

East Central Railway

Office of the
General Manager(Fngg.)/Hajipur

PCE's Circular No.- 35/2009/Works **Sub. : Land boundary demarcation**

The ownership of all land held by the Railway vests in the Central Government. Hence it is the duty of every Railway Administration to preserve unimpaired, the title to all land in its occupation and to keep it free from encroachment. Therefore it becomes important to adequately and properly demarcate the land boundaries and verify them at regular intervals.

Senior Divisional/Divisional Engineers shall be responsible to ensure that records of title are carefully preserved and kept upto date by noting all changes on the copies of authorised land plans in their possession. All land plans should show complete dimensions preferably with boundary pillars and their numbers.

Vide para 1048 of Engineering Code, every Zonal Railway Administration is responsible for the demarcation and periodical verification of the boundaries and maintenance of proper records in connection with land in the possession of that Railway. Railway land boundaries are to be demarcated as per stipulations contained in para 1047 of Engineering Code. In case of detached marks such as boundary pillars, the centre to centre distance should not be greater than 50m.

Normally the boundary pillars shall be used for demarcation of Railway boundary in order to bring uniformity. The detailed cross-section of these pillars shall be as per the drawing attached and marked as 'Annexure A'. The pillars shall be pre-cast, made of M20 grade concrete. Notching at the top of the boundary pillar shall be done as shown in drawing to show the direction of boundary line. The total length of the pillar shall be 1.25m. out of which 0.75m. shall be embedded properly in soil. A suitable earth auger shall be used to make the foundation hole into which the boundary pillar shall be fixed and then the earth shall be rammed back in position. The portion projecting above the ground level shall have clear engraving of "पू म रे" on the side facing the track. The top of the pillar shall be painted red and the remaining portion projecting above the ground shall be white washed. The letters shall be painted in black. The posts shall be fixed squarely, the outside face representing the boundary.

It is seen that many unserviceable concrete sleepers are lying in the mid-section which are not suitable for using those in track. In order to ensure their proper use, it would be appropriate that these are also used as boundary pillars for demarcating land boundary. A suitable earth auger shall be used to make the hole in the ground into which the boundary pillar shall be

fixed and then the earth shall be rammed back in position. Fixing shall be done in such a manner that about 1500 mm length of concrete sleeper is embedded in the ground. The flat face (bottom of sleeper) shall be kept towards the track. The letters "पू १३" shall be painted on this flat face as shown in the drawing attached and marked as 'Annexure B'. The top 150 mm of the sleeper shall be painted red and the remaining portion projecting above the ground shall be white washed. The letters shall be painted in black. The sleepers shall be fixed squarely, the outside face representing the boundary.

Boundary pillars should be fixed at every point of change of alignment. In hilly country and for sharp curves, each pillar shall be so placed that it can be observed from the adjoining pillar on either side. High boundary pillars on each bank of rivers or important waterways crossed by Railway bridges shall be erected so as to prevent and control encroachments. Land within this boundary should never be surrendered.

Verification of boundary pillars shall be done by Section Engineer (P-way/ Works) following the provisions of para 813 & 809 of Indian Railway Works Manual.

In areas having habitation adjacent to railway land and also where habitation is likely in near future, boundary walls should be provided, so that potential encroachments are prevented and outsiders do not develop any right of entry on railway land. Construction of boundary walls and fencing may be taken up as per instructions contained in para 811 of Indian Railway Works Manual. However in such areas where construction of boundary wall may take some time, boundary pillars should be provided as an interim measure. The spacing of such pillars should be kept as under:

- a) For thickly/dense populated built-up areas - 20m.
- b) For moderately populated built-up areas - 30m.
- c) For other areas - not more than 50m.

This has got the approval of PCE.

DA: As above.

