

ACKNOWLEDGEMENT

The Central Planning Organization takes this opportunity to express hearty thanks to the Sr.DEN/Co-Ord/HYB & other officials and Inspectors of Engineering Department and Sr.DPO/HYB & other officials and staff of Personal department of HYB Division for their valuable guidance and co-operation in extending their support by giving necessary information/statistical data.

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METHODOLOGY

The Work Study department has applied the following techniques for completion of the Work Study.

1. Collection of the details of workload.
2. Interaction with the Officers and Staff.
3. Critical examination of the existing system of working and
4. Assessment of manpower required for the existing work load

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SYNOPSIS

- Subject: Review Of Staff Strength Of Engineering Department Over Hyderabad Division.
- Authority: Annual Programme of Work Studies 2019-20.
- Study No: WSSCR-02/2019-20.
- Reference File No: G.276/2/WSSCR-02/ 2019-20.
- Area of Activity: Engineering Department over Hyderabad Division.
- As per the directives of SDGM, the Central Planning Organisation of South Central Railway has taken up Work-study on "Review of staff strength of Engineering department over Hyderabad Division".
- **Application of Benchmarking Norms:** Benchmarking is based on dynamic and comparative analysis and is a very useful tool to manage efficient deployment of staff and monitor effects of improvement in working practices, use of new technologies and level of outsourcing. Board in successive meetings has directed all units to achieve average of Indian Railway Benchmark.
- **March-2019 IR average and Bench Marking of HYB divn is as follows.**

Organization	MPR of HYB	IR avg MPR	Benchmark MPR
P.Way	1.33	1.28	0.65
Buildings	0.21	0.18	0.04
Bridges	0.07	0.11	0.02

- P.Way and Building organization of Engineering department over HYB division are above IR average, where as the Bridges organisation is below IR average.
- Major changes have taken place in the working system of Engineering department, as several works are being done on zonal contract. Many works have been outsourced. In the P.Way wing & Works wing several works are being outsourced such as track maintenance works.
- The Work-study team made an analysis on the requirement of staff based on the following references:
 - a) As per Railway board letter no.2011/E&R/2800/Rly.imp.vol VI/ (Corr) dated 09.06.2016 to bring down the manpower ratios for activities which are above the IR average atleast to the current IR average.
 - b) No. of activities under out sourcing in Engineering organization.
 - c) Recommendation to surrender due to the posts lying vacant.

➤ **Work load of P.Way wing of Engineering department:**

S.No.	ADEN	SSE/SE/P W	Route Km	Track Km	ETKM	ITKM
1	KCG	MED	95.13	108.83	198.23	460.89
2		KCG	94.61	108.15	200.49	
3	KRNT	MBNR	91.94	91.94	155.03	471.60
4		KRNT	108.45	108.45	194.12	
5		GWD-RC Line	55.61	55.61	59.12	
6	NZB	NZB	98.35	98.35	164.42	361.42

7		UMRI	79.1	79.1	128.99	
8	ADEN/I/HYB		623.19		0	1095.04
9	ADEN/II/HYB				0	725.94
10	ADEN/BRIDGE				0	242.00
11	DEN/LGD				0	80.55
		Total			1100.4	3437.44

- **Requirement of Manpower of P.Way and Works organisations as per IR average:**

P.WAY	
IR Average of March-2019	1.28 men per ETKM
Total ETKM	1100.4
Requirement of manpower =IR average x ETKM	1100.4x1.28 =1408.5 say 1409
Total sanctioHYB staff in P.way	2059
Staff excess to the requirement	2059-1409 = 650 staff
WORKS	
IR Average of March-2019	0.18 men per ITKM
Total ITKM	2143.53
Requirement of manpower =IR average x ETKM	2143.53x0.18 = 385.83 say 386
Total sanctioHYB staff in Works	713
Staff excess to the requirement	713-386 = 327
Total staff excess to the requirement in P.way + Works	650+327 = 977

