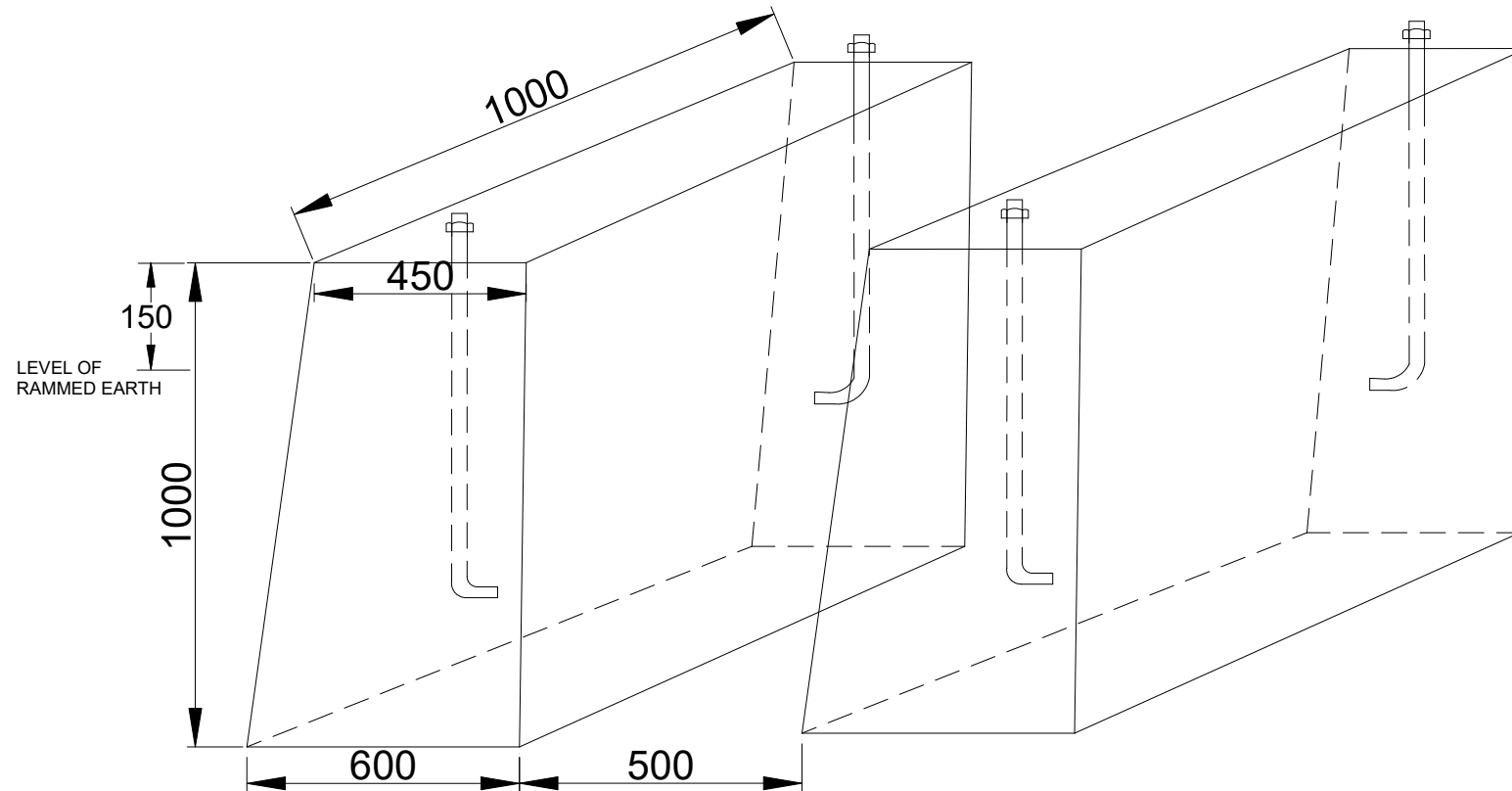


## APPARATUS CASE FULL SIZE FOUNDATION

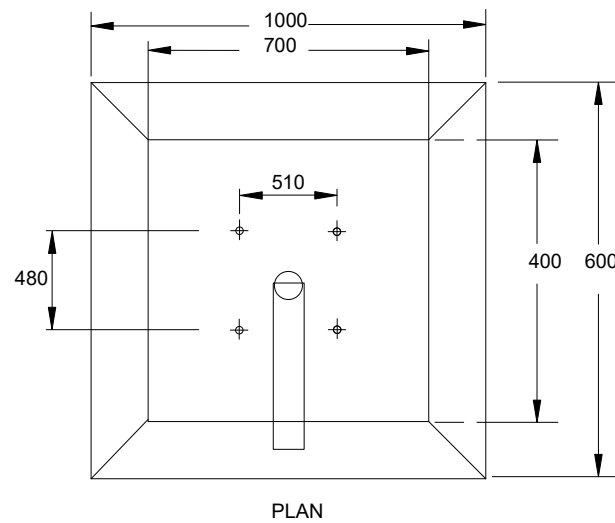
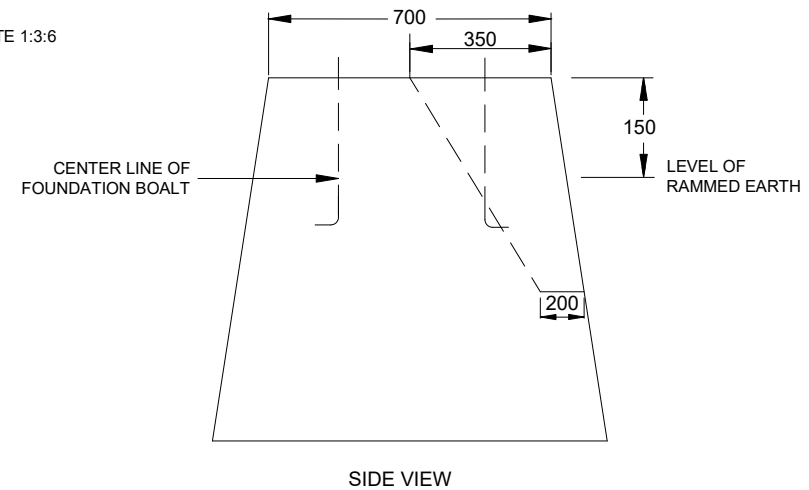
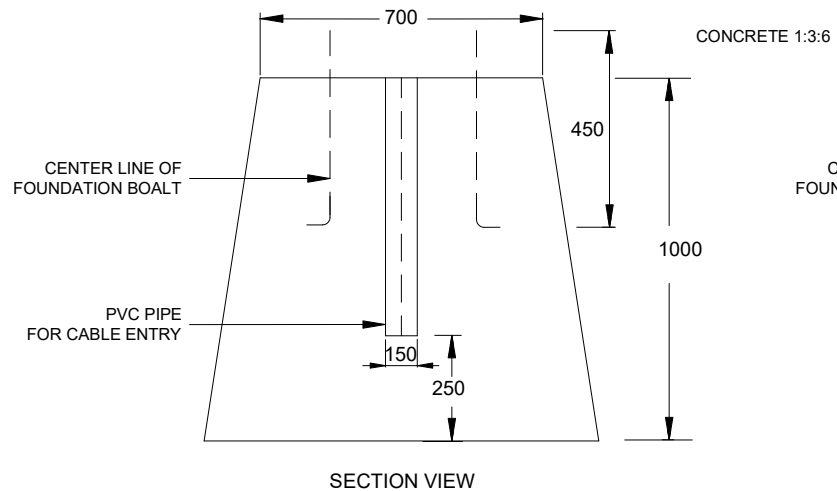


## NOTE:-

CONCRETE 1:3:6

1. ALL DIMENSIONS ARE IN MM.
2. CONCRETE FOUNDATION WITH MIXTURE OF CEMENT, SAND AND JELLY CHIPS, SIZE:20, WITH RATIO 1:3:6.
3. OUTER SURFACE SHOULD BE PLASTERED WITH 1:4 CEMENT AND SAND.
4. ON ALL SIDES OF THE EARTH SHOULD BE RAMMED INTO THE LEVEL AS SHOWN IN THE SKETCH.
5. FOUNDATION BOLT OF SIZE 22 MM DIA., 450 MM LONG WITH 2 FLAT SPRING WASHERS & ONE NUT IS TO BE USED.

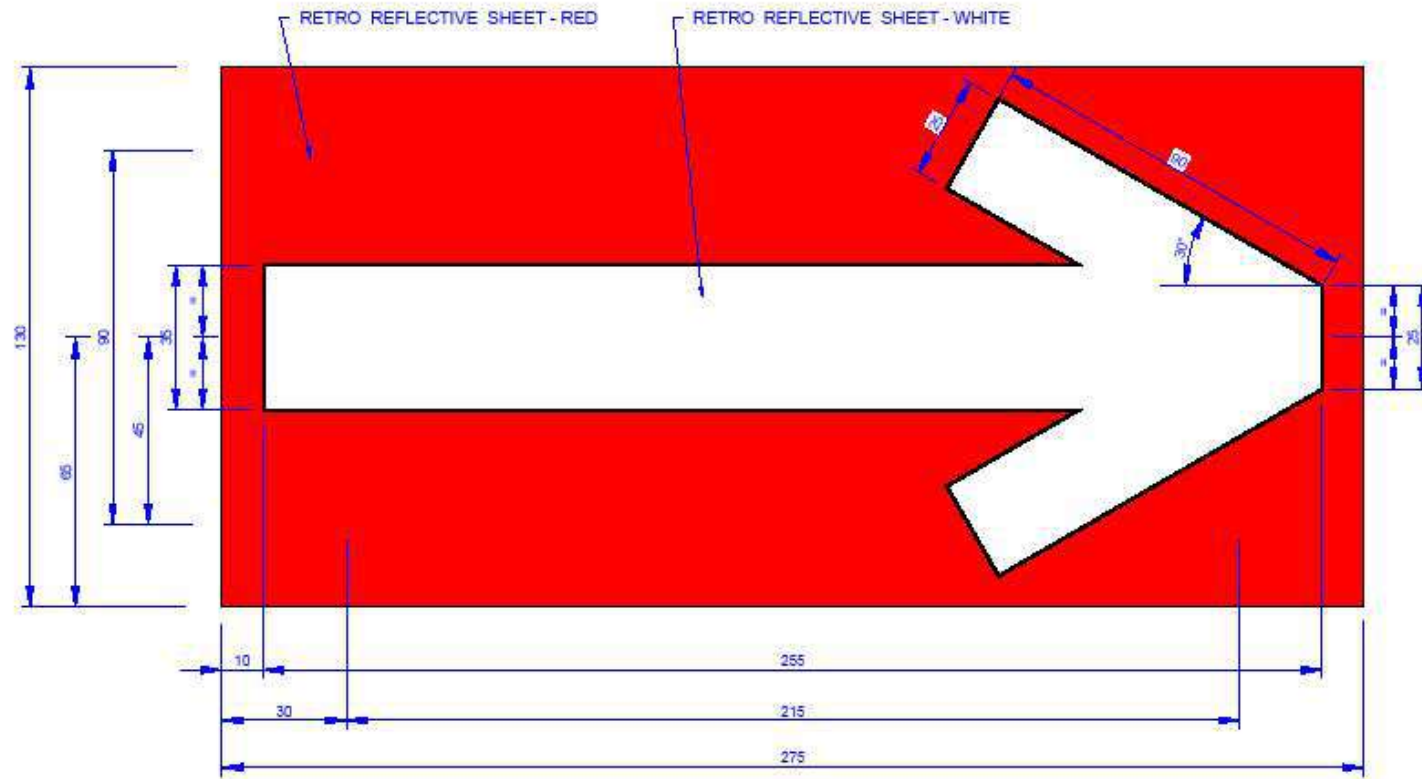
## APPARATUS CASE HALF/QUARTER SIZE FOUNDATION



### NOTE:-

1. ALL DIMENSIONS ARE IN MM.
2. CONCRETE FOUNDATION WITH MIXTURE OF CEMENT, SAND AND JELLY CHIPS, SIZE:20, WITH RATIO 1:3:6.
3. OUTER SURFACE SHOULD BE PLASTERED WITH 1:4 CEMENT AND SAND.
4. ON ALL SIDES OF THE EARTH SHOULD BE RAMMED INTO THE LEVEL AS SHOWN IN THE SKETCH.
5. FOUNDATION BOLT OF SIZE 22 MM DIA., 450 MM LONG WITH 2 FLAT SPRING WASHERS & ONE NUT IS TO BE USED.