Unal
10-06-09
(V. Kumar)

Chief Engineer/Works

Date- 13.08.09

Docket No. W-2/118/09/Works Policy/ 1244

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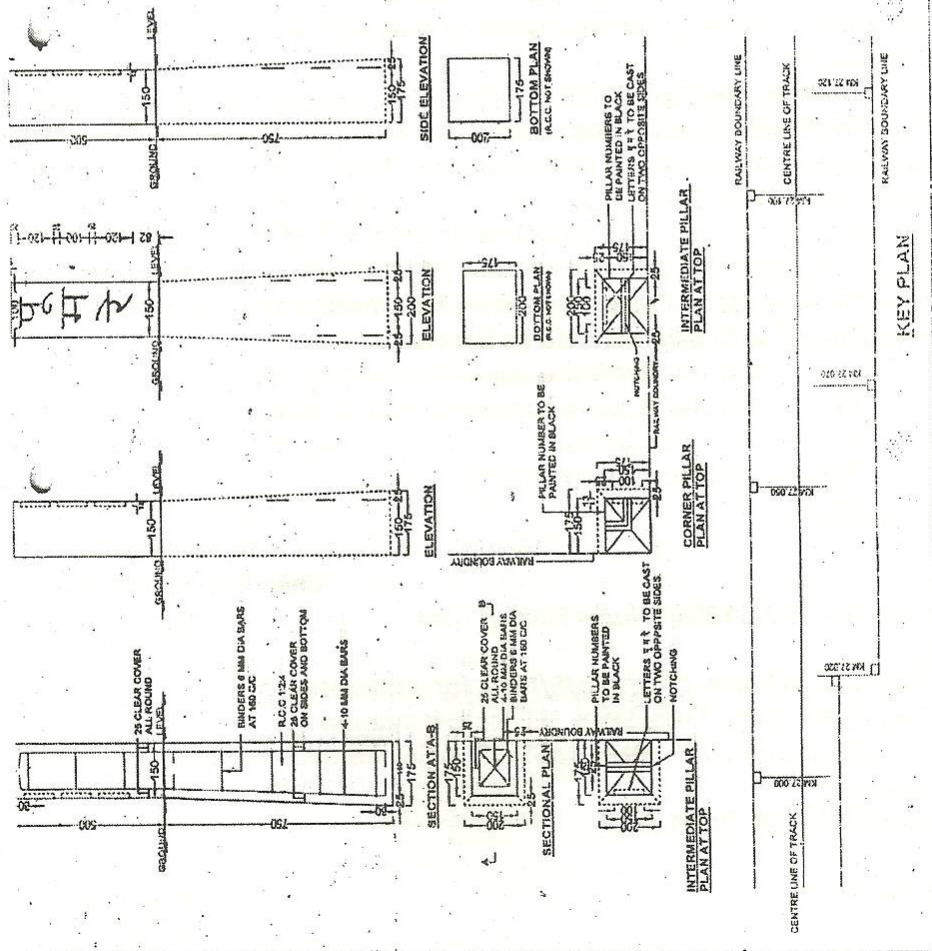
1. CAO/Con/N/MHX, CAO/Con/S/MHX for information pl.
2. DRM/DNR, DHN, MGS, SPJ & SEE for information pl.
3. Sr. DEN/Co-ord./DNR, DHN, MGS, SPJ & SEE for information and necessary action pl.
4. All HOD/ Engg. Deptt./ECR

DA: As above.

Niraj Kumar
10-06-09
(Niraj Kumar)
Dy. CE/ Works/HJP

ANNEXURE 'A'

