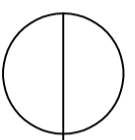
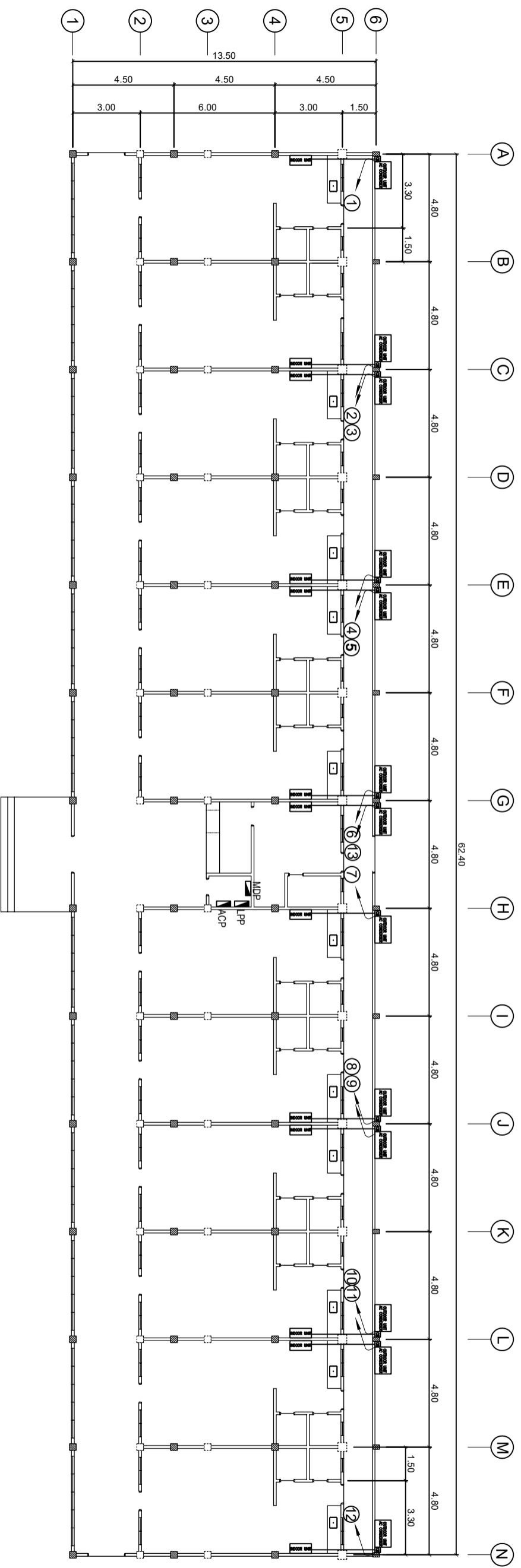


LIGHTING LAYOUT

SCALE

1 : 200 MTS

RENOVATION OF BOYS DORMITORY - BID BULLETIN



ACU LAYOUT
SCALE 1 : 200 MTS

RENOVATION OF BOYS DORMITORY - BID BULLETIN

SCHEDULE OF LOADS

PANEL: LPP CABLE: 3 - 14.0 SQ. MM THHN + G 8.0 SQ MM THHN MAIN: 70 AT, 100AF, 3P, 230V, 18 KAIC, MCCB
 PHASE: 3 CONDUIT: RSC, 32 MM DIA. ENCLOSURE: NEMA 1
 VOLTS: 230 LOCATION: GROUND FLOOR MOUNTING: SURFACE

