SOUTH CENTRAL RAILWAY

Head Quarters Office
Works branch
Rail Nilayam
Secunderabad

No. W.351/Platforms/System Improvement Date: 17-03-2022

DRMs SC, BZA, GTL, GNT, HYB, NED.

Sub: Drawing for Passenger Platform Flooring with Vacuum Dewatered Concrete – reg.

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A Soft copy of the approved drawing bearing No. **GM/W/SC/PF FLOORING/VDC/71/2022** for Passenger Platform Flooring with Vacuum Dewatered Concrete is sent herewith for information and necessary action.

Encl: PDF Drg through mail.

(M. Subash) 17/3/2022.
Dy. Chief Engineer/P&D
for Principal Chief Engineer

Copy to:

CAO/C/SC, CPM/RVNL/SC, CPM/RVNL/BZA , CPM/RVNL/MAS & GGM/RITES/SC
- Copy of drg bearing No GM/W/SC/PF FLOORING/VDC/71/2022 is enclosed herewith for information and adoption henceforth for all the works.

Sr. DEN/Co-Ord/SC, BZA, GTL, GNT, HYB, NED for information and necessary action.

Encl: PDF Drg through mail.

(Mail List over leaf)

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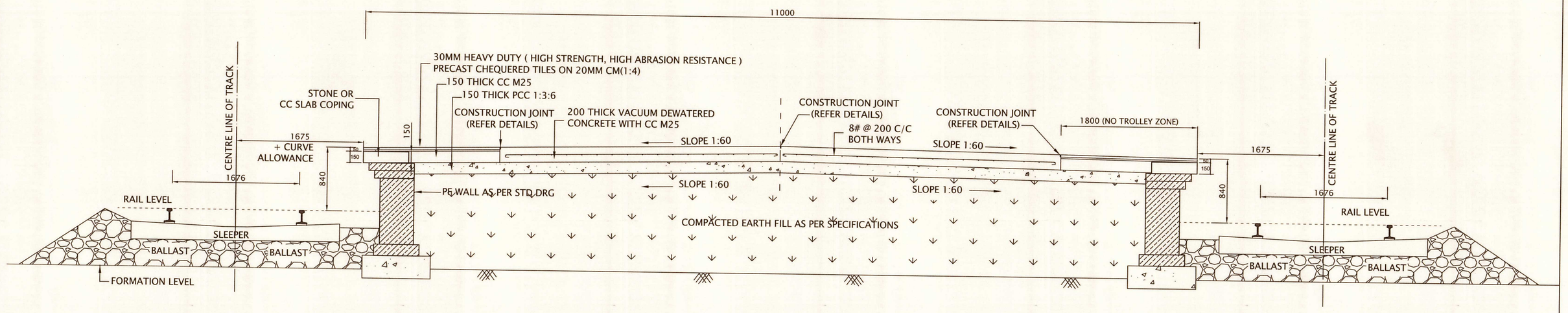
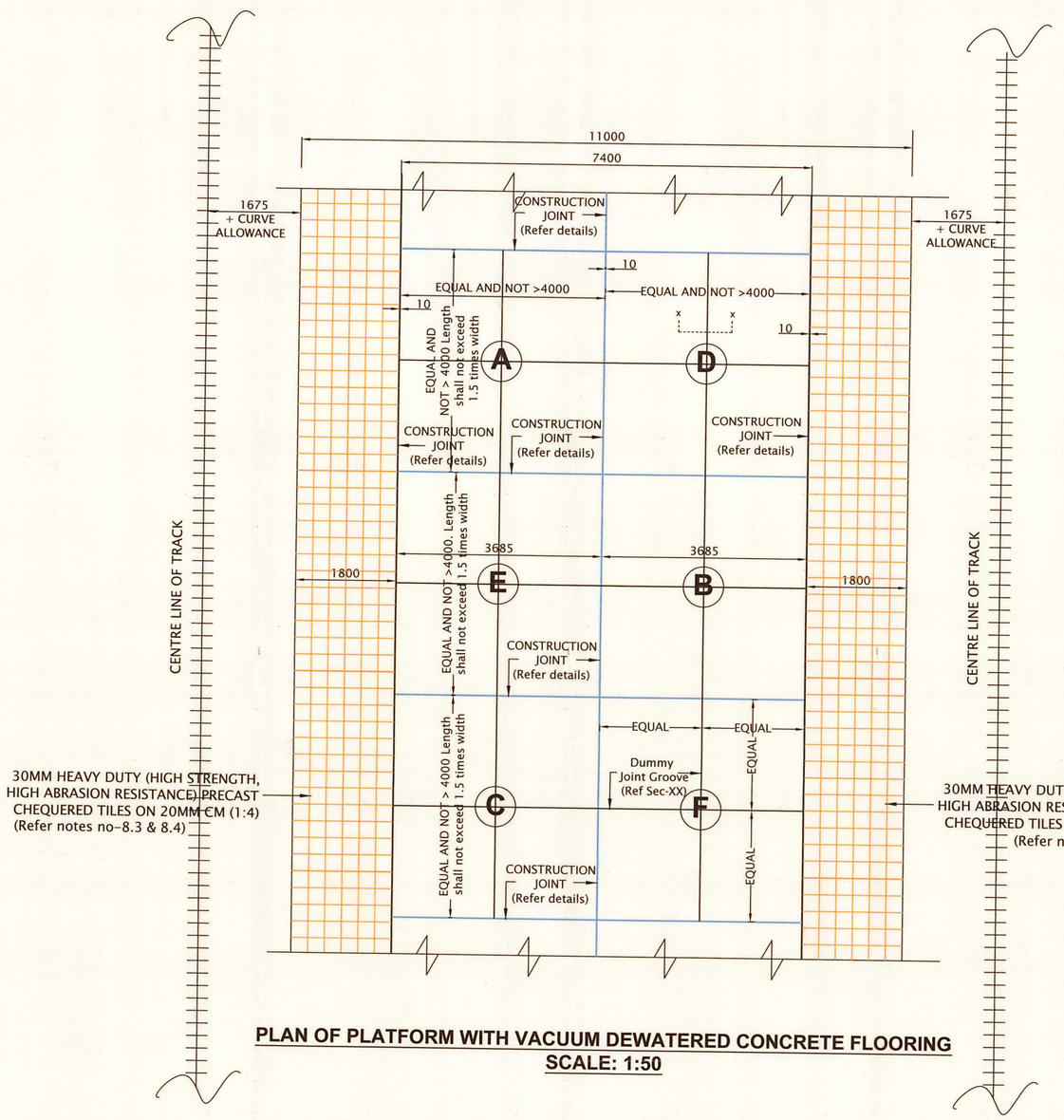
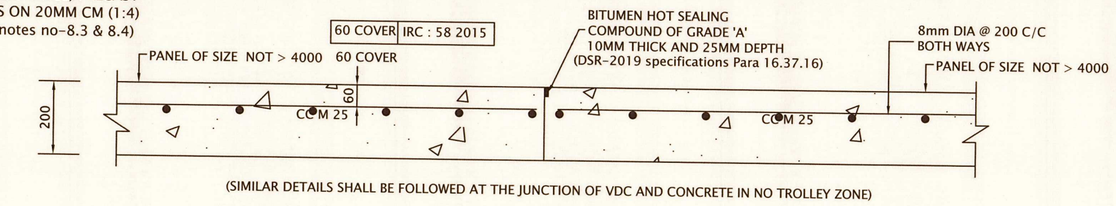