- For operational convenience the total section is divided in to units, which are controlled by SSE and each SSE unit is further divided in to small gang units. Each gang unit will be responsible for maintainance of 6-7 track kilometers. Sectional track kilometers and no. of gang units in each gang unit of the Hyderabad Division is as follows:

S No	SSE section	Section length IN KMs	No.gang units
1.	KCG	110	19
2.	MBNR	91.8	14
3.	KRNT	162.8	46
4.	MED	120	19
5.	NZB	100	16
6.	UMRI	80	13
	Total	664.6	127

- **Unit wise SAVE position of Trach Maintainers:**

S No	SSE/Unit	San	Act	vac
1	KCG	306	250	56
2	MBNR	285	203	82
3	KRNT	342	231	111
4	MED	302	238	64
5	NZB	244	160	84
6	UMRI	192	138	54
	TOTAL	1671	1220	451

➤ **Requirement of Track Maintainers as per Practical observation in Engineering Organisation of HYB Division:**

- Total track kilometers in HYB division = 623.19Km
- Total SSE Units in HYB Division = 6 units
- Total no. of Gang Units = 127
- Each Gang unit has 6-7 track kms of track to maintain.
- To maintain 6-7 Track kilometers 11 track Maintainers are required.
- LR 12.5% = $11 \times 12.5\% = 1.34$ say 2
- Total requirement of Track Maintainers for each gang unit = $11 + 2 = 13$
- Hence requirement of Track maintainers for 127 gang units = $13 \times 127 = 1651$
- Total sanctioned posts of Track Maintainer = 1713
- Requirement of Track Maintainers = 1651
- Excess to the requirement = $1713 - 1651 = 62$

➤ Comparative statement of staff requirement:

	Total staff	Staff required	Excess
As per IR Average	2772 (P.Way+ Works)	1795	977
As per Practical observation	1713 (Track Maintainer)	1651	62

- From the above, it is observed that staff excess to the requirement as per the Indian Railway Average Benchmarking is 977 and as per Practical observation is 62 track Maintainers. For convenience of the department and to bring down the organisation nearer to the Indian railway Average benchmarking gradually, the work study team considered Practical observation.
- In view of the above, the following recommendation is made.
Recommendation: It is recommended to surrender 62 vacant posts of Track Maintainer which are excess to the requirement in Engineering Organisation.

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1.0 INTRODUCTION:**1.1 RAILWAY'S ROLE:**

Indian Railways is a premier transport service provider to the nation and is vested with the responsibility of carrying bulk of freight and passenger traffic across the country at rates affordable for public. The Indian Railways operates through 18 Zones with 73 Divisions to serve the above objective and its operations cover twenty nine states and seven union territories.

1.2 GENESIS OF THE REPORT: Engineering Department consists of three organizations namely Permanent way, Works, and Bridges. The prime job of engineering department is to keep on maintaining the track in good fettle from beginning to the end, which is done by Permanent way. Works Organisation maintains the Railway properties such as buildings, stations etc and looks after the passenger amenities at station, supply of water to Railway Colonies & stations, and maintains the sewage lines, roads & premises of Railway colonies etc. Bridge Organisation constructs and maintains Railway Bridges where Railway Track is available.