# ARROW MARKER RETRO REFLECTIVE SHEET

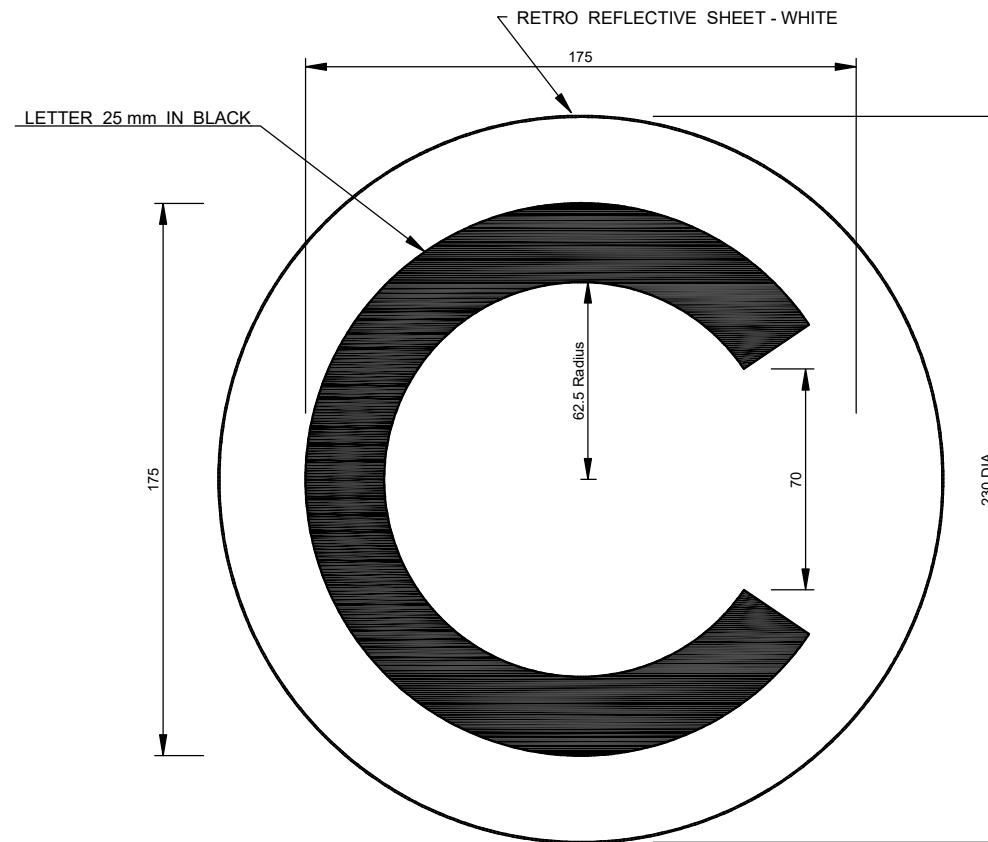


## MATERIAL :-

RETRO REFLECTIVE SHEET HIGH INTENSITY GRADE RED WITH  
 IMPRINTED " ARROW " IN WHITE  
 WITH FILM THICKNESS 0.3 mm  
 TOLERANCE AS PER APPLICABLE  
 NOTE :- ALL DIMENSIONS ARE IN mm

**PRINT IN COLOUR**

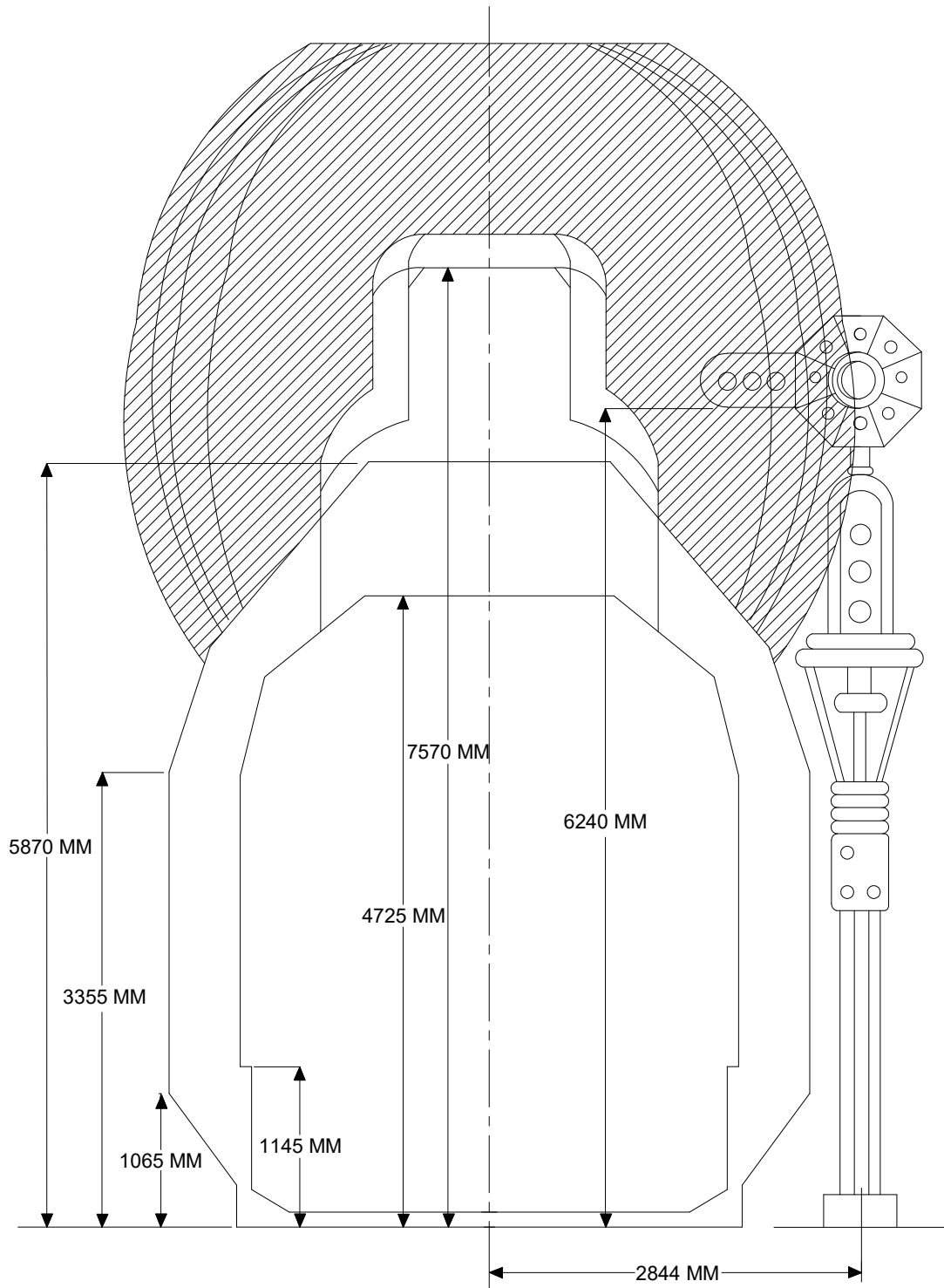
## "C" MARKER RETRO REFLECTIVE SHEET

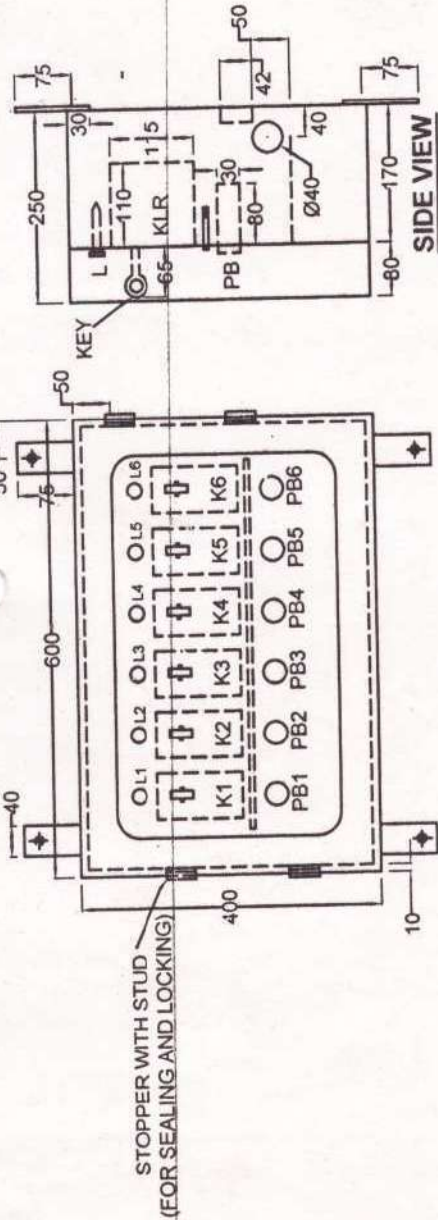


### MATERIAL :-

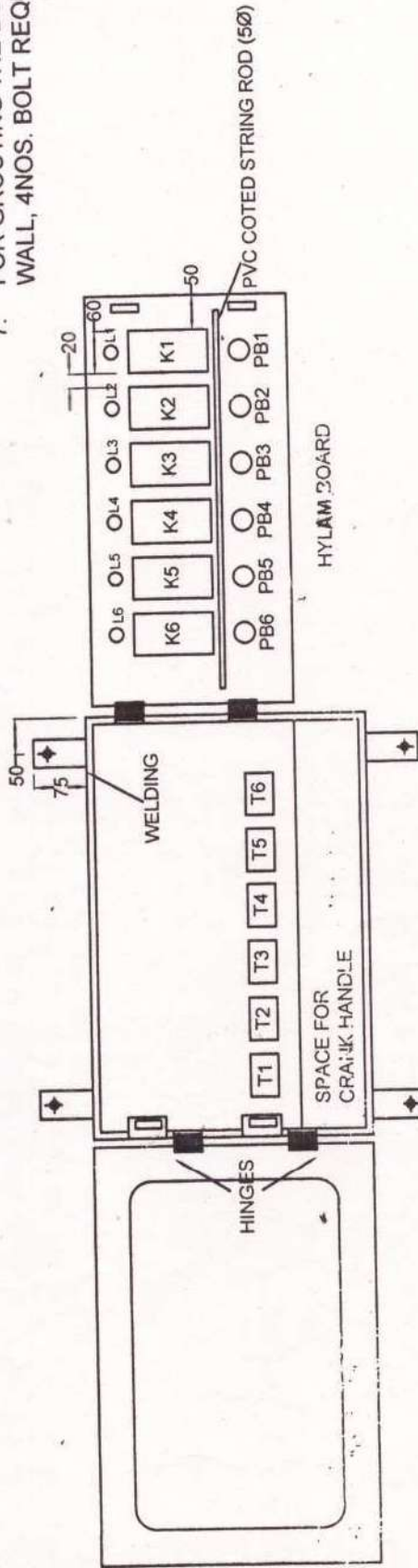
RETRO REFLECTIVE SHEET HIGH INTENSITY GRADE WHITE WITH  
IMPRINTED 'C' IN BLACK  
WITH FILM THICKNESS 0.3 mm  
TOLERANCE AS PER APPLICABLE  
NOTE :- ALL DIMENSIONS ARE IN mm

COLOUR LIGHT SIGNAL WITH JUNCTION ROUTE INDICATOR  
LEFT HAND OR RIGHT HAND BROAD GAUGE (TANGENT TRACK)





**FRONT VIEW**



**FRONT VIEW WITH TRANSPARENT DOOR & HYLAM BOARD OPEN**

**LEGEND:-**

- K1-6 SIEMENS KEY LOCK RELAY
- L1-6 JUMBO LED (RED) WITH SUITABLE RESISTANCE OF LOW CAPACITY FOR 60V DC/ 24VDC OPERATION.
- PB 1-6 PUSH BUTTON OF 5A CAPACITY HAVING 2 NO. AND 2 NC CONTACT.
- T1-6 TERMINAL BLOCKS 8 WAY ISOLATION BARRIER TYPE MADE OF PBT.