CKT NO.	NO OF OUTLETS	CIRCUIT DESCRIPTION	LOAD IN				CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MM ø	Color Code
			VOLT-AMPERES	VOLT	AB	BC		CA	SQ. MM THHN		
1	14	LIGHTING OUTLET(4E+2E+8E)	1400	230	6.09		20AT, 2P, 10 KAIC	2 - 3.5	15	1R, 1BK, 1G	
2	14	LIGHTING OUTLET(4E+2E+8E)	1400	230	6.09		20AT, 2P, 10 KAIC	2 - 3.5	15	1R, 1BK, 1G	
3	14	LIGHTING OUTLET(4E+2E+8E)	1400	230	6.09		20AT, 2P, 10 KAIC	2 - 3.5	15	1R, 1BK, 1G	
4	14	LIGHTING OUTLET(4E+2E+8E)	1400	230	6.09		20AT, 2P, 10 KAIC	2 - 3.5	15	1R, 1BK, 1G	
5	14	LIGHTING OUTLET(4E+2E+8E)	1400	230	6.09		20AT, 2P, 10 KAIC	2 - 3.5	15	1R, 1BK, 1G	
6	14	LIGHTING OUTLET(4E+2E+8E)	1400	230	6.09		20AT, 2P, 10 KAIC	2 - 3.5	15	1R, 1BK, 1G	
7	7	LIGHTING OUTLET(2E+1E+4E)	700	230	3.04		20AT, 2P, 10 KAIC	2 - 3.5	15	1R, 1BK, 1G	
8	7	LIGHTING OUTLET(4E+13E)	1700	230	7.39		20AT, 2P, 10 KAIC	2 - 3.5	15	1R, 1BK, 1G	
9	12	CONVENIENCE OUTLET	2160	230	9.39		20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1Y, 1G	
10	12	CONVENIENCE OUTLET	2160	230	9.39		20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1Y, 1G	
11	12	CONVENIENCE OUTLET	2160	230	9.39		20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
12	12	CONVENIENCE OUTLET	2160	230	9.39		20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
13	12	CONVENIENCE OUTLET	2160	230	9.39		20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1BK, 1G	
14	12	CONVENIENCE OUTLET	2160	230	9.39		20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1BK, 1G	
15	8	CONVENIENCE OUTLET	1440	230	6.26		20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1Y, 1G	
16	4	CONVENIENCE OUTLET	720	230	3.13		20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
17	8	CEILING FANS	1440	230			20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
18	10	CEILING FANS	1800	230			20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
19	8	CEILING FANS	1440	230	6.26		20AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1BK, 1G	
20		SPARE							15		
TOTAL			30600	230	47.65	40.35	45.04	7M, 100AF, 3P, 230V, 18KAIC, CB	3 - 14.0 + G 8.0	32	1R, 1BK, 1Y, G

FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE: $I_{T1} = [1.732 \times 47.65 + 25\% \times \ln] \text{ DF} = 63.98$ Amperes
 G - Means Ground Wire use: 3 - 14.0 SQMM THHN + 1 - 8.0 SQMM THHN IN 32 MM DIA, RSC
 1R - Color RED
 1BK - Color BLACK
 1G - Color GREEN
 $I_{CB} = [1.732 \times 47.65 + 250\% \times \ln] \text{ DF} = 69.43$ Amperes
 use: 70AT, 100AF, 3P, 230V, 18KAIC, CB

This Electrical Design is good only for the above connected loads.
 Any additional electrical load connection in the future is prohibited.
 Except redesign of electrical load system will be done.

PANEL: ACP CABLE: 3 - 22.0 SQ. MM THHN + G 8.0 SQ MM THHN MAIN: 100 AT, 100AF, 3P, 230V, 18 KAIC, MCCB
 PHASE: 3 CONDUIT: RSC, 32 MM DIA. ENCLOSURE: NEMA 1
 VOLTS: 230 LOCATION: GROUND FLOOR MOUNTING: SURFACE

CKT NO.	NO OF OUTLETS	CIRCUIT DESCRIPTION	LOAD IN				CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MM ø	Color Code
			VOLT-AMPERES	VOLT	AB	BC		CA	SQ. MM THHN		
1	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1BK, 1G	
2	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1BK, 1G	
3	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1Y, 1G	
4	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1Y, 1G	
5	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
6	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
7	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1BK, 1G	
8	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1BK, 1G	
9	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1Y, 1G	
10	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1R, 1Y, 1G	
11	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
12	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
13	1	1-1.5HP CEILING MOUNTED ACU	1500	230	10.00		30AT, 2P, 10 KAIC	2 - 3.5 + G 2.0	15	1Y, 1R, 1G	
14		SPARE							15		
TOTAL			18992	230	40.00	40.00	50.00	100AT, 3P, 18 KAIC	3 - 22.0 + G 8.0	32	1R, 1BK, 1Y, G

FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE: $I_{T1} = [1.732 \times 40 + 25\% \times \ln] \text{ DF} = 89.10$ Amperes
 G - Means Ground Wire use: 3 - 22.0 SQMM THHN + 1 - 8.0 SQMM THHN IN 32 MM DIA, RSC
 1R - Color RED
 1BK - Color BLACK
 1G - Color GREEN
 $I_{CB} = [1.732 \times 40 + 250\% \times \ln] \text{ DF} = 94.28$ Amperes
 use: 100AT, 100AF, 3P, 230V, 18KAIC, CB

This Electrical Design is good only for the above connected loads.
 Any additional electrical load connection in the future is prohibited.
 Except redesign of electrical load system will be done.

PANEL: MDP (MAIN DISTRIBUTION PANEL) CABLE: 3 - 50.0 SQMM THHN + 1 - 14.0 SQMM THW MAIN: 150 AT, 200AF, 3P, 230V, MCCB
 PHASE: 3 CONDUIT: RSC, 40 MM DIA. ENCLOSURE: NEMA 1
 VOLTS: 230 LOCATION: ELECTRICAL ROOM MOUNTING: SURFACE

CKT NO.	CIRCUIT DESCRIPTION	VOLT	LOAD IN				CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MM ø	Color Code
			3 ø	AB	BC	CA		SQ. MM THHN	+ SQ. MM THW(G)		
1	LIGHTING AND POWER PANEL	30600	230	0	48	40	45	70 AT, 3P, 230V, MCCB	3 - 14.0 + G 8.0	RSC, 32	1R, 1B, 1Y, G
2	AIR CONDITIONING UNIT PANEL	18000	230	0	40	40	100 AT, 3P, 230V, MCCB	3 - 22.0 + G 8.0	RSC, 32	1R, 1B, 1Y, G	
3	SPARE										
4	SPARE										
TOTAL			48600	230	0	88	80	150AT, 3P, 230V, MCCB	3 - 50.0 + G 14.0	RSC, 40	1R, 1B, 1Y, G

MAIN FEEDER and CURRENT PROTECTION COMPUTATION:

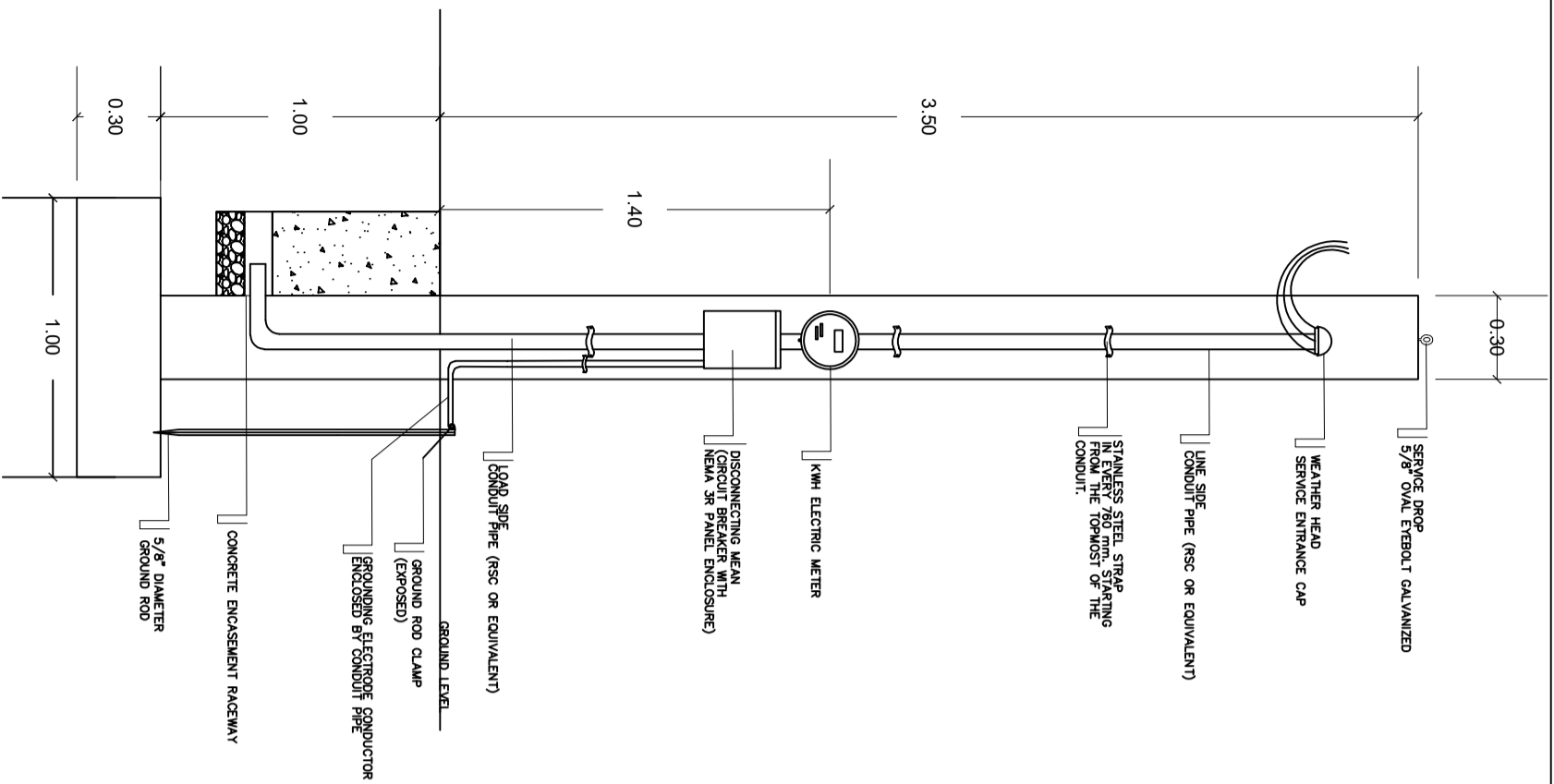
NOTE: $I_{T1} = [0.95 \times 1.732] \times \text{DF} = 131.63$ Amperes
 G - Means Ground Wire use: 3 - 50.0 SQMM THHN + 1 - 14.0 SQMM THW IN 40 MM DIA, RSC
 1R - Color RED
 1B - Color BLACK
 1Y - Color YELLOW
 1G - Color GREEN
 $I_{CB} = [0.95 \times 1.732] \times \text{DF} = 131.63$ Amperes
 use: 150 AT, 200AF, 3P, 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.

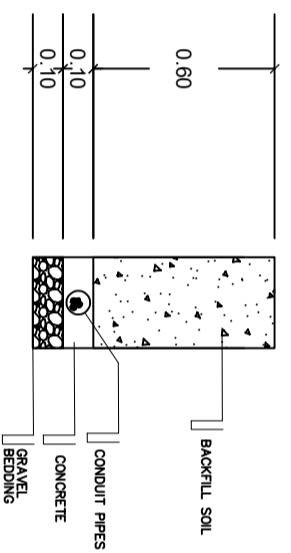
RENOVATION OF BOYS DORMITORY - BID BULLETIN

SCHEDULE OF FOOTINGS													
NAME	TYPE	THICKNESS	SIZE (LxW)	DEPTH	REINFORCEMENT								
F1	ISOLATED	300 MM	1000 X 1000 MM	1300 MM	<table border="1"> <thead> <tr> <th colspan="2">REINFORCEMENT</th> </tr> <tr> <th>BOTTOM</th> <th>ALONG W</th> </tr> </thead> <tbody> <tr> <td>ALONG L</td> <td>ALONG W</td> </tr> <tr> <td>7-16 MM Ø @ 150 MM</td> <td>7-16 MM Ø @ 150 MM</td> </tr> </tbody> </table>	REINFORCEMENT		BOTTOM	ALONG W	ALONG L	ALONG W	7-16 MM Ø @ 150 MM	7-16 MM Ø @ 150 MM
REINFORCEMENT													
BOTTOM	ALONG W												
ALONG L	ALONG W												
7-16 MM Ø @ 150 MM	7-16 MM Ø @ 150 MM												

COLUMN	DIMENSION	REINFORCEMENT	NO. OF TIES & SPACING
C1	300 MM X 300 MM	8 - 16mm Ø R.S.B.	3 SET OF 10mm Ø TIES @ 2-50mm, 4-75mm, 6-100mm, REST @ 200mm O.C.

