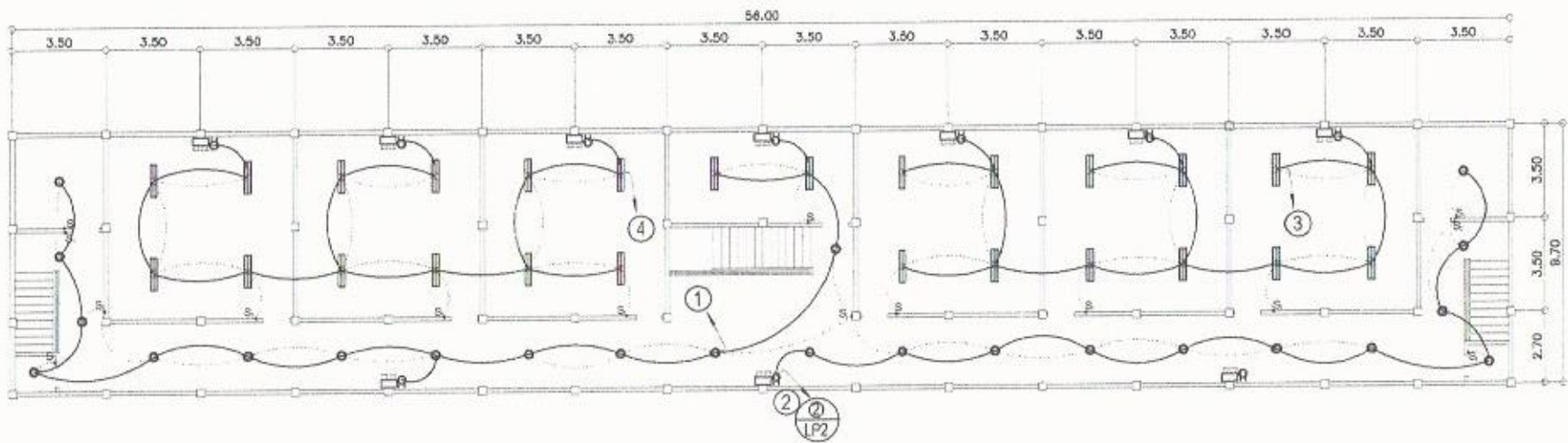


GROUND FLR. LIGHTING LAYOUT
 SCALE 1 : 250 M

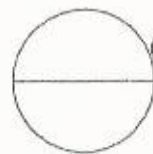
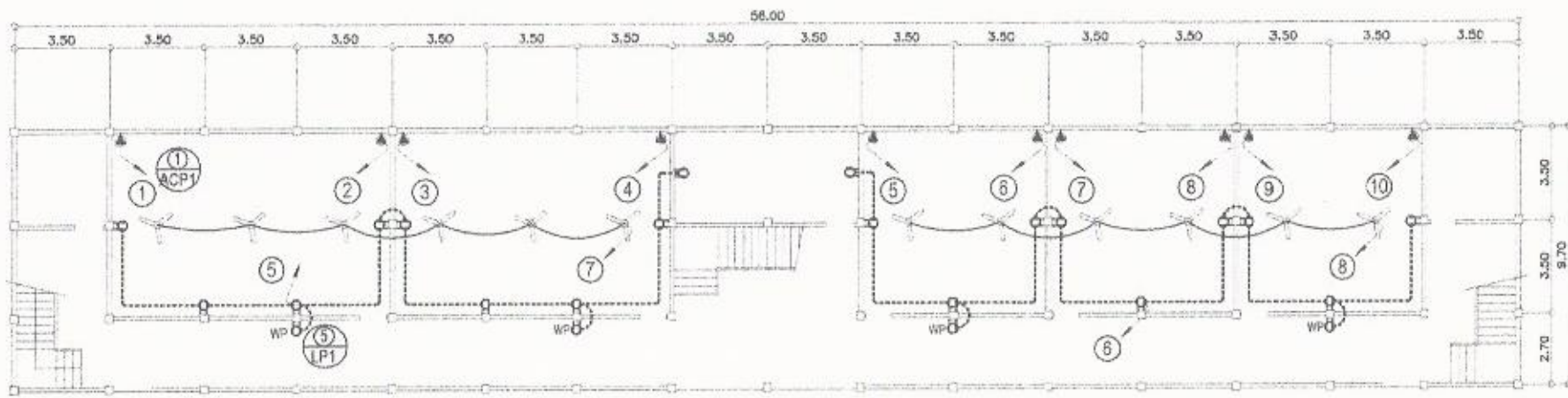
REPAIR OF TWO STOREY CEMDS BLDG.
 (OLD ENGINEERING BUILDING)
 CVSU, MAIN CAMPUS