**NOTES:-**

1. ALL DIMENSIONS ARE IN mm.
2. DRG. IS NOT TO SCALE.
3. BASED ON CENTRAL RAILWAY DRG. NO. R-ST/C/114.
4. ENTIRE BODY OF THE BOX SHALL BE FABRICATED USING M.S. STEEL AND SHALL BE POWDER COATED.
5. HYLAM SHEET SHALL BE 10 MM THICK, RESIN BONDED GRADE P-3.
6. FRONT DOOR SHOULD BE GLASS OR TRANSPARENT SHEET.
7. FOR GROUTING THE BOX ON WALL, 4NOS. BOLT REQUIRED.

**WEST CENTRAL RAILWAY (S&T)**

**CRANK HANDLE BOX**  
WITH KLCR & ACCESSORIES

APPROVED:

*[Signature]*

*[Signature]*

*[Signature]*

DEEPAK

J.E.D.

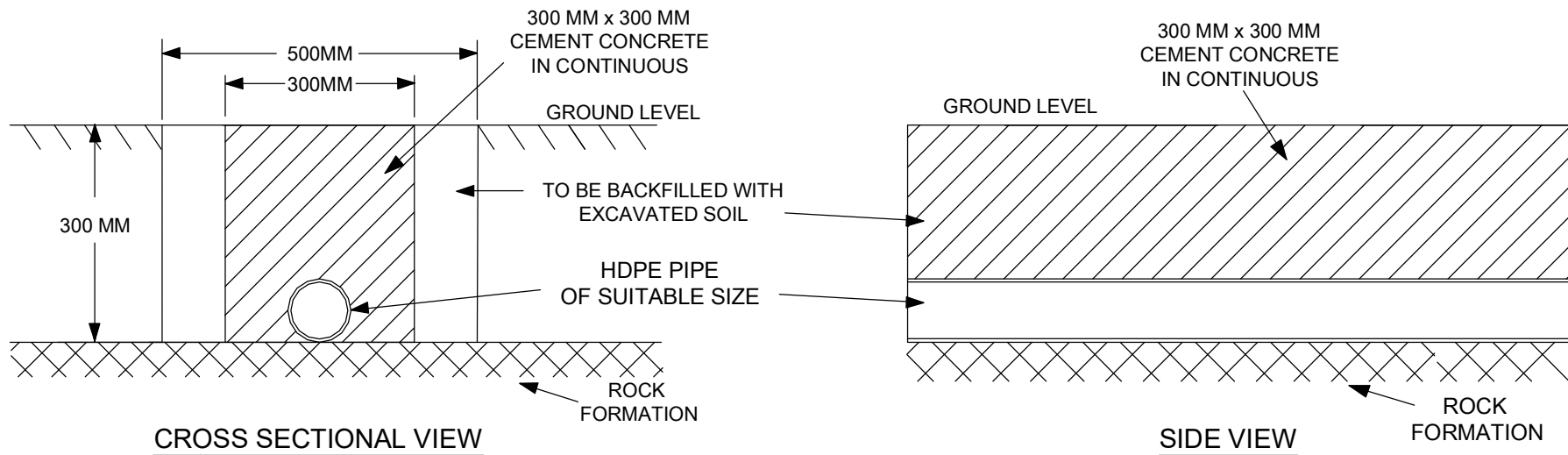
SSE/Sig/CI

CHECKED BY: DSTE/C/BPL

DY. CSTE/C/BPL

DRG. NO : CHB/RST/C/BPL/114

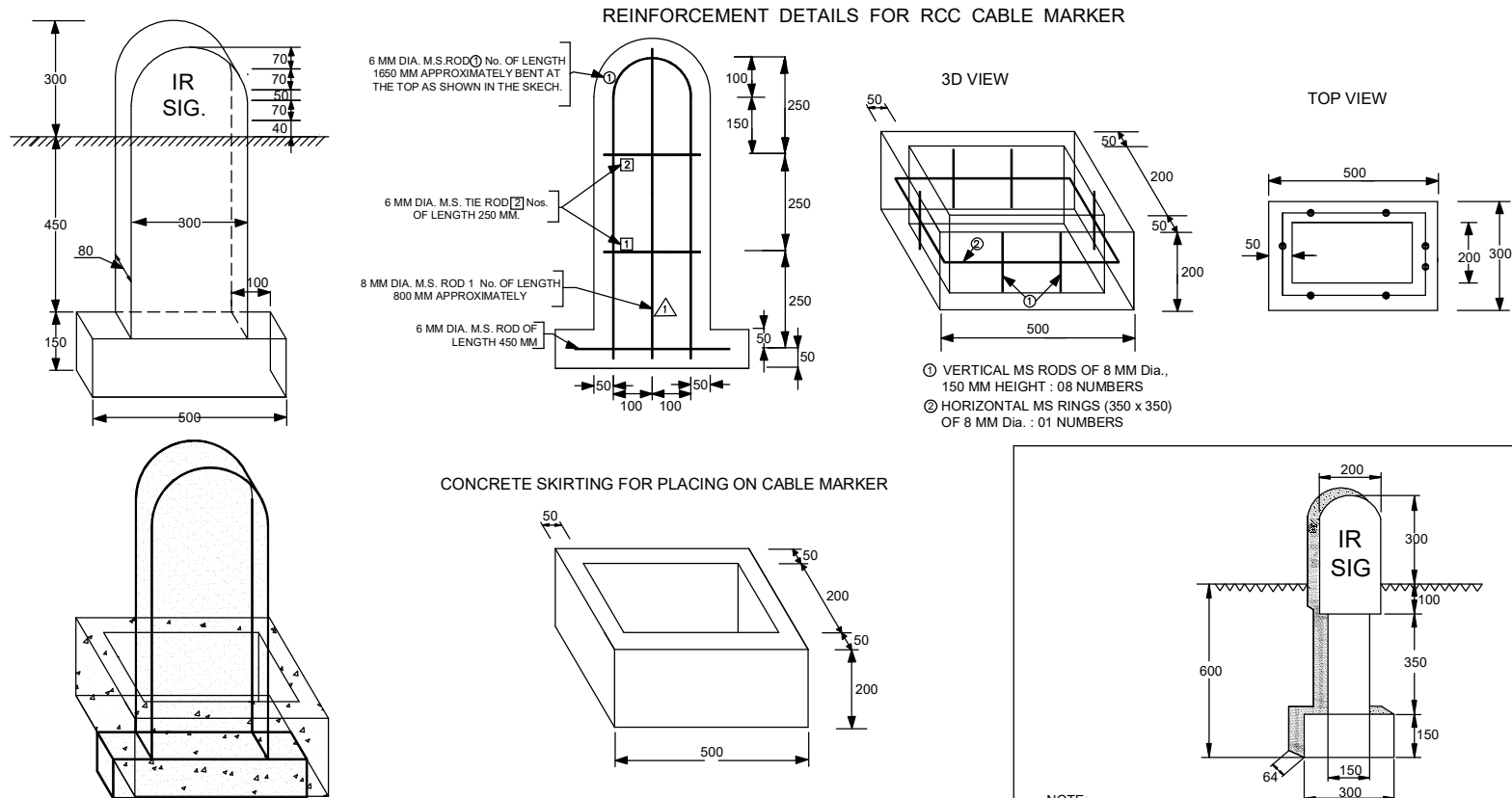
## DRAWING FOR CABLE LAYING WHEN ROCK FACED AT 300 MM DEPTH FROM GROUND LEVEL



**NOTE :**

- 1) ALL DIMENSIONS ARE IN MILLIMETER.
- 2) CEMENT CONCRETING OF 300 MM x 300 MM SHALL BE PROVIDED IN CONTINUOUS.
- 3) CONCRETING WITH MIXTURE OF CEMENT RIVER SAND/ M-SAND. AND JELLY CHIPS OF SIZE 20 MM WITH RATIO 1:3:6.
- 4) HDPE PIPE AS PER IS-4984 TO BE USED.
- 5) REFILLED SOIL SHALL BE RAMMED TO THE EARTH LEVEL.

## DRAWING FOR RCC CABLE MARKER



**NOTE:-**

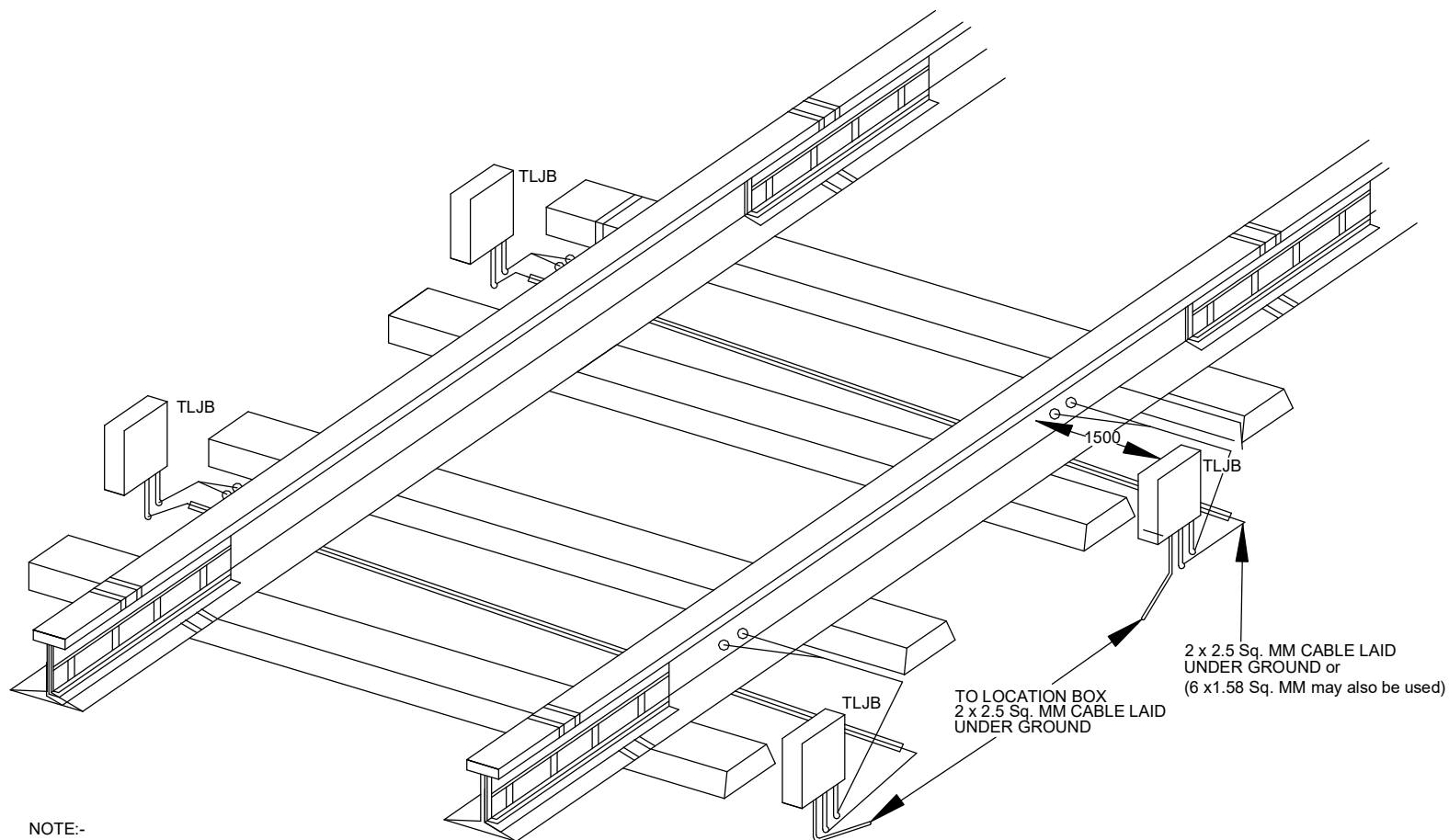
1. ALL DIMENSIONS ARE IN MM.
2. CABLE MARKER SHALL BE ENGRAVED WITH IR SIG / IR QUAD / IR OFC AS THE CASE MAY BE OF 2.8" (70 MM) HEIGHT.
3. CABLE MARKERS SHALL BE PAINTED IN RED COLOR PAINT FOR SIGNALLING CABLES ENGRAVED LETTERS SHALL BE PAINTED IN WHITE COLOR CEMENT PAINT.
4. AFTER PLACING PRECAST RCC SKIRTING ON THE PRECAST RCC MARKER AS SHOWN, GAP BETWEEN THE CABLE MARKER AND SKIRTING SHALL BE FILLED WITH RICH MORTAR.
5. THE PROPORTION FOR CEMENT, SAND & JELLY SHALL BE 1:2:4 WITH 6 MM TO 10 MM GRANITE METAL.
6. FOR MILD STEEL THE SPECIFICATION IS IS:432.
7. CABLE MARKERS SHALL BE PLACED AT AN INTERVAL OF 20 M WITH IN STATION SECTION AND 50 M IN BLOCK SECTION FOR GUIDANCE ONLY.