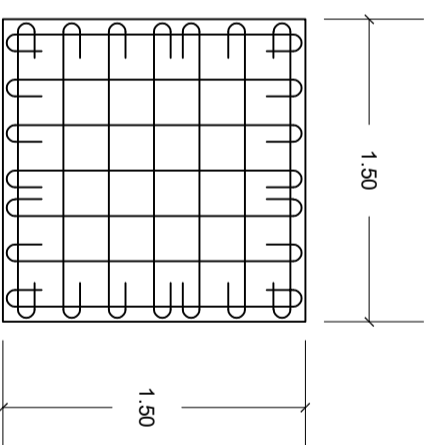
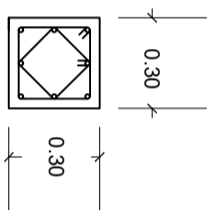


CONCRETE PEDESTAL DETAILS
SCALE 1 : 25 MTS.

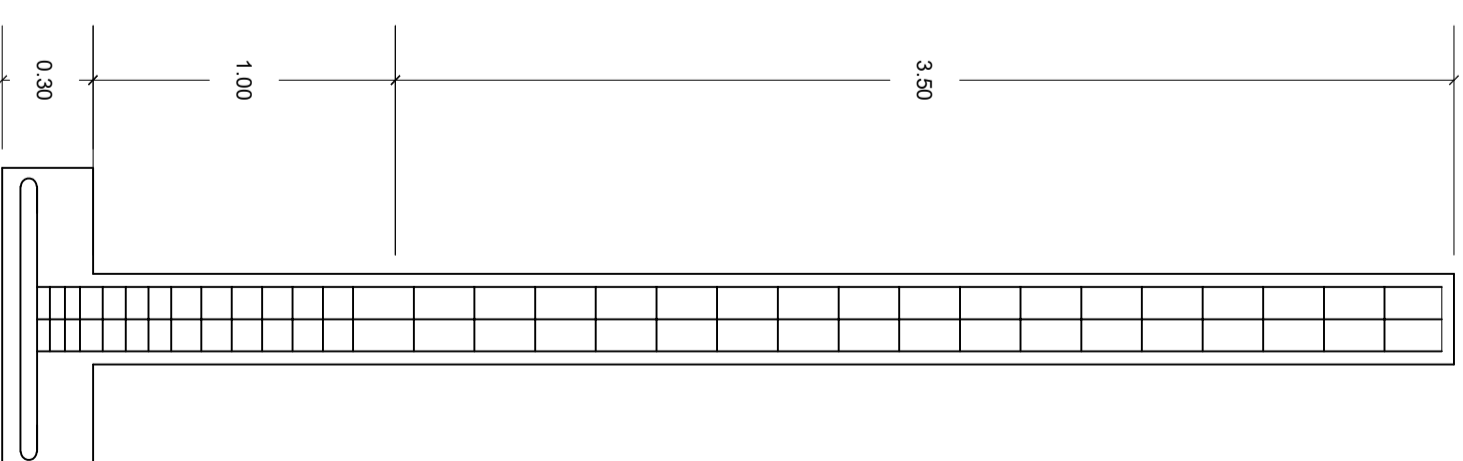


CONCRETE ENCASMENT RACEWAY
SCALE 1 : 25 MTS.

8 - 16mm Ø R.S.B.
3 SET OF 10mm Ø TIES
@ 2-50mm, 4-75mm,
6-100mm, REST @ 200mm O.C.



7-16 MM Ø
@ 150 MM



RENOVATION OF BOYS DORMITORY - BID BULLETIN