TYPICAL DETAILS OF PLATFORM WITH VACUUM DEWATERED CONCRETE FLOORING
SCALE 1:25



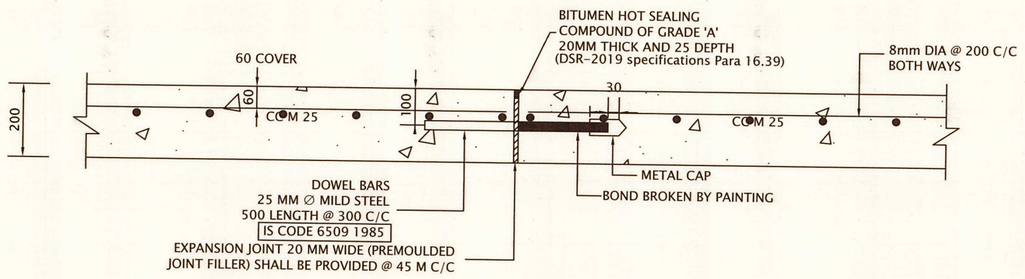
PLAN OF PLATFORM WITH VACUUM DEWATERED CONCRETE FLOORING
SCALE: 1:50

DUMMY JOINT GROOVE
ENLARGED SECTION
@ X-X



(SIMILAR DETAILS SHALL BE FOLLOWED AT THE JUNCTION OF VDC AND CONCRETE IN NO TROLLEY ZONE)

DETAILS OF CONSTRUCTION JOINT
SCALE 1:10



DETAILS OF EXPANSION JOINT
SCALE 1:10

NOTES

1. All dimensions are shown in millimetres unless otherwise specified.
2. All civil engineering works related to building works, road works & horticulture works shall confirm to CPWD specifications vol. 1 & 2 circulated vide CE/Works lr. no. scr-hqoengg(sor)/18/2019-DYCE/works/scr dtd. 26.02.2020
3. For plain and reinforced concrete, IS 456-2000 shall be followed.
4. Tor steel shall confirm to IS 1786-2008. Mild steel shall confirm to IS. 432:1982
5. Platform wall shall be constructed as per the HQ Drg bearing No. GM/W/SC/PF WALL/70/2022.
6. The position of trenches and pipes for services such as water and drainage, heating, electric supply and telephones etc, must be fixed before floor concrete starts.

7 SUB-BASE

7.1 The ground or earth filling should be thoroughly compacted so that there are no loose pockets left any where in the whole area, maintaining desired slope.Earth filling shall be watered and rammed in 15cm layers.

7.2 A slope of 1 in 60 away from centre of the platform upto coping on either side for island platform shall be provided. In case of single face platform, a slope of 1 in 60 away from the coping shall be provided to ensure proper drainage.

7.3 150mm thick PCC 1:3:6 shall be laid over a compacted earth filling.

8. NO TROLLEY ZONE (1.8m)

8.1 CC-M25 shall be laid over sub-base to a width of 1.20m from the edge of coping stone (600mm) duly providing the reinforcement as shown in the drawing.

8.2 Before placing the concrete, sub-base should be properly wetted.

8.3 Platform flooring shall be laid over coping slab with 30mm Heavy duty(High strength, High Abrasion resistance) precast chequered tiles over 20mm thick mortar 1:4 for NSG 1 to NSG 4 (old A1, A & B category), SG1, SG2, SG3 (old C category) category of stations with a slope 1 in 60 as mentioned in note-7.2.

8.4 Platform flooring shall not be laid over coping slab for NSG5 & NSG6 (old D&E category), HG1, HG2, HG3 (old F category) category of stations.

9 VDC FLOORING

9.1 Before placing the concrete, sub-base should be properly wetted.

9.2 All CC works shall be of design mix of M-25 grade as per IS Code 456-2000, with cement content of 310-360 KG/Cu.m and maximum water cement ratio as 0.45.

9.3 The area to be paved shall be divided into suitable panels. No dimension of a panel shall exceed 4 m. Length of a panel shall not exceed 1.5 times its breadth.

9.4 Straight MS -C Channels (200mm) used as form work shall be placed carefully and levelled to ensure flatness and slope of platform. Bottom edge of the channel shall be sealed properly to prevent leakage of cement slurry.