**NOTE:-**

1. ALL DIMENSIONS ARE IN MILLI METER.
2. PAINTED WHITE LETTERS ON RED BACK GROUND
3. FOUNDATION CONCRETE OF 300 MM FROM THE BASE OF THE MARKER SHALL BE DONE AT SITE AT ALL PLACES WITH MIX 1:3:5.
4. COMPONENT CONCRETE SHALL BE OF M25 MIX AND WIRE MESH OF 1.5 MM THICK MESS SHALL BE USED.
5. THE ENGRAVING OF "RLY" & "SIG" SHALL BE DONE ON BOTH SIDES OF THE MARKER AND ENGRAVED SIDE SHALL BE PLACED PARALLEL TO THE LENGTH OF CABLE ROUTE.



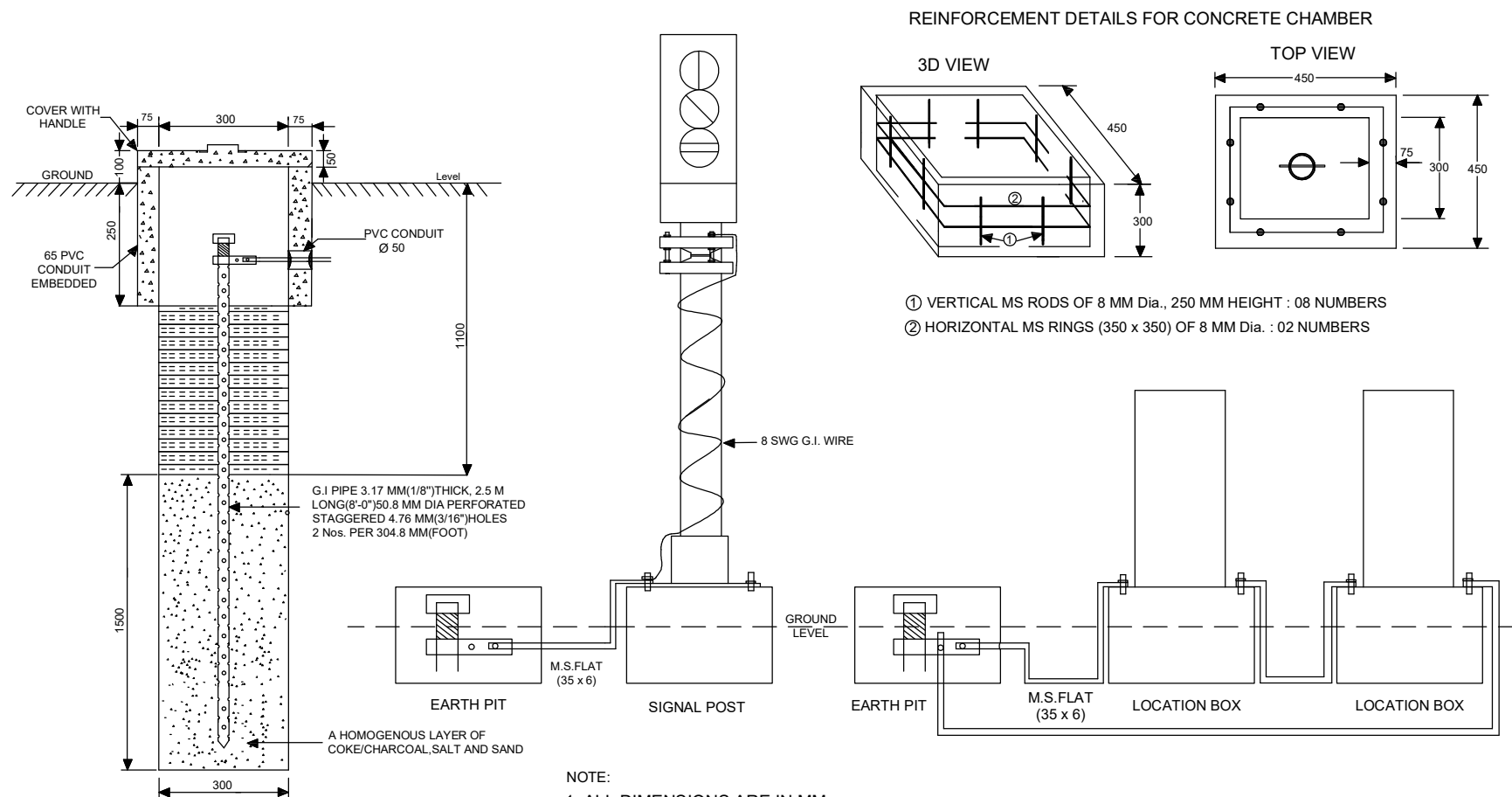
## DRAWING FOR TRACK LEAD CABLE CONNECTIONS



## NOTE:-

1. ALL DIMENSIONS ARE IN MM.
2. TRACK LEAD CABLE SHALL BE LAID AT A DEPTH OF 1 Mtr FROM THE GROUND LEVEL.
3. CONNECTORS FROM TLJB TO TRACK SHALL BE MADE FIRMLY THROUGH 2 x 2.5 Sq. MM CABLE ALONG WITH ARMOUR AT BOTH ENDS.

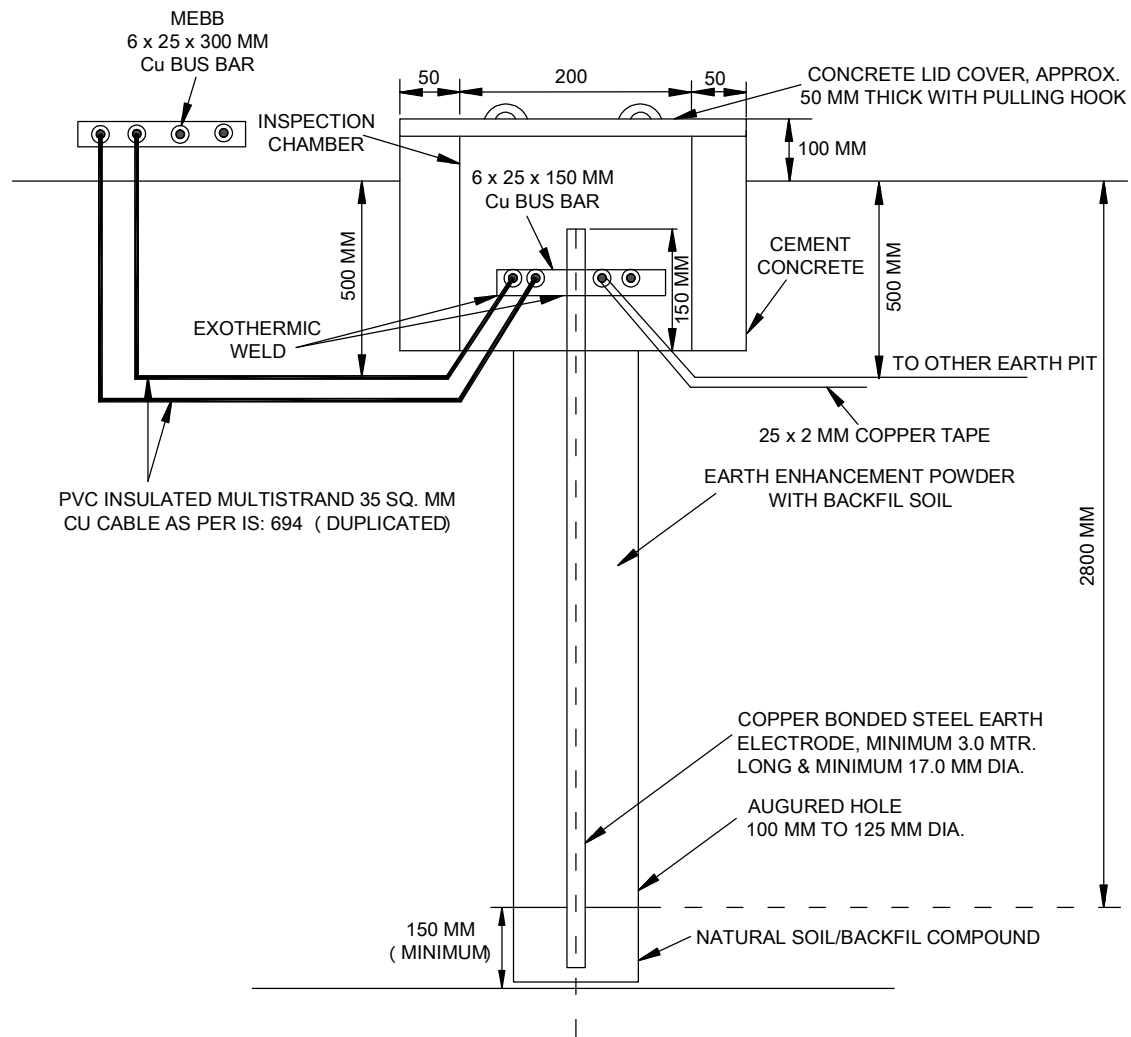
# EARTHING ARRANGEMENT FOR SIGNALS, LOCATION BOXES



NOTE:

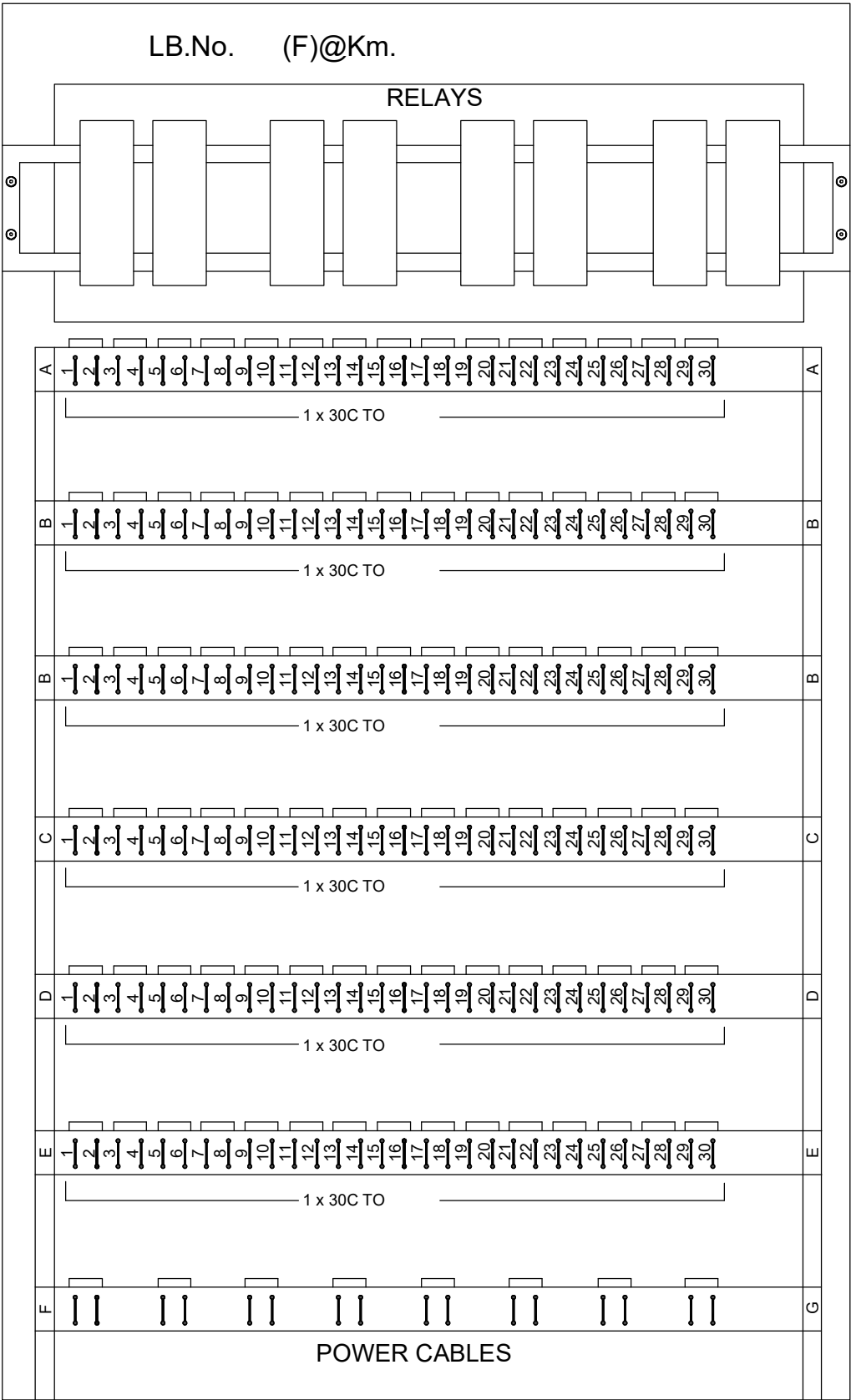
1. ALL DIMENSIONS ARE IN MM.
2. ALL MULTIPLE UNITS, CALLING-ON, SHUNT, ROUTE & SCREENS SHALL BE LOOPED TOGETHER.
3. CODE OF PRACTICE FOR EARTHING AS PER IS:3043
4. CONCRETE OF M25 GRADE 1:2:4 WITH MAXIMUM SIZE OF STONE CHIPS OF 10 MM.

