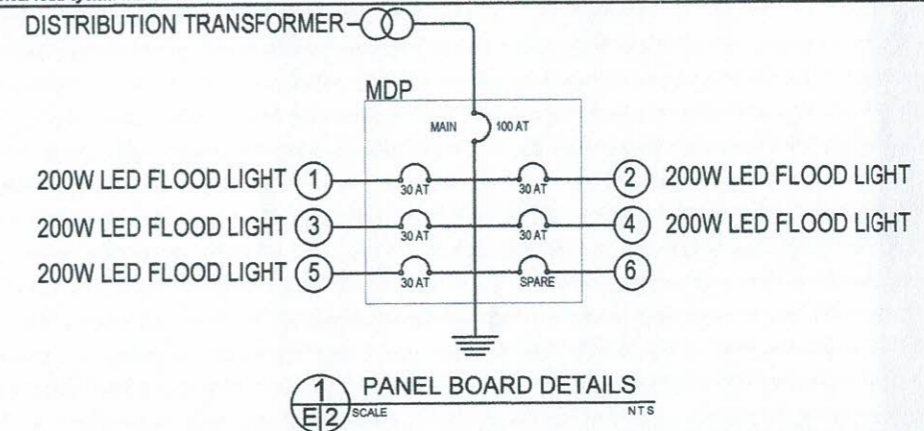
MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE: $I_{FL} = \frac{(57.39 \times DF)}{}$ = 57.39 Amperes
 $I_{CB} = \frac{(57.39 \times DF)}{}$ = 57.39 Amperes

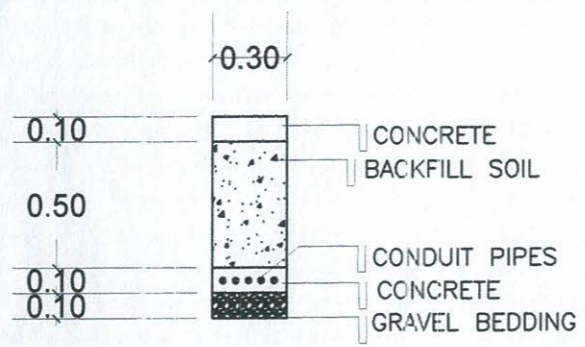
G - Means Ground Wire
 1R - Color RED
 1B - Color BLACK
 1G - Color GREEN

use: 2 - 14.0 SQMM THHN + 1 - 8.0 SQMM THW IN 32 MM DIA. RSC
 use: 100 AT, 200 AF, 2P, 230V, MCCB

This Electrical Design is good only for the above connected loads.
 Any additional electrical load connection in the future is not allowed.
 Except redesign of electrical load system will be done.

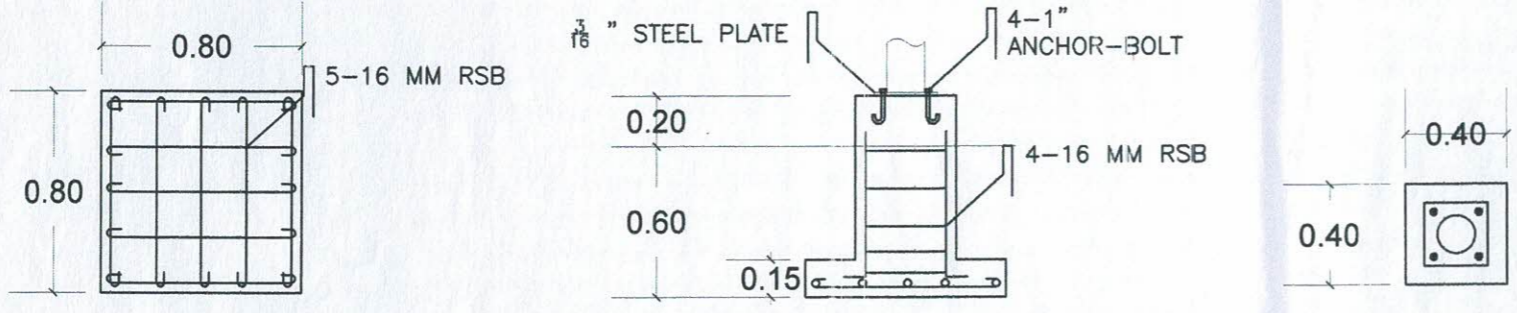


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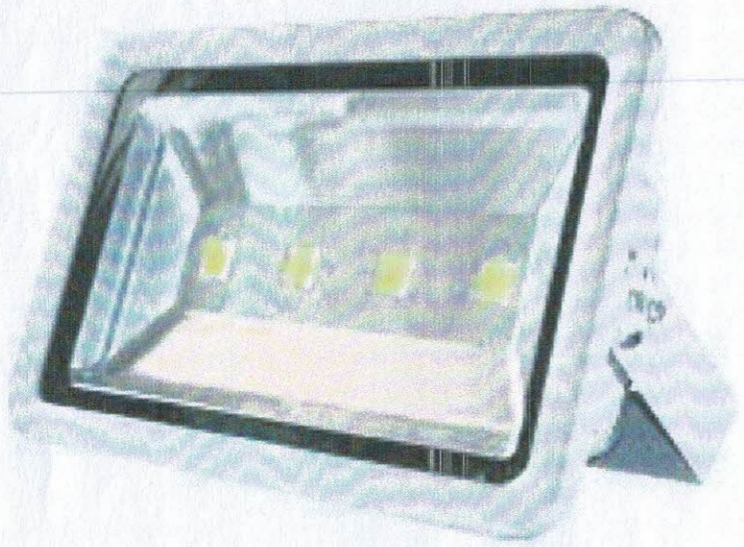