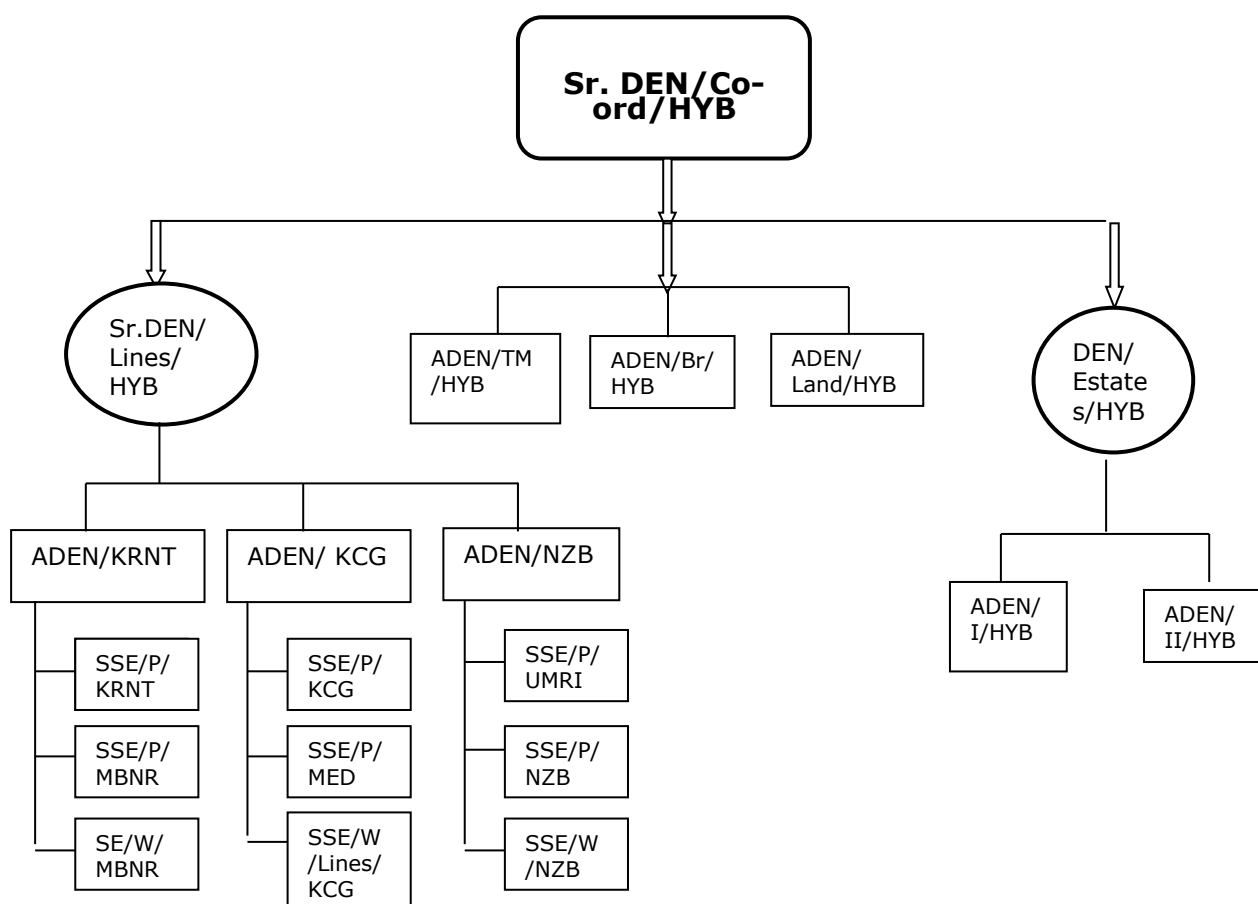
1.3 Civil Engineering infrastructure is the largest static infrastructure of Indian Railways comprising of track, bridges, land, etc. Management of this huge infrastructure has to be done in accordance with the organization's vision. Civil engineering department of Indian Railways manages and maintains all these infrastructures. Further, it has key role in the area of infrastructure development, technological leap in various fields, high-speed travel and development of world-class stations.

1.4 In view of the above, the Central Planning organization under the control of SDGM conducted work-study on Review of Staff Strength of Engineering department over HYB Division of South Central Railway.