# DRAWING OF EARTHING ELECTRODE FOR S&T INSTALLATION (RDSO/SPN/197/2008)

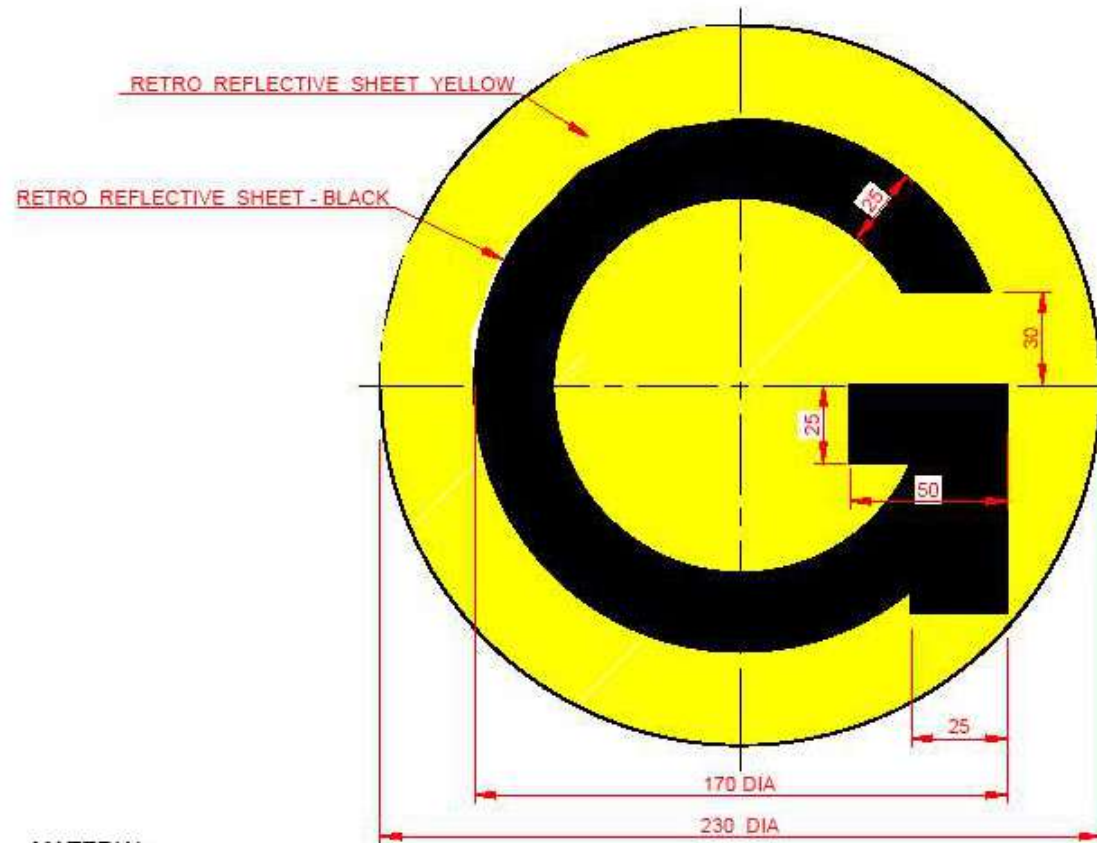


FULL LOCATION WIRING FORMAT

FULL LOCATION BOX



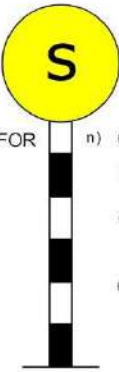
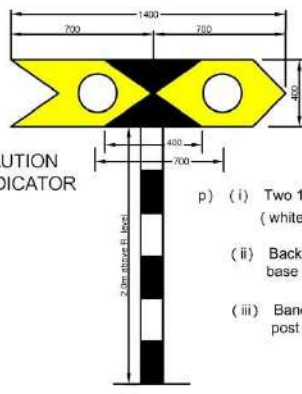
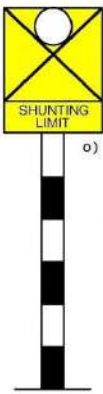
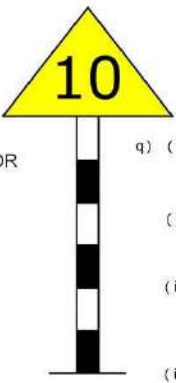
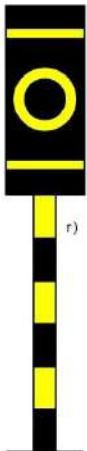
## "G" MARKER RETRO REFLECTIVE SHEET



### MATERIAL :-

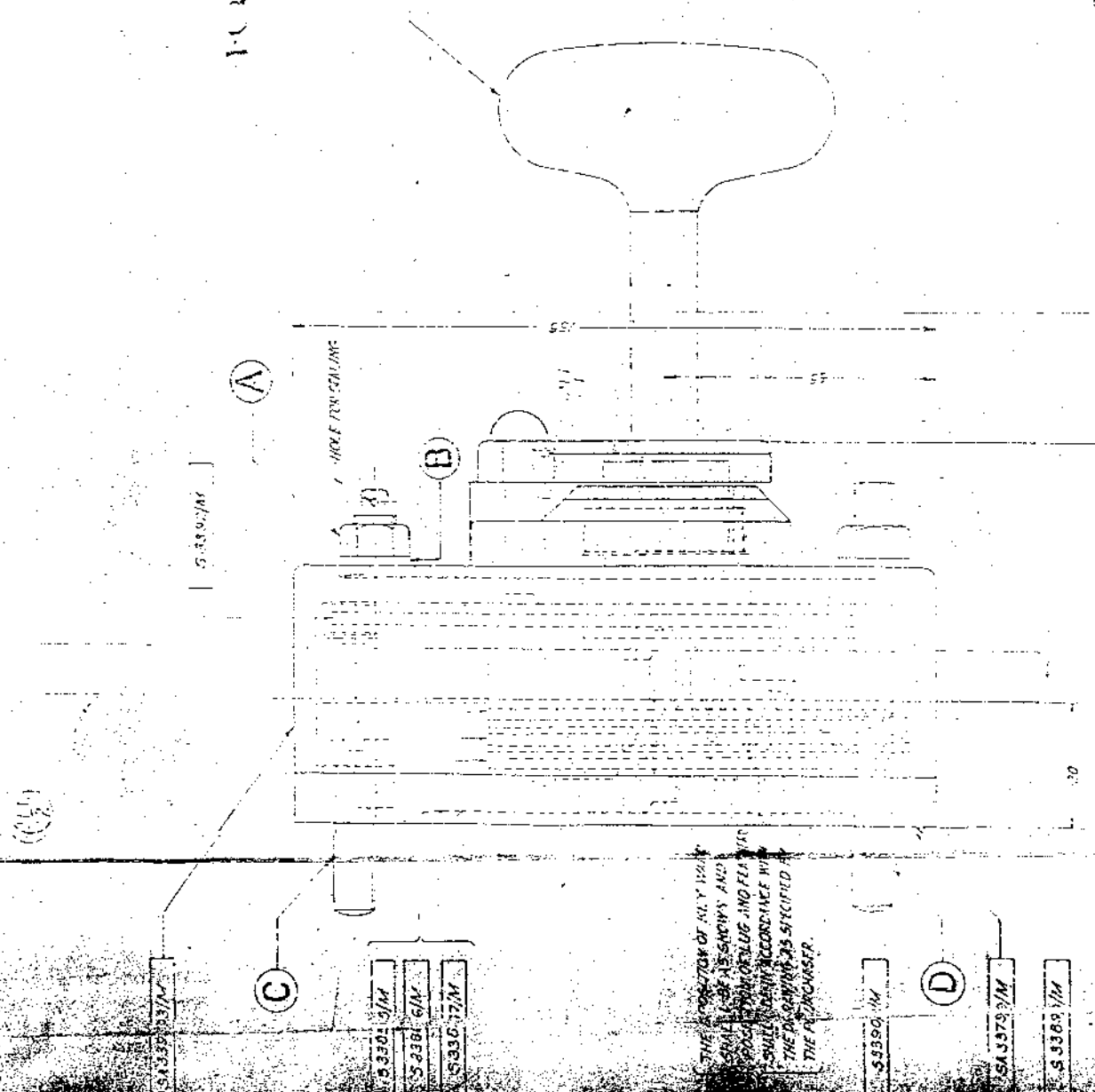
RETRO REFLECTIVE SHEET HIGH INTENSITY GRADE YELLOW WITH  
IMPRINTED 'G' IN BLACK  
WITH FILM THICKNESS 0.3 mm  
TOLERANCE AS PER APPLICABLE  
NOTE :- ALL DIMENSIONS ARE IN mm

**PRINT IN COLOUR**

Signal	Shape	Remark	Signal	Shape	Remark
n) 'S' MARKER FOR OUTLYING SIDINGS		n) (i) Disc diameter : 1 metre. (ii) Letter 'S' height : 300 mm, 40 mm thick (iii) Height of centre of disc from rail level : 2000 mm (iv) Bands on the post : 300 mm wide, Black & White bands alternately	p) CAUTION INDICATOR		p) (i) Two 130mm. Yellow lights (white back lights) (ii) Back triangle base : 400 mm (iii) Band on the post : 300 mm wide, Black & White bands alternately (Ref.-Annexure 8/4-para 807 & 808 of P-Way Manual)
o) SHUNTING LIMIT BOARD		o) (i) Rectangular board : 600 mm x 1 metre (ii) Height from rail level to the underside of the board containing the cross : 2000 mm (iii) Bands on the post : 300 mm wide Black & White bands alternately	q) SPEED INDICATOR		q) (i) Equilateral triangular board-side : 1 metre (ii) letters indicating speed-height : 300 mm, 40 mm thick (iii) Height from rail level to bottom of the board : 2000 mm (iv) Band on the post : 300 mm wide Black & White bands alternately (Ref.-Annexure 8/4-para 807 & 808 of P-Way Manual)
r) GOODS WARNING BOARD		r) (i) Rectangular board : 535 x 1800 mm (ii) Yellow band & circle as shown : 140 mm (iii) Plastic reflector as shown (iv) Band on the post : 300 mm wide, Black & Yellow bands alternately.			