9.5 200mm thick Concreting with vacuum dewatering process shall be done in alternate panels viz., A, B, C etc., duly providing MS C channels (200mm size) as formwork on day-1 and in remaining panels viz., D, E, F etc. on day-2 with a slope as shown in drawing.

10 CONSTRUCTION JOINT

10.1 The construction joint shall be butt type, straight and vertical to the full thickness of the slab while concrete in adjacent bay is still green, flats of suitable size shall be drawn along the edge and groove of size 10mm x 25mm deep shall be neatly formed and finished.

NOTES Continued:

10.2 Bitumen hot sealing compound of Grade 'A' shall be filled in groove of size 10mmx25mm after curing period.

11 EXPANSION JOINT (EJ)

11.1 EJ of width 20mm shall be provided at every 45m across the width of PF. (IS 6509-1985).

11.2 MS C Channels used as shuttering shall have holes in each interval of 300mm for provision of Dowel bars.

11.3 Dower bars shall be provided as shown in drg.

11.4 Before the provision of EJ, the face of the already laid concrete slab shall be painted with primer. The Expansion pad shall be properly cut to shape and shall then be place in position abutting the painted face of already laid concrete slab. The adjacent slab then be concreted. The face of the pad against which the new concrete slab is to be laid shall also be painted with primer before laying the concrete, while concreting a neat groove of size 20mm x 25mm shall be formed on top of the pad as shown in the drawing.

11.5 Bitumen hot sealing compound of Grade 'A' shall be filled in Groove of size 20mm x 25mm, in expansion joints as shown in drawing after curing period.

12. DUMMY JOINT

12.1 Dummy Joint groove of size 10mm wide and 40mm deep shall be formed by depressing with high tensile MS or other approved Tee or flat bar of depth not less than required depth of the joint (40mm) while the concrete is green making sub-panels of size 2mx2m approximately as shown in drawing.

12.2 Dummy Joint grooves shall be filled with backer rod and Bitumen hot sealing compound of Grade 'A' as shown in drawing.

13. All the grooves shall be thoroughly cleaned and shall be perfectly dried and the faces of concrete joints shall be coated with primer of approved brand, before filling the joints with sealing compound.Bitumen emulsion shall not be used as primer.

14. All Joints shall be sealed as soon as practicable after 28 days of casting CC pavement. All joints shall be sealed flush with the adjacent pavement surface when work is carried in summer and 3-4mm below finished concrete surface in winter.

15. Regular traffic on the floor should be allowed only after 28 days, after all joints are sealed. (IS 2571-1970).

16. The guidelines furnished in hand book on Vacuum Dewatering Concrete Flooring by RDSO vide Document number CAMTECH/2021/C/VDF/1.0Feb-2021, shall be followed for details not covered in this drawing.

17. Type of PF flooring at stations depends on the category of the station. RDSO guidelines (WKS/WS/05/FS Dated. 22-09-2009) on Flooring standards for platform to be followed as per the instructions of Railway Board vide lr. No.2018/LM/PA/03/06 Dtd. 09-04-2018 and the same was re-iterated by PCE office vide lr. No. 351/Platforms/System Improvement dtd. 06-01-2022.

18. VDC for workshop flooring shall be followed as per the guidelines issued by the RDSO vide lr no WKS/WS/05/FS dtd 10-01-2013.

CE/P&D	G. BRAHMANANDA REDDY 12/3/2022
DY. CE/P&D	M. SUBASH 17/3/2022

SOUTH CENTRAL RAILWAY
HEAD QUARTERS OFFICE, SECUNDERABAD

PASSENGER PLATFORM FLOORING WITH VACUUM DEWATERED CONCRETE

CAD DRAWN BY	P. AMARENDER SSE/DRAWINGS	P.Amar
DRAWING CHECKED BY	J. SRINIVAS SSE/DRAWINGS	J.S

SCALE :- AS SHOWN

H.Q. OFFICE DRG.NO. GM/W/SC/PF FLOORING/VDC/71/2022