Bid Bulletin
 (3-10-21)




2ND FLOOR LIGHTING LAYOUT
 SCALE 1 : 250 M

REPAIR OF TWO STOREY CEMDS BLDG.
 (OLD ENGINEERING BUILDING)
 CVSU, MAIN CAMPUS



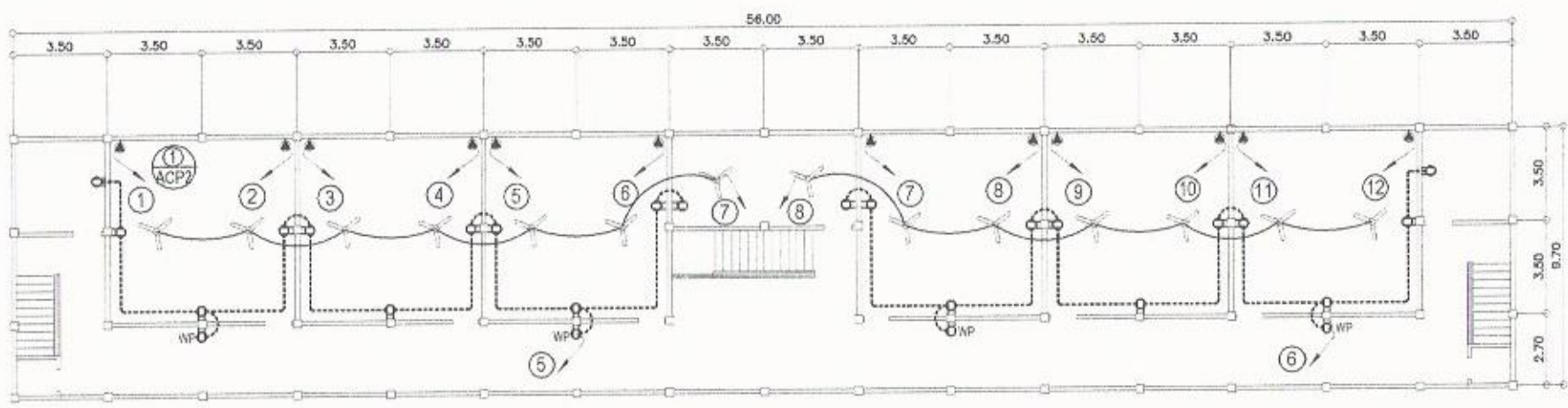
GROUND FLR. C.O. LAYOUT

SCALE

1 : 250 M

**REPAIR OF TWO STOREY CEMDS BLDG.
(OLD ENGINEERING BUILDING)**

CVSU, MAIN CAMPUS




2ND FLOOR C.O. LAYOUT
 SCALE 1 : 250 M

REPAIR OF TWO STOREY CEMDS BLDG.
 (OLD ENGINEERING BUILDING)
 CVSU, MAIN CAMPUS

PANEL: LP1
 PHASE: 3
 VOLTS: 230

CABLE: 3 - 5.5 SQ. MM THHN + G 53.5 SQ MM THHN
 CONDUIT: RSC, 40 MM DIA.
 GROUND FLOOR

MAIN: 40 AT, 50AF, 3P, 230V, 10 kAIC, MCCB
 ENCLOSURE: NEMA 1
 MOUNTING: SURFACE

CKT NO.	NO. OF OUTLETS	CIRCUIT DESCRIPTION	LOAD IN			CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MM ø	Color Code		
			WATTS	VOLT	AMPERES			SQ. MM THHN			SQ. MM THHN(G)	
					AB		BC					CA
1	13	LIGHTING OUTLET	1300	230	5.65			15AT, 2P,10 KAIC	2 - 2.0	15	1R,1BK	
2	12	LIGHTING OUTLET	1200	230	5.22			15AT, 2P,10 KAIC	2 - 2.0	15	1R,1BK	
3	16	LIGHTING OUTLET	1600	230		6.96		15AT, 2P,10 KAIC	2 - 2.0	15	1B,1Y	
4	15	LIGHTING OUTLET	1500	230		6.52		15AT, 2P,10 KAIC	2 - 2.0	15	1B,1Y	
5	11	CONVENIENCE OUTLET	1980	230			8.61	20AT, 2P,10 KAIC	2 - 3.5 + G 2.0	15	1Y,1R,G	
6	12	CONVENIENCE OUTLET	2160	230			9.39	20AT, 2P,10 KAIC	2 - 3.5 + G 2.0	15	1Y,1R,G	
7	6	CEILING FANS	1800	230	7.83			20AT, 2P,10 KAIC	2 - 3.5 + G 2.0	15	1R,1BK	
8	6	CEILING FANS	1800	230		7.83		20AT, 2P,10 KAIC	2 - 3.5 + G 2.0	15	1B,1Y	
9		SPARE										
10		SPARE										
		TOTAL	13340	230	18.70	21.30	18.00	40AT, 3P,10 KAIC	3 - 5.5 + G 5.5	25	1R,1BK,1Y, G	

FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

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

$I_{FL} = \frac{[21.30 \times 1.732 + 25\% \times lm]}{DF} = 31.18 \text{ Amperes}$
 use: 3 - 5.5 SQMM THHN + 1 - 5.5 SQMM THHN IN 25 MM DIA. RSC

$ICB = \frac{[21.30 \times 1.732 + 250\% \times lm]}{DF} = 31.18 \text{ Amperes}$
 use: 40AT, 50AF, 3P, 230V, 10KAIC, 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.

REPAIR OF TWO STOREY CEMDS BLDG.
 (OLD ENGINEERING BUILDING)
 CVSU, MAIN CAMPUS

PANEL: LP2
 PHASE: 3
 VOLTS: 230

CABLE: 3 - 5.5 SQ. MM THHN + G 53.5 SQ MM THHN
 CONDUIT: RSC, 40 MM DIA.
 SECOND FLOOR

MAIN: 40 AT, 50AF, 3P, 230V, 10 KAIC, MCCB
 ENCLOSURE: NEMA 1
 MOUNTING: SURFACE

CKT NO.	NO. OF OUTLETS	CIRCUIT DESCRIPTION	LOAD IN			CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MMø	Color Code		
			WATTS	VOLT	AMPERES			SQ. MM THHN			SQ. MM THHN(G)	
					AB		BC					CA
1	16	LIGHTING OUTLET	1600	230	6.96			15AT, 2P,10 KAIC	2 - 2.0	15	1R,1BK	
2	11	LIGHTING OUTLET	1100	230	4.78			15AT, 2P,10 KAIC	2 - 2.0	15	1R,1BK	
3	21	LIGHTING OUTLET	2100	230		9.13		15AT, 2P,10 KAIC	2 - 2.0	15	1B,1Y	
4	21	LIGHTING OUTLET	2100	230		9.13		15AT, 2P,10 KAIC	2 - 2.0	15	1B,1Y	
5	13	CONVENIENCE OUTLET	2340	230			10.17	20AT, 2P,10 KAIC	2 - 3.5 + G 2.0	15	1Y,1R,G	
6	13	CONVENIENCE OUTLET	2340	230			10.17	20AT, 2P,10 KAIC	2 - 3.5 + G 2.0	15	1Y,1R,G	
7	7	CEILING FANS	2100	230	9.13			20AT, 2P,10 KAIC	2 - 3.5 + G 2.0	15	1R,1BK	
8	7	CEILING FANS	2100	230		9.13		20AT, 2P,10 KAIC	2 - 3.5 + G 2.0	15	1B,1Y	
9		SPARE										
10		SPARE										
		TOTAL	15780	230	20.87	27.39	20.35	40AT, 3P,10 KAIC	3 - 5.5 + G 5.5	25	1R,1BK,1Y, G	

FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

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

$I_{TL} = \frac{[21.30 \times 1.732 + 25\% \times \text{Im}] \text{ DF}}{\text{use: 3 - 5.5 SQMM THHN + 1 - 5.5 SQMM THHN IN 25 MM DIA. RSC}}$ = 35.24 Amperes

$I_{CB} = \frac{[21.30 \times 1.732 + 250\% \times \text{Im}] \text{ DF}}{\text{use: 40AT, 50AF, 3P, 230V, 10KAIC, CB}}$ = 35.24 Amperes

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 Except redesign of electrical load system will be done.