PRINT IN COLOUR

कार्यालय प्रकाश हुनु  
PUBLIC AFFAIRS SECTION



PLAN  
WITHOUT COVER

ONLY BE TAKEN OUT WHEN THE LOCK BOLT  
D KEY WARD IS IN POSITION AS SHOWN

(B)	SEARCHING	100
(C)	INDEXING	100
(D)	RECORDING	100
(E)	REPORTING	100
(F)	REVIEWING	100
(G)	RECORDING	100
(H)	RECORDING	100
(I)	RECORDING	100
(J)	RECORDING	100
(K)	RECORDING	100
(L)	RECORDING	100
(M)	RECORDING	100
(N)	RECORDING	100
(O)	RECORDING	100
(P)	RECORDING	100
(Q)	RECORDING	100
(R)	RECORDING	100
(S)	RECORDING	100
(T)	RECORDING	100
(U)	RECORDING	100
(V)	RECORDING	100
(W)	RECORDING	100
(X)	RECORDING	100
(Y)	RECORDING	100
(Z)	RECORDING	100

KEY LOCK (TYPE)

DATE 12/19/95

5

2. 2. 2.

0.

5

NOTIFICATION NO. 2

20150501

2008.01.15

10

7-11-1947

172454

1838.5.5

**E. CLARK M.D.**

D.R.N. -

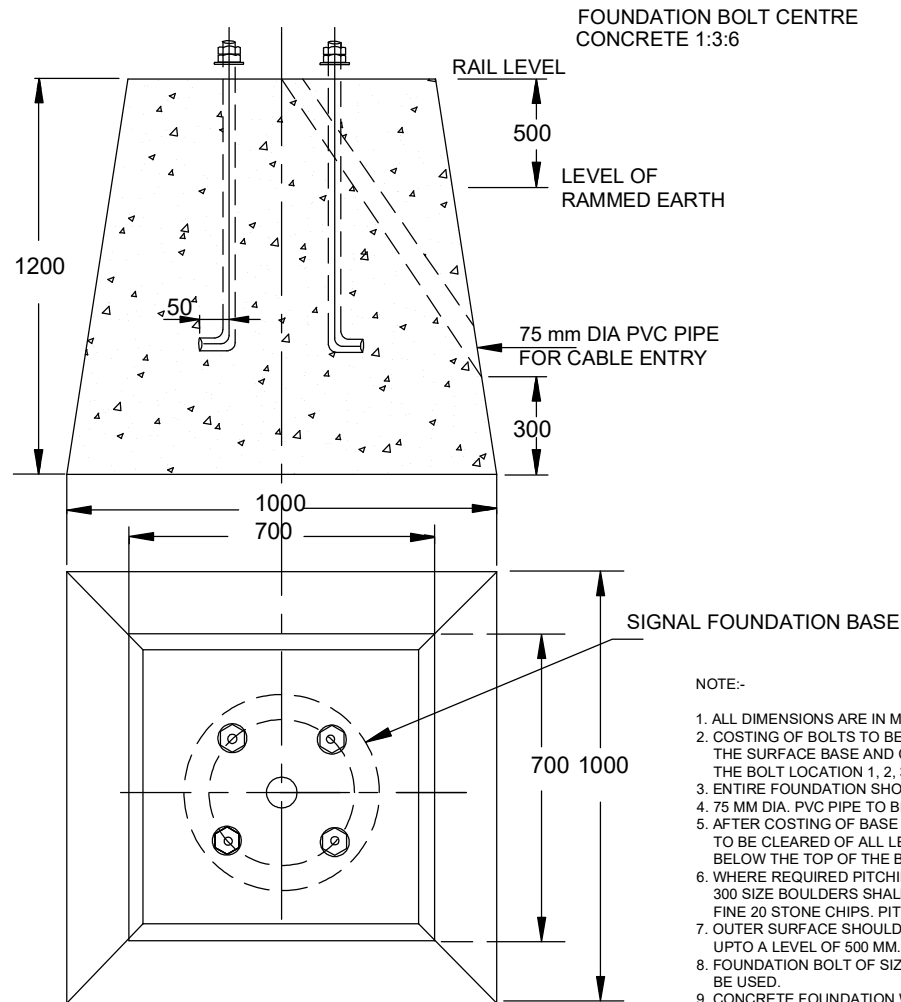
Case:

65175 8(111271)

[illegible]

Source: *Journal of the American Statistical Association*, 1997, Vol. 92, No. 439, pp. 1033-1044.

# MAIN SIGNAL POST FOUNDATION

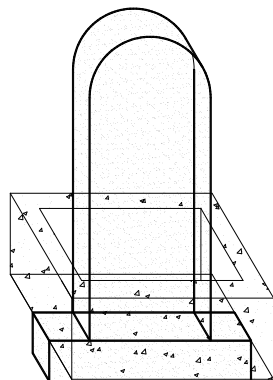
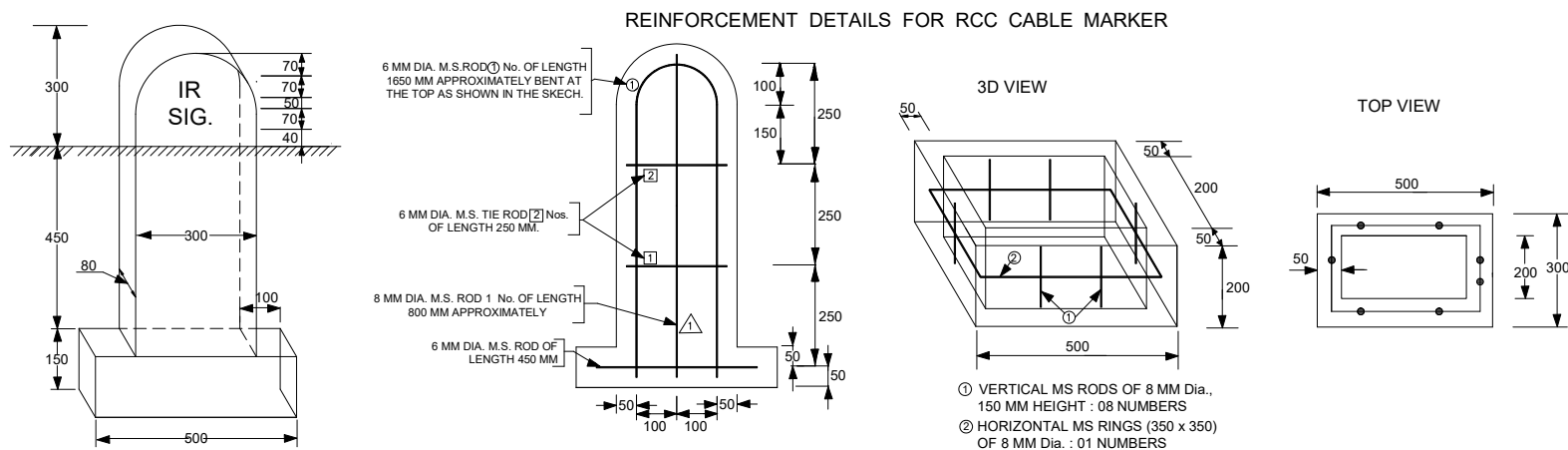
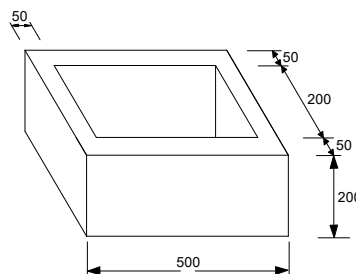


NOTE:-

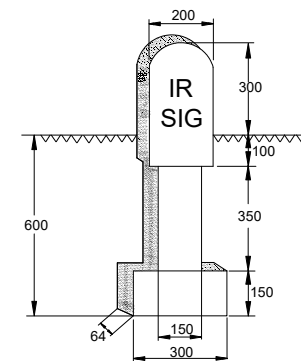
1. ALL DIMENSIONS ARE IN MM.
2. COSTING OF BOLTS TO BE DONE IN THE CONCRETE BASE DULY TAKING HE MEASUREMENTS OF THE SURFACE BASE AND CIRCLE ALSO ALIGNING THE FOUR HOLES OF THE SURFACE BASE WITH THE BOLT LOCATION 1, 2, 3 & 4 BY PROVIDING TEMPLATE.
3. ENTIRE FOUNDATION SHOULD BE CAST IN ONE STRETCH AND WITH BOLT ONLY.
4. 75 MM DIA. PVC PIPE TO BE EMBEDDED DURING CASTING ITSELF (AND NOT LATER ON).
5. AFTER COSTING OF BASE AND CURING OF THE SAME IS OVER THE FOUR SIDES OF THE BASE TO BE CLEARED OF ALL LEFT OVER CONCRETE AND SIDES DULY RAMMED WITH EARTH UPTO 500 BELOW THE TOP OF THE BASE.
6. WHERE REQUIRED PITCHING ON THE RELEVANT SIDES OF THE RAMMED SURFACE WITH 225 TO 300 SIZE BOULDERS SHALL BE DONE AND FILLING THE CREVICES WITH 10:6:12 CONCRETE WITH FINE 20 STONE CHIPS. PITCHING WILL BE TO THE FULL HEIGHT OF THE RAMMED EARTH.
7. OUTER SURFACE SHOULD BE PLASTERED FROM TOP OF FOUNDATION WITH 1:2 CEMENT AND SAND UPTO A LEVEL OF 500 MM.
8. FOUNDATION BOLT OF SIZE 30 MM DIA 750 MM LONG WITH 2 FLAT SPRING WASHERS & 2 NUTS ARE TO BE USED.
9. CONCRETE FOUNDATION WITH RATIO 1:3:6.



## DRAWING FOR RCC CABLE MARKER

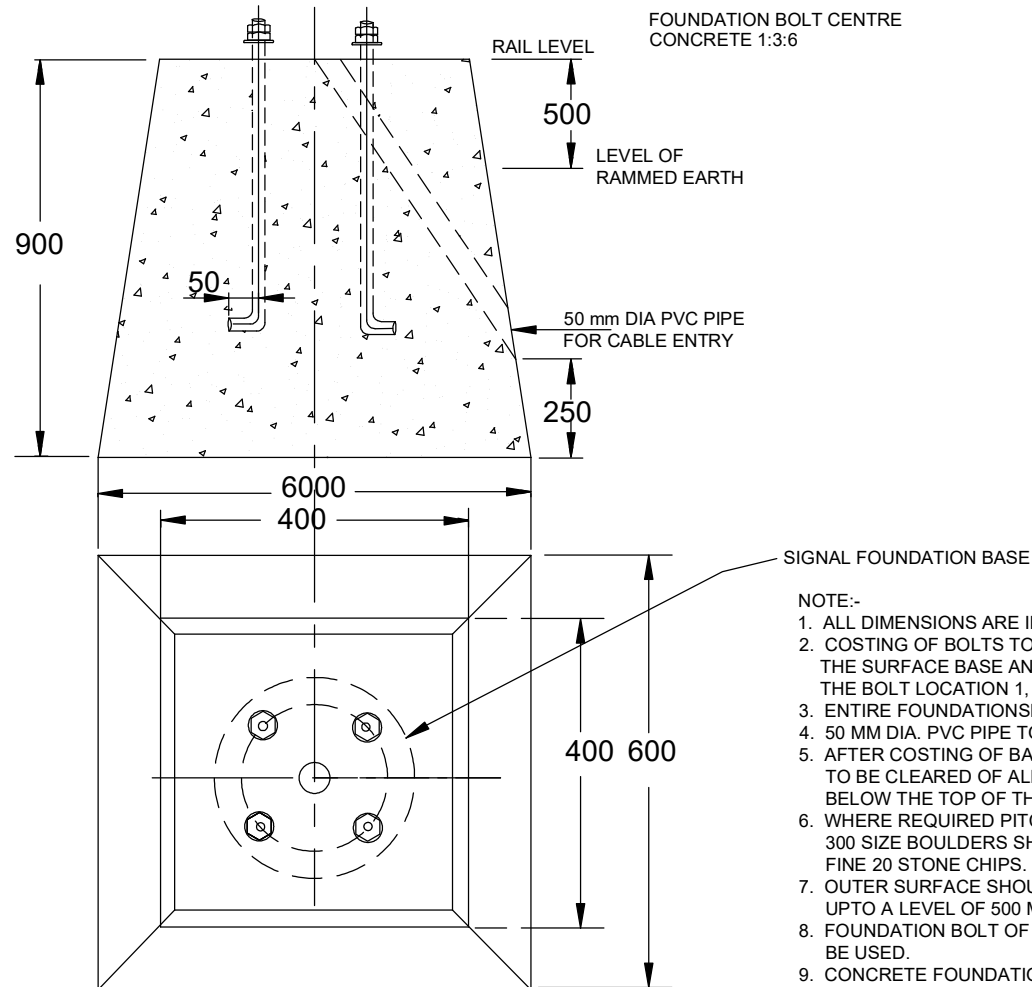
**CONCRETE SKIRTING FOR PLACING ON CABLE MARKER****NOTE:-**

1. ALL DIMENSIONS ARE IN MM.
2. CABLE MARKER SHALL BE ENGRAVED WITH IR SIG / IR QUAD / IR OFC AS THE CASE MAY BE OF 2.8" (70 MM) HEIGHT.
3. CABLE MARKERS SHALL BE PAINTED IN RED COLOR PAINT FOR SIGNALLING CABLES ENGRAVED LETTERS SHALL BE PAINTED IN WHITE COLOR CEMENT PAINT.
4. AFTER PLACING PRECAST RCC SKIRTING ON THE PRECAST RCC MARKER AS SHOWN, GAP BETWEEN THE CABLE MARKER AND SKIRTING SHALL BE FILLED WITH RICH MORTAR.
5. THE PROPORTION FOR CEMENT, SAND & JELLY SHALL BE 1:2:4 WITH 6 MM TO 10 MM GRANITE METAL.
6. FOR MILD STEEL THE SPECIFICATION IS IS:432.
7. CABLE MARKERS SHALL BE PLACED AT AN INTERVAL OF 20 M WITH IN STATION SECTION AND 50 M IN BLOCK SECTION FOR GUIDANCE ONLY.