STEEL POST DETAILS					
BOTTOM	TOP	HEIGHT	BASE PLATE	BOLT DIAMETER	BOLT LENGTH
6"	3"	6.0 M	4	1"	20"

1 CONCRETE ENCASEMENT DETAILS
 SCALE 1:30 MTS.

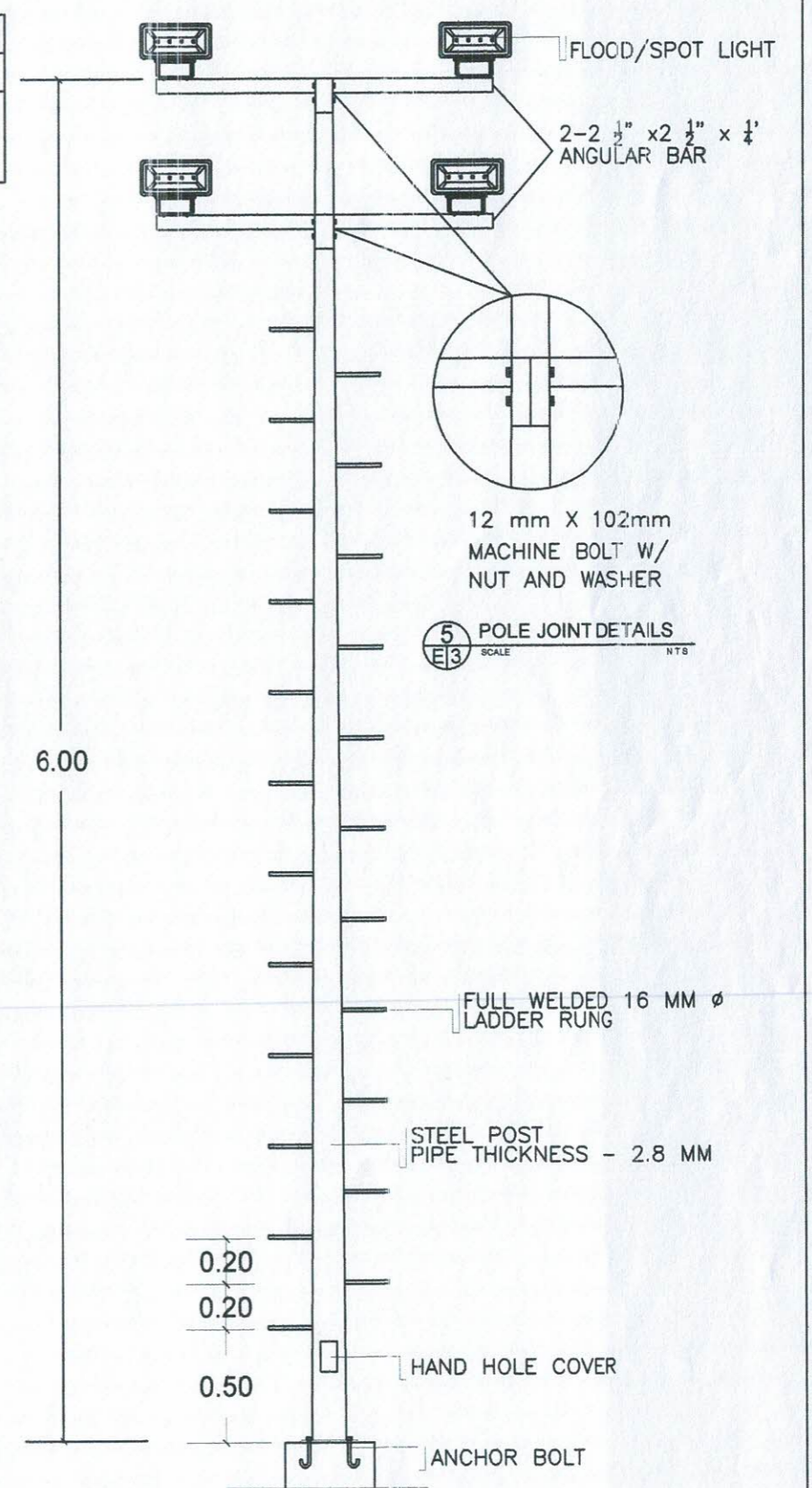


2 CONCRETE PEDESTAL DETAILS
 SCALE 1:30 MTS.



WATTAGE	200W
LUMINOUS FLUX	> 20,000 lm
COLOR TEMPERATURE	DAYLIGHT
INPUT VOLTAGE	230V 60Hz
IP RATING	IP65 OR IP67 OUTDOOR
BEAM ANGLE	120 DEG.
LIFE TIME	> 50,000 Hours

3 FLOOD/SPOT LIGHT DETAILS AND SPECIFICATION
 SCALE N.T.S.



4 STEEL POST DETAILS
 SCALE 1:30 MTS.

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