REPAIR OF TWO STOREY CEMDS BLDG.
 (OLD ENGINEERING BUILDING)
 CVSU, MAIN CAMPUS

BID BULLETIN
 (3-10-21)

PANEL: ACP1
 PHASE: 3
 VOLTS: 230

CABLE: 3 - 30 SQ. MM THHN + G 8.0 SQ MM THHN
 CONDUIT: RSC, 32 MM DIA.
 GROUND FLOOR

MAIN: 125 AT, 225AF, 3P, 230V, 18 KAIC, MCCB
 ENCLOSURE: NEMA 1
 MOUNTING: SURFACE

CKT NO.	NO. OF OUTLETS	CIRCUIT DESCRIPTION	LOAD IN					CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit in MM ø	Color Code	
			WATTS	VOLT	AMPERES				CIRCUIT BREAKER RATING	SQ. MM THHN			SQ. MM THHN(G)
					AB	BC	CA						
1	1	ACU OUTLET WT	2500	230	12.00			30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1R,1BK	
2	1	ACU OUTLET WT	2500	230	12.00			30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1R,1BK	
3	1	ACU OUTLET WT	2500	230		12.00		30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1B,1Y	
4	1	ACU OUTLET WT	2500	230		12.00		30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1B,1Y	
5	1	ACU OUTLET WT	2500	230			12.00	30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1Y,1R,G	
6	1	ACU OUTLET WT	2500	230			12.00	30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1Y,1R,G	
7	1	ACU OUTLET WT	2500	230	12.00			30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1R,1BK	
8	1	ACU OUTLET WT	2500	230	12.00			30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1R,1BK	
9	1	ACU OUTLET WT	2500	230		12.00		30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1B,1Y	
10	1	ACU OUTLET WT	2500	230		12.00		30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1B,1Y	
11	1	ACU OUTLET WT	2500	230			12.00	30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1Y,1R,G	
12	1	ACU OUTLET WT	2500	230			12.00	30AT, 2P,10 KAIC	2 - 5.5	+ G 2.0	20	1Y,1R,G	
11		SPARE											
12		SPARE											
		TOTAL	30000	230	48.00	48.00	48.00	125AT, 3P,18 KAIC	3 - 30.0	+ G 8.0	32	1R,1BK,1Y, G	

FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

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

$I_{FL} = \frac{[48.0 \times 1.732 + 25\% \times 1m]}{DF} = 86.14 \text{ Amperes}$
 use: 3 - 30 SQMM THHN + 1 - 8.0 SQMM THHN IN 32 MM DIA. RSC

$I_{CB} = \frac{[48.0 \times 1.732 + 250\% \times 1m]}{DF} = 113.14 \text{ Amperes}$
 use: 125AT, 225AF, 3P, 230V, 18KAIC, CB

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REPAIR OF TWO STOREY CEMDS BLDG.
 (OLD ENGINEERING BUILDING)
 CVSU, MAIN CAMPUS

BID BULLETIN
 (3-10-21)

PANEL: ACP2
 PHASE: 3
 VOLTS: 230

CABLE: 3 - 30 SQ. MM THHN + G 8.0 SQ MM THHN
 CONDUIT: RSC, 32 MM DIA.
 SECOND FLOOR

MAIN: 125 AT, 225AF, 3P, 230V, 18 kAIC, MCCB
 ENCLOSURE: NEMA 1
 MOUNTING: SURFACE

CKT NO.	NO. OF OUTLETS	CIRCUIT DESCRIPTION	LOAD IN			CIRCUIT PROTECTION	Size of Conductor		Size Of Conduit In MM ϕ	Color Code		
			WATTS	VOLT	AMPERES			SQ. MM THHN			SQ. MM THHN(G)	
					AB		BC					CA
1	1	ACU OUTLET WT	2500	230	12.00			30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1R,1BK	
2	1	ACU OUTLET WT	2500	230	12.00			30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1R,1BK	
3	1	ACU OUTLET WT	2500	230		12.00		30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1B,1Y	
4	1	ACU OUTLET WT	2500	230		12.00		30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1B,1Y	
5	1	ACU OUTLET WT	2500	230			12.00	30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1Y,1R,G	
6	1	ACU OUTLET WT	2500	230			12.00	30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1Y,1R,G	
7	1	ACU OUTLET WT	2500	230	12.00			30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1R,1BK	
8	1	ACU OUTLET WT	2500	230	12.00			30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1R,1BK	
9	1	ACU OUTLET WT	2500	230		12.00		30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1B,1Y	
10	1	ACU OUTLET WT	2500	230		12.00		30AT, 2P,10 KAIC	2 - 5.5 + G 2.0	20	1B,1Y	
11		SPARE										
12		SPARE										
11		SPARE										
12		SPARE										
TOTAL			25000	230	48.00	48.00	24.00	125AT, 3P,18 kAIC	3 - 30.0 + G 8.0	32	1R,1BK,1Y, G	

FEEDER and CURRENT PROTECTION COMPUTATION:

NOTE:

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

$$I_{FL} = \frac{[48.0 \times 1.732 + 25\% \times 1m]}{DF} = 86.14 \text{ Amperes}$$

use: 3 - 30 SQMM THHN + 1 - 8.0 SQMM THHN IN 32 MM DIA. RSC

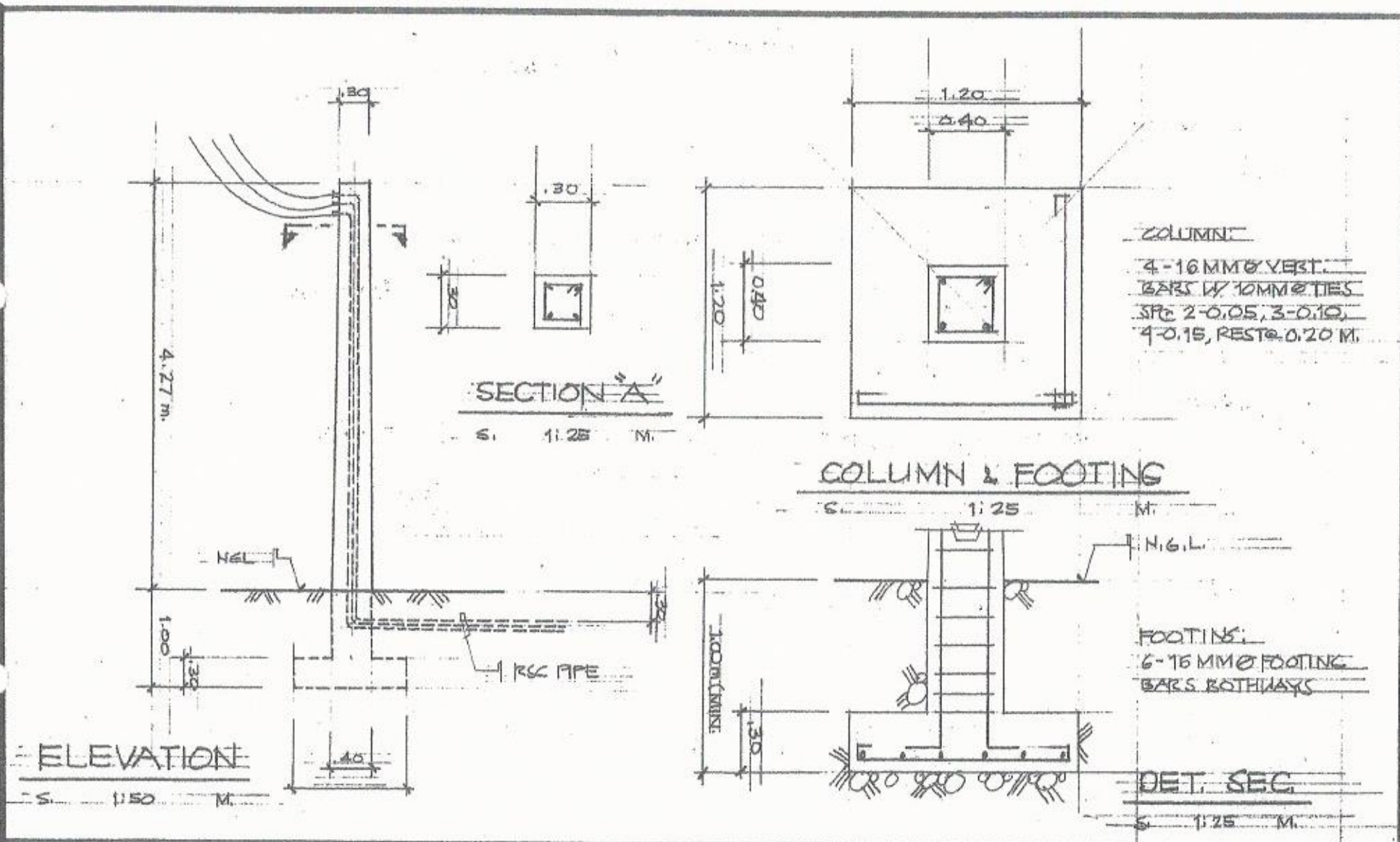
$$ICB = \frac{[48.0 \times 1.732 + 250\% \times 1m]}{DF} = 113.14 \text{ Amperes}$$

use: 125AT, 225AF, 3P, 230V, 18kAIC, CB

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REPAIR OF TWO STOREY CEMDS BLDG.
 (OLD ENGINEERING BUILDING)
 CVSU, MAIN CAMPUS

BID BULLETIN
 (3-10-21)



Service Entrance Post