**NOTE:-**

1. ALL DIMENSIONS ARE IN MILLI METER.
2. PAINTED WHITE LETTERS ON RED BACK GROUND
3. FOUNDATION CONCRETE OF 300 MM FROM THE BASE OF THE MARKER SHALL BE DONE AT SITE AT ALL PLACES WITH MIX 1:3:5.
4. COMPONENT CONCRETE SHALL BE OF M25 MIX AND WIRE MESH OF 1.5 MM THICK MESS SHALL BE USED.
5. THE ENGRAVING OF "RLY" & "SIG" SHALL BE DONE ON BOTH SIDES OF THE MARKER AND ENGRAVED SIDE SHALL BE PLACED PARALLEL TO THE LENGTH OF CABLE ROUTE.

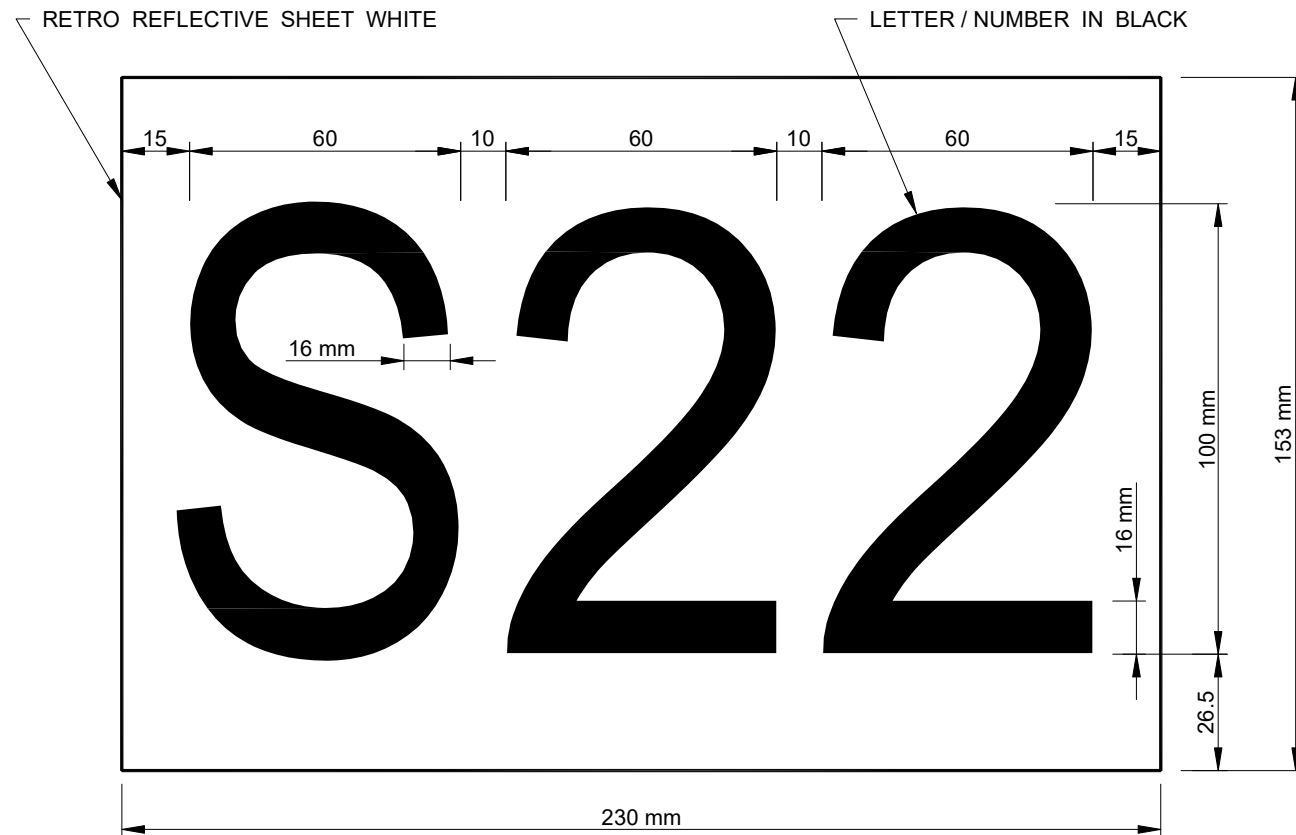
## SHUNT SIGNAL FOUNDATION



## NOTE:-

1. ALL DIMENSIONS ARE IN MM.
2. COSTING OF BOLTS TO BE DONE IN THE CONCRETE BASE DULY TAKING HE MEASUREMENTS OF THE SURFACE BASE AND CIRCLE ALSO ALIGNING THE FOUR HOLES OF THE SURFACE BASE WITH THE BOLT LOCATION 1, 2, 3 & 4 BY PROVIDING TEMPLATE.
3. ENTIRE FOUNDATIONS SHOULD BE CAST IN ONE STRETCH AND WITH BOLT ONLY.
4. 50 MM DIA. PVC PIPE TO BE EMBEDDED DURING CASTING ITSELF (AND NOT LATER ON).
5. AFTER COSTING OF BASE AND CURING OF THE SAME IS OVER THE FOUR SIDES OF THE BASE TO BE CLEARED OF ALL LEFT OVER CONCRETE AND SIDES DULY RAMMED WITH EARTH UPTO 500 BELOW THE TOP OF THE BASE.
6. WHERE REQUIRED PITCHING ON THE RELEVANT SIDES OF THE RAMMED SURFACE WITH 225 TO 300 SIZE BOULDERS SHALL BE DONE AND FILLING THE CREVICES WITH 10:6:12 CONCRETE WITH FINE 20 STONE CHIPS. PITCHING WILL BE TO THE FULL HEIGHT OF THE RAMMED EARTH.
7. OUTER SURFACE SHOULD BE PLASTERED FROM TOP OF FOUNDATION WITH 1:2 CEMENT AND SAND UPTO A LEVEL OF 500 MM.
8. FOUNDATION BOLT OF SIZE 22 MM DIA 450 MM LONG WITH 2 FLAT SPRING WASHERS & 2 NUTS ARE TO BE USED.
9. CONCRETE FOUNDATION WITH RATIO 1:3:6.
10. SAME DRAWING CAN BE ADOPTED FOR GWB, BSLB, CALLING-ON LEGEND BOARD OR ANY OTHER BOARDS OF SPECIFIED IN SIP.

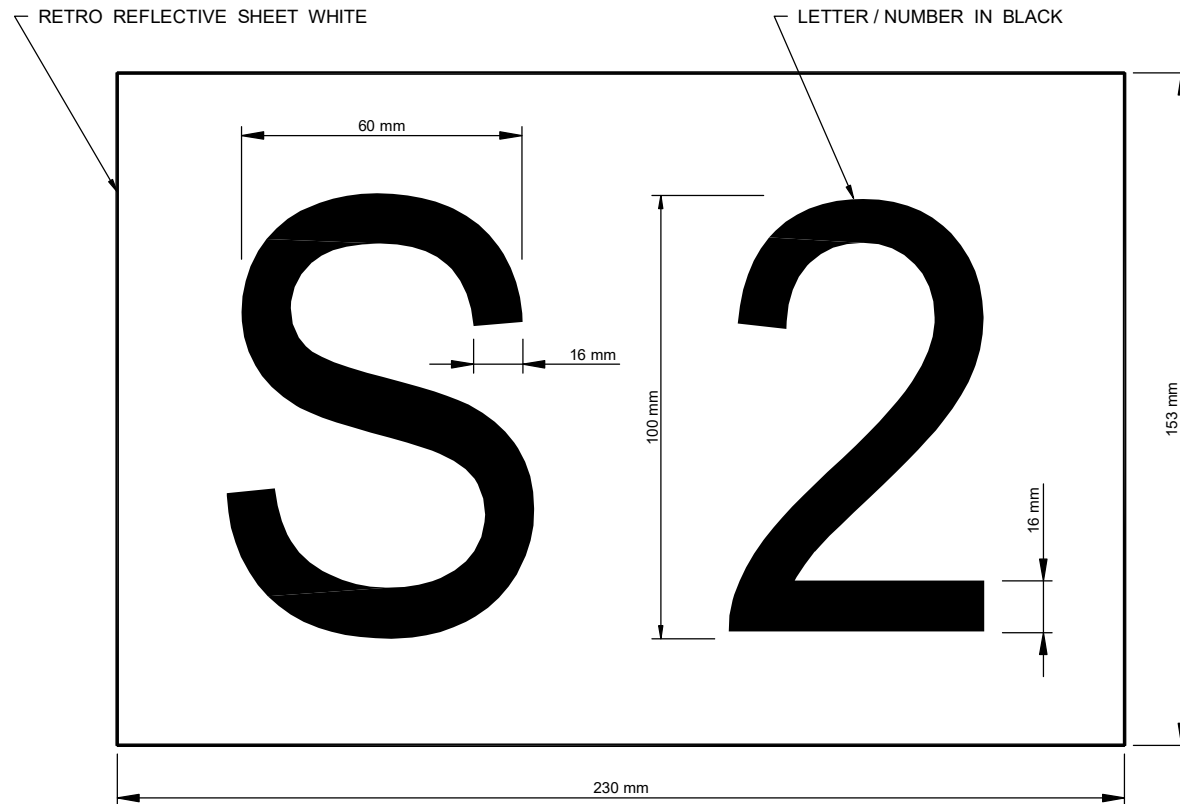
# SIGNAL NUMBER PLATE (DOUBLE DIGIT) RETRO REFLECTIVE SHEET



## MATERIAL :-

PRESSURE SENSITIVE TYPE RETRO REFLECTIVE SHEET HIGH INTENSITY  
 GRADE WHITE WITH IMPRINTED NUMBER / ALPHABET IN BLACK  
 WITH FILM THICKNESS 0.3 mm  
 TOLERANCE AS PER APPLICABLE  
 NOTE :- ALL DIMENSIONS ARE IN mm