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2.0 EXISTING SCENARIO:

- 2.1 ORGANISATION:** For the administrative convenience, Civil Engineering Department of Hyderabad Division is headed by Sr. DEN/co-ord and assisted by Sr.DEN/ Lines/HYB, DEN/ Estates/HYB. In turn, Sr.DEN and DEN are assisted by ADENs and SSEs/SEs/JEs.
- 2.2** For the administrative convenience and close supervision/inspection, total KM over the division has been divided into small segments as far as practicable and kept under the control of Sr. Section Engineers, who are also responsible for their jurisdictions. These SSEs are controlled directly by ADENs posted at suitable places, so that coordination will be easy .These ADENs are answerable to Sr.DEN/DENs for their respective jurisdiction who are normally placed at division Headquarters which are detailed in the chart below:



2.3 **SSE/SE/JE's**

The list of SSE/SE/JE's are working under the control of the respective ADENs as follows.

SSE/P.Way/KRNT	SSE/Works/MBNR	SSE/Works/RN
SSE/P.Way/MBNR	SSE/Works/L/KCG	SSE/Works/S.LGD
SSE/P.Way/KCG	SSE/Works/NZB	SSE/Works/N.LGD
SSE/P.Way/UMRI	SSE/Works/DIVN	SSE/Works/WW/LGD
SSE/P.Way/MED	SSE/Works/GOC	SSE/Works/Garden/LGD
SSE/P.Way/NZB	SSE/Works/W/MLY	JE/Works/IRISET/SC
	SSE/Works/KCG	SSE/TM/BMO
	SSE/Works/CKL	SSE/P/USFD/BMO
	SSE/Works/WW/SC	SSE/PWD/MLY
	SSE/Works/WS/LGD	SSE/Br/HYB

2.4 **Route Kilometers of HYB Division:**

SSE/Section	Details
MED	95.13
KCG	94.61
MBNR	91.94
KRNT	108.45
GWD-RC	55.61
NZB	98.35
UMRI	79.1
Grand Total	623.19

2.5 **SCALE CHECK:** The consolidated Scale check of Staff of Civil Engineering (safety)/HYB as on 01.04.2019 is furnished below:

S No	Dept	Category	San	Act	Vac
1.	Engg/bridges	SSE	3	2	1
2.	Engg/bridges	JE	1	1	0
3.	Engg/bridges	Instructor	4	6	-2
4.	Engg/bridges	Tech BS	0	1	-1
5.	Engg/bridges	Tech.Riviter	3	3	0
6.	Engg/bridges	Tech Erector	6	5	1
7.	Engg/bridges	Helper Bridges	15	9	6
8.	Engg/bridges	SFC	1	1	0
9.	Engg/P.Way	SSE	32	29	3
10.	Engg/P.Way	JE	20	16	4
11.	Engg/P.Way	SSE/USFD	3	3	0
12.	Engg/P.Way	JE/USFD	2	1	1

13.	Engg/P.Way	SSE/TTM	30	25	5
14.	Engg/P.Way	JE/TTM	12	3	9
15.	Engg/P.Way	Tech. Welder	18	5	13
16.	Engg/P.Way	Tech.TMO	59	37	22
17.	Engg/P.Way	Tech BS	30	11	19
18.	Engg/P.Way	SSE/JE/WORKS	35	30	5
19.	Engg/P.Way	Track Maintainer	1713	1258	455
20.	Engg/P.Way	Helper/TM	47	18	29
		Total	2034	1464	570

2.5.1 SCALE CHECK: The consolidated Scale check of Staff of Civil Engineering (non-safety)/HYB as on 01.04.2019 is furnished below