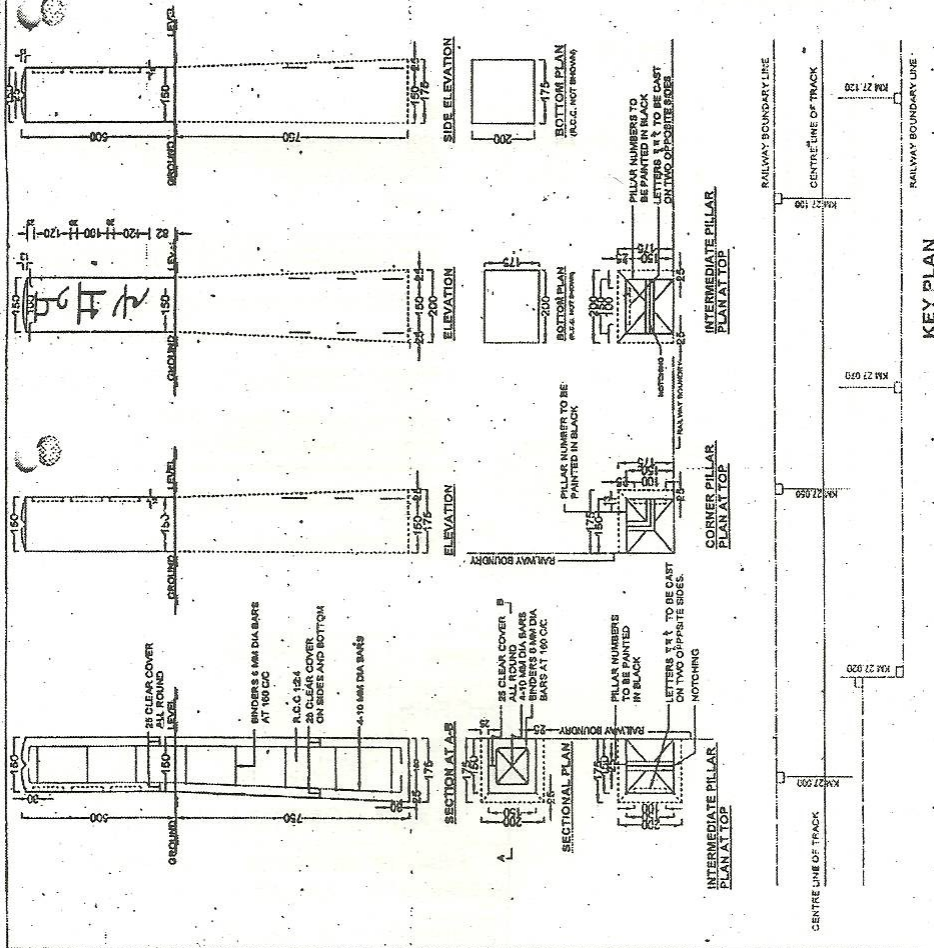
- NOTE:**
- BOUNDARY PILLAR SHOULD BE PLACED IN A MANNER SO THAT THE BOUNDARY OF THE LAND IS CLEARLY DEFINED. THE PILLAR SHOULD BE PLACED AT THE CORNER OF THE LAND OR AT THE POINT OF CHANGE OF DIRECTION OF THE BOUNDARY. EACH CASE BE TAKEN IN A STRAIGHT LINE FROM THE OUT SIDE OF ONE PILLAR TO THE OUT SIDE OF THE OTHER.
 - BOUNDARY PILLARS IN NO CASE TO BE ADDED GREATER DISTANCE THAN 100 M.
 - BOUNDARY PILLARS SHOULD BE PLACED AT EVERY POINT OF CHANGE OF ALIGNMENT IN RAILWAY COUNTRY AND FOR SHARP CURVES EACH PILLAR SHOULD BE SO PLACED THAT IT CAN BE OBSERVED FROM THE ADJOINING ONE ON EITHER SIDE.
 - THE BOUNDARY PILLARS SHOULD BE FIXED SQUARELY THE OUT SIDE FACE REPRESENTING THE BOUNDARY WITH THE LETTERS FACING THE ADJACENT LAND.
 - THE LETTERS 'T & R' TO BE ON THE SIDE FACING THE TRACK.
 - NOTCHING AT TOP OF BOUNDARY PILLARS AS SHOWN TO INDICATE DIRECTION OF BOUNDARY LINE TO BE PRECAST ALONG WITH THE PILLAR.
 - A SUTABLE EARTH MOUND SHOULD BE USED TO MAKE THE FOUNDATION FIRM IN TO WHICH THE BOUNDARY PILLAR SHOULD BE PLACED AND EARTH MOUND BACK INTO POSITION.
 - TOP OF THE BOUNDARY PILLAR SHALL BE PAINTED RED AND THE REMAINING PART SHALL BE PAINTED WHITE.
 - ALL DIMENSIONS ARE IN METERS EXCEPT WHERE SPECIFIED.
 - POSITION AND NUMBERS OF ALL BOUNDARY PILLARS TO BE ACCURATELY SHOWN ON LAND PLANS WITH DISTANCE AND SIDE WIDTHS MARKED AS INDICATED IN KEY PLAN.
 - THIS DRAWING IS BASED ON N. R. H.Q. PLAN NO. 10104-43