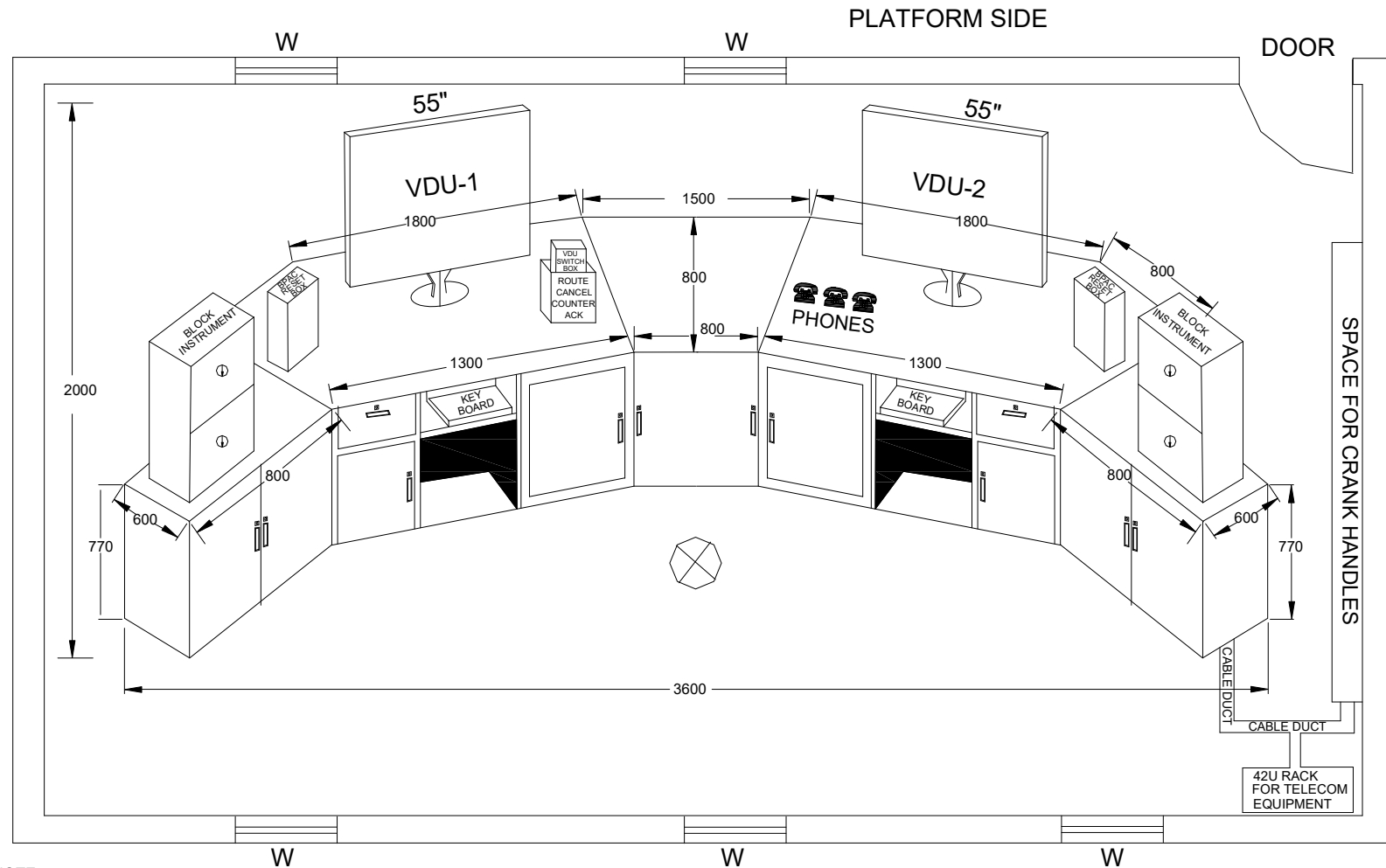
## SIGNAL NUMBER PLATE RETRO REFLECTIVE SHEET



### MATERIAL :-

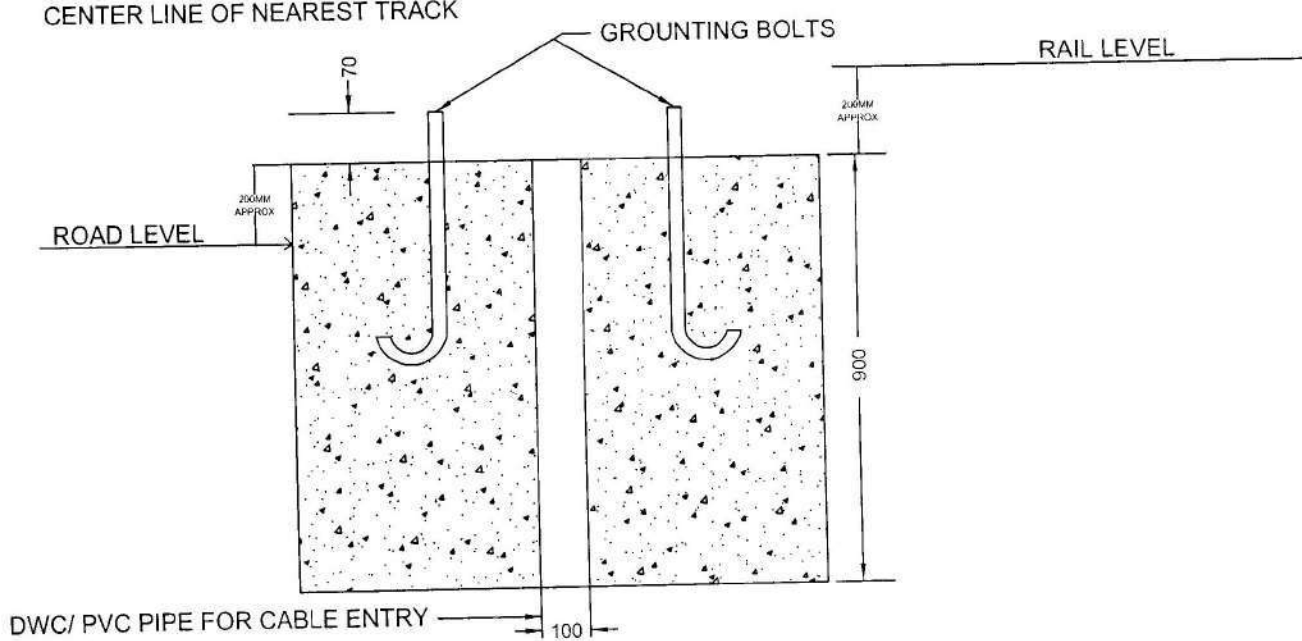
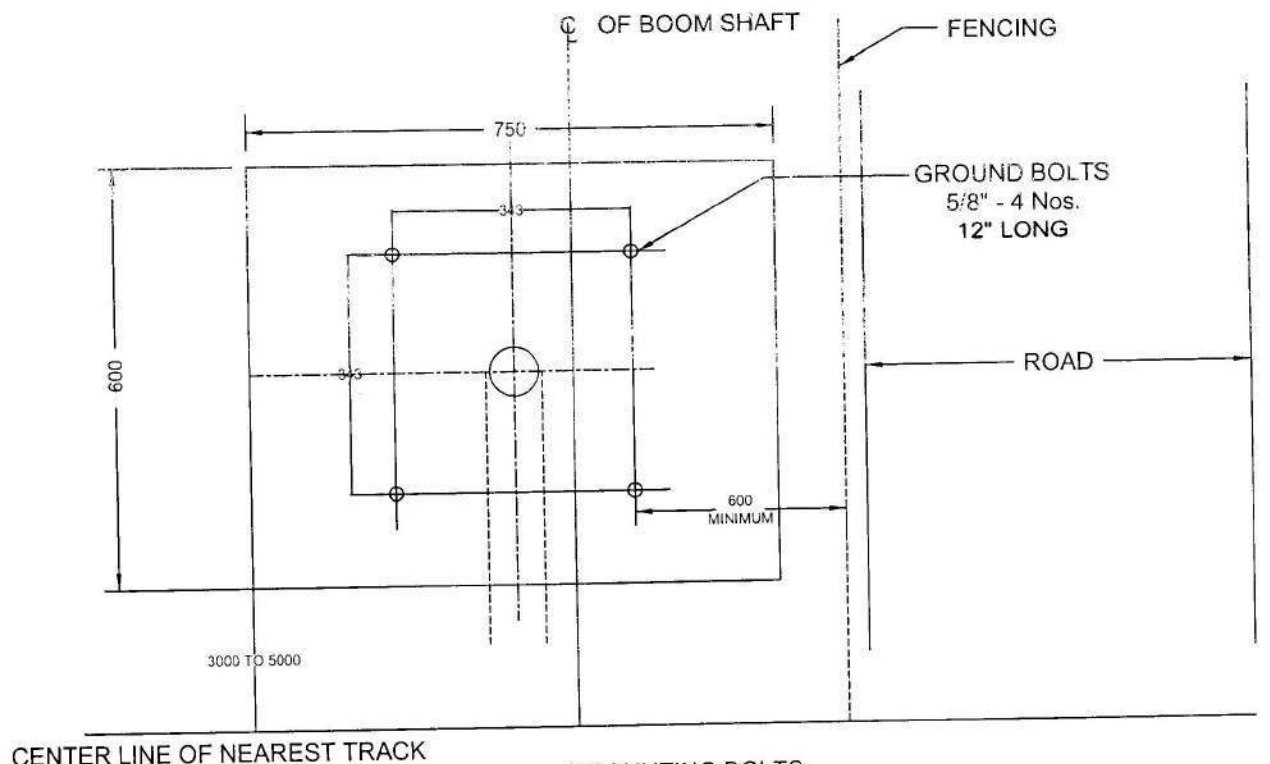
PRESSURE SENSITIVE TYPE RETRO REFLECTIVE SHEET HIGH INTENSITY  
GRADE WHITE WITH IMPRINTED NUMBER / ALPHABET IN BLACK  
WITH FILM THICKNESS 0.3 mm  
TOLERANCE AS PER APPLICABLE  
NOTE :- ALL DIMENSIONS ARE IN mm

# SM TABLE WITH DUAL VDUs






NOTE:-

1. FOR BIGGER YARDS, NUMBER OF VDUs MAY BE INCREASED.
2. FOR JUNCTION STATIONS, NUMBER OF BLOCK INSTRUMENTS MAY BE MORE THAN TWO VDU TABLE SIZE TO BE MODIFIED TO SUIT ABOVE.
3. ALL DIMENSIONS ARE IN MM.

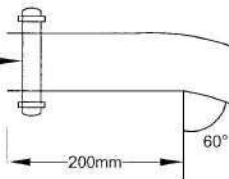


# **NOTES:-**

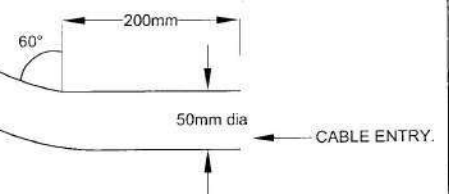
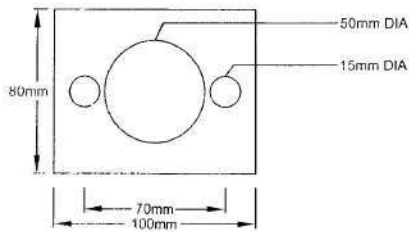
- (1) ALL DIMENSIONS ARE IN mm. DRG. IS NOT TO SCALE.
- (2) TOP OF FOUNDATION TO BE KEPT AT 200 MM BELOW RAIL LEVEL HOWEVER MUST BE KEPT 200MM ABOVE ROAD LEVEL IN CASE THE DIFFERENCE BETWEEN ROAD AND RAIL LEVEL IS MORE THAN 400MM IT SHOULD BE EQUALLY DIVIDED.

 21.11.15	 25.11.15	APPROVED:  25.11.15	WEST CENTRAL RAILWAY (S&T)
SSE/D/BPL	DSTE/C/BPL	Dy.CSTE/C/BPL	LIFTING BARRIER FOUNDATION
			DRG. NO :Dy.CSTE/C/BPL/012

SECTION 'A'  
5 mm PLATE WITH 15 MM DIA  
TWO HOLE & NUTS + BOLTS.






FIXING PLATE 5 mm THICK



NOTE:-

- 1) ALL DIAMENTION ARE IN mm
- 2) SECTION 'A' G.I. PLATE WELDED IN G.I. PIPE FOR FIXING IN POINT MACHINE.
- 3) 'B' CLASS ISI MARK G.I. PIPE ONLY SHOULD BE USED.

 21.11.15	 25.11.15	APPROVED:  26.11.15	WEST CENTRAL RAILWAY (S&T)
			G.I. BEND PIPE FOR POINT MACHINE CABLE ENTRY 50mm DIA & 1200mm LONG WITH WELDED PLATE FIXED AT ONE END
SSE/D/BPL	DSTE/C/BPL	Dy.CSTE/C/BPL	DRG. NO :Dy.CSTE/C/BPL/011