S No	Dept	Category	San	Act	Vac
1.	Engg/Works	SSE/Drg	8	8	0
2.	Engg/bridges	JE/Drg	6	7	-1
3.	Engg/Works	Ministerial	48	46	2
4.	Engg/Works	Tech /Carpenter	50	28	22
5.	Engg/Works	Tech/Mason	79	64	15
6.	Engg/Works	Tech/MT Driver	1	1	0
7.	Engg/Works	Tech/Painter	16	11	5
8.	Engg/Works	Tech/Plumber	43	37	6
9.	Engg/Works	Chowkidar/watchman	12	12	0
10.	Engg/Works	Peons	14	8	6
11.	Engg/Works	Luskar	10	8	2
12.	Engg/Works	Safaiwala	0	5	-5
13.	Engg/Works	Mali	59	43	16
14.	Engg/Works	Sr.Instructor/Civil	2	2	0
15.	Engg/Works	Instructor	1	0	1
16.	Engg/Works	Tech/Fitter/Mech	3	3	0
17.	Engg/Works	Tech/Driver/Mech	2	1	1
18.	Engg/Works	Helper/WORKS	334	232	102
19.	Engg/Works	Sanitary Helper	24	27	-3
20.	Engg/Works	Trolley men	1	1	0
21.	Engg/Bridges	Tech/BS	1	1	0
22.	Engg/Bridges	Trolley man	2	0	2
23.	Engg/Bridges	Heater	1	1	0
24.	Engg/Bridges	Sock	1	0	1
25.	Engg/Bridges	Watchman	2	0	2
26.	Engg/P.way	Bellow boy	6	6	0
27.	Engg/P.way	Messenger	1	0	1
28.	Engg/P.way	Helper/P.way	51	30	21
29.	Engg/TMO	Supernumeraray	0	2	-2
		TOTAL	778	584	194

2.6 Summary of Engineering organization:

S.No	Designation	sanction	Actual	Vacancy
1	Safety	2034	1464	570
2	Non-Safety	778	584	194
Grand Total		2812	2048	764

2.7 work Load of Engineering Department:

Integrated Track Kilometers (ITKMS) & Equated Track Kilometers:

The work Load of P.Way Organisation is represented in the form of ETKMs (Equated track Kms) & Work Load of works Organisation is Integrated Track Kilometers (ITKMS) of the concerned units, which is shown below to throw light on the workload of the various units.

S.No.	ADEN	SSE/SE/P W	Route Km	Track Km	ETKM	ITKM
1	KCG	MED	95.13	108.83	198.23	460.89
2		KCG	94.61	108.15	200.49	
3	KRNT	MBNR	91.94	91.94	155.03	471.60
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10	ADEN/BRIDGE				0	242.00
11	DEN/LGD				0	80.55
Total					1100.4	3437.44

2.8 DUTIES OF ENGINEERING STAFF (WORKS):

- **SSE/SEWORKS:** SSE/SE (Works) performs duties both in office and in field. The works are broadly classified as follows:
 - a) Executive works.
 - b) Store Works.
 - c) Establishment works.
 - d) Industrial relations, staff welfare etc.
- **Official work:**
 - a) Maintenance of registers connected to staff quarters and service buildings.
 - b) Periodical verification of stores and placement of indents for procurement of material.
 - c) Maintain attendance, leave, pass and other staff welfare matters and office correspondence.
- **Field work:** Inspection of
 - a) staff Quarters
 - b) Service / Welfare Buildings
 - c) Roads sewage lines
 - d) Maintenance of gardens after they are handed over by the contractor.
 - e) Encroachment their removal and eviction of unauthorized occupants.

- **Maintenance work:** Carries out maintenance works of staff quarters, service buildings etc. The repairs are undertaken based either on complaints lodged or on routine Inspection. Cob webs cleaning, Cleaning of shrubs and bushes in the around railway premises. Maintain registers to keep record of maintenance and repair works undertaken.
- Stores:** Periodical indents are to be placed on various stores depots for the procurement of material. Loading/un-loading of material. After procurement of material, the same are to be entered in respective ledgers. Day to day issues of materials are to be entered in 'voucher book' maintainHYB in the office.
- **Water Supply:** SE (Works) is responsible for procurement and supply of water to service buildings and residential buildings. In order to keep continuous supply of water, he has to maintain water pipe line, bore wells, reservoirs and overhead tanks and keep them in good fettle.
- **Roads:** SSE/SE (Works) has to maintain and repair the roads when warranted.
- **Sewerage Line:** SSE/SE (Works) arranges staff to attend under ground drainage lines, and cleaning/de- sledge of septic tanks.
- **Maintenance of gardens:** After the plantation and maintenance by the contractor for one year, the gardens are taken over by the SE/JE (Works) for further maintenance and are being maintainHYB with the help of a valve-man for watering the plants.