CPDE	Wahle
Dy.C.E/P/g	By
DRAWN BY	Wahle
CHECKED BY	Wahle
EAST CENTRAL RAILWAY	
STANDARD DRG. OF LAND DEMARCATION BOUNDARY PILLAR	
C.E.'S DRG. NO. - 41 - 71 - 2009 (2nd-I)	

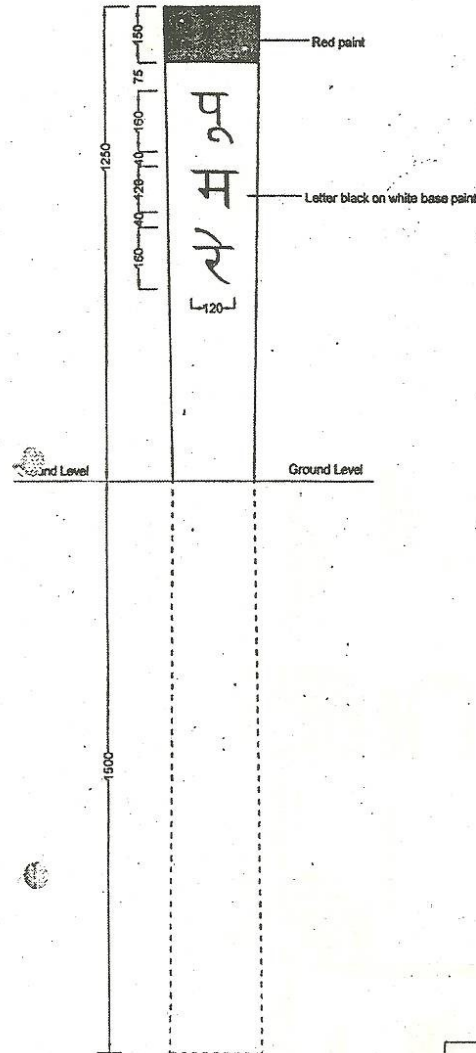
ANNEXURE - A

- NOTE:**
- BOUNDARY PILLAR SHOULD BE FIXED IN A MANNER SO THAT THE BOUNDARY OF THE RAILWAY LAND WILL PASS ALONG THE OUT SIDE OF EACH PILLAR BOUNDARY IN EACH CASE BE TAKEN IN A STRAIGHT LINE FROM THE OUT SIDE OF ONE PILLAR TO THE OUT SIDE OF THE NEXT PILLAR.
 - BOUNDARY PILLARS IN NO CASE TO BE ADDED GREATER DISTANCE THAN 50 M CC.
 - BOUNDARY PILLARS SHOULD BE FIXED AT EVERY POINT OF CHANGE OF ALIGNMENT THAT IS AT AN INTERSECTION AND FOR SHARP CURVES EACH PILLAR SHOULD BE SO PLACED THAT IT CAN BE OBSERVED FROM THE ADJOINING ONE ON EITHER SIDE.
 - THE BOUNDARY PILLARS SHOULD BE FIXED SQUARELY THE OUT SIDE FACE OF THE PILLAR SHOULD BE WITH THE LETTERS FACING THE RAILWAY LINE.
 - THE LETTERS 'R' & 'L' TO BE ON THE SIDE FACING THE TRACK.
 - NOTCHING AT TOP OF BOUNDARY PILLAR, AS SHOWN TO INDICATE DIRECTION OF BOUNDARY IT TO BE PRESENT ALONG WITH THE PILLAR.
 - A SUITABLE EARTH AUGUR SHOULD BE USED TO MARK THE FOUNDATION HOLE IN TO THE GROUND AND FOR SHARP CURVES EACH PILLAR SHOULD BE SO PLACED THAT IT CAN BE OBSERVED FROM THE ADJOINING ONE ON EITHER SIDE.
 - TOP OF THE BOUNDARY PILLAR SHALL BE PAINTED RED AND THE REMAINING PORTION PROJECTING ABOVE GROUND SHALL BE WHITE WASHED. THE LETTERS AND THE NUMBERS SHALL BE PAINTED IN BLACK.
 - ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT WHERE SPECIFIED.
 - POSITION AND NUMBERS OF ALL BOUNDARY PILLARS TO BE ACCURATELY SHOWN ON LAND PLANS WITH DISTANCE AND SIDE WIDTHS MARKED AS INDICATED IN KEY PLAN.
 - THIS DRAWING IS BASED ON N. K. D. PLAN NO. H2404-48



CPDE	W. 10/10/10
Dy.C.E/Pig	W. 10/10/10
DRAWN BY	W. 10/10/10
CHECKED BY	W. 10/10/10
BY	W. 10/10/10
EAST CENTRAL RAILWAY	
STANDARD DRG. OF LAND DEMARCATION BOUNDARY PILLAR	

ANNEXURE - B



NOTE :

1. BOUNDARY PILLAR SHOULD BE FIXED IN A MANNER SO THAT THE BOUNDARY OF THE RAILWAY LAND WILL PASS ALONG THE OUT SIDE OF SUCH PILLAR. BOUNDARY IN EACH CASE BE TAKEN IN A STRAIGHT LINE FROM THE OUT SIDE OF ONE PILLAR TO THE OUT SIDE OF THE OTHER
2. BOUNDARY PILLARS IN NO CASE TO BE PROVIDED AT GREATER DISTANCE THAN 50 M.
3. BOUNDARY PILLARS SHOULD BE FIXED AT EVERY POINT OF CHANGE OF ALIGNMENT IN HILLY COUNTRY AND FOR SHARP CURVES, EACH SLEEPER/PILLAR SHOULD BE SO PLACED THAT IT CAN BE OBSERVED FROM THE ADJOINING ONE ON EITHER SIDE.
4. THE BOUNDARY PILLARS SHOULD BE FIXED SQUARELY THE OUT SIDE FACE REPRESENTING THE BOUNDARY WITH THE LETTERS FACING THE RAILWAY LINE.
5. THE LETTERS 'H' 'H' 'H' TO BE PAINTED ON BOTTOM SIDES OF THE SLEEPER, ON THE SIDE FACING THE TRACK.
6. A SUITABLE EARTH AUGUR SHOULD BE USED TO MAKE THE FOUNDATION HOLE IN TO WHICH THE BOUNDARY PILLAR SHOULD BE PLACED AND EARTH RAMMED BACK INTO POSITION.
7. TOP 150 MM OF THE BOUNDARY PILLAR SHALL BE PAINTED IN RED AND THE REMAINING PORTION PROJECTING ABOVE GROUND SHALL BE WHITE WASHED. THE LETTERS AND THE NUMBERS SHALL BE PAINTED IN BLACK.
8. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT WHERE SPECIFIED.
9. POSITION AND NUMBERS OF ALL BOUNDARY SLEEPER/PILLARS TO BE ACCURATELY SHOWN ON LAND PLANS WITH DISTANCE AND SIDE WIDTHS MARKED AS INDICATED IN KEY PLAN.
10. UNSERVICEABLE SLEEPER SHOULD BE FIXED KEEPING THE OUTER MOST FACE OF SLEEPER ON LAND BOUNDARY OF RAILWAY.

CPDE	<i>Ug/LP/10</i>		
Dy.C.E./Plg.	<i>Pine</i>		
DRAWN BY	<i>Wishal</i> <i>15.10.07</i>	CHECKED BY	<i>K. S. S. S. S.</i>
EAST CENTRAL RAILWAY			
FIXING OF UNSERVICEABLE CONCRETE SLEEPERS FOR LAND BOUNDARY DEMARCATION			
C.E.'S DRG. NO. - A-91-2007 (Ph-11)			