2.9 DUTIES OF ENGINEERING STAFF (P.Way):

- **Gang mate:** He supervises the work done by trackmen, custodian of tools, introducing patrolling attention in case of emergencies, weekly twice key-man duty.
- **Keyman:** He performs daily daytime patrolling of track for observing any rail failure and in time protection for safe running of trains and tightens all fittings.
- **Spl. Gr. Trackmen:** He is entrusted with duties of Monsoon patrolling, Hot Weather patrolling, cold weather patrolling, watchmen at vulnerable locations, pilot men at work spots of special works.
- **Sr. Trackmen:** He performs the duties of Monsoon patrolling, Hot Weather patrolling, cold weather patrolling, watchmen at vulnerable locations, patrol men at work spots of special works.
- **Jr.Trackmen:** For assisting working of small track machines i.e. transportation/carrying to loading and unloading, replacement of glued joints, SEJs, trucking of rails, rail renewals, stacking of rails and various other P. Way materials for declaring scraping, jungle clearance, through gauging for improving TGI values, curve greasing, points and crossing, L.C. approach screening of pumping joints, cleaning of waterways of bridges longitudinal drains, cross drains, cache water drains.
- **Spl.Gr.Store watchman:** For watching store materials and to watching out side dump P. Way materials, temperature, rain fall measuring, Mail collection, stocking of P. Way materials, cleaning of office compound, Receive phone message and passing the message controlling in charges.
- **Sr.Gr.Store Watchman:** He is entrusted with duties of watching store materials and to watching out side dump P. Way materials, temperature, rain fall measuring, Mail collection, stocking of P. Way materials, cleaning

of office compound, Receive phone message and passing the message controlling in charges.

- **Spl.Gr.Trolley man:** Pushing of Trolley, Measuring along with PWI i.e. curves, points and crossings, SEJ's Pre and post Tampering measurements, L.C. Gates measuring, Attending emergency Rail/Weld failures along with PWI's, Ballast stocks measurements, P. Way material Inventory, Scrap rails Inventory, ASV/DSK, Accompanying along with PWI's, Joint Inspection with SSE/Signals, Traffic Inspector, SE/Bridges and collecting of various details of track works.
- **Jr.Gr.Trolleyman:** Pushing of Trolley, Measuring along with PWI i.e. curves, points and crossings, SEJ's Pre and post Tampering measurements, L.C. Gates measuring, Attending emergency Rail/Weld failures along with PWI's, Ballast stocks measurements, P.Way material Inventory, Scrap rails Inventory, ASV/DSK, Accompanying along with PWI's, Joint Inspection with SSE/Signals, Traffic Inspector, SE/Bridges and collecting of various details of track works.
- **Carpenter:** Deployed for laying and adjusting Wooden layouts Points and crossings rail screw prodding and tightening of wooden blocks, cutting and drilling, providing of wooden block at the time of R/W failures, and attending Section Trolley's repairs.
- **Painter:** Painting of curves, points and crossings, SEJ Pillars, Fouling Marks, Km stones, LC. Gates Boards Caution Order Boards, curve Boards, Points Boards letter painting, checking rails, painting, Bridges DL, HFL Level Markings Bridges Nos. paintings, Scrap rails measurements marked with paint, Stencil cutting, Weld collar painting.

2.10 Work Load of Engineering Organisation:

The work Load of P.Way Organisation is represented in the form of ETKMs (Equated track Kms) & Work Load of works Organisation is Integrated Track Kilometers (ITKMS) of the concerHYB units.

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3.0 CRITICAL EXAMINATION:

3.1 General: The prime job of engineering department is to keep the wheels on Rail, either in motion or in stable condition. For this purpose, it has to keep on maintaining the track in good fettle from beginning to the end. In addition to this, there are many Service Buildings and residential buildings in the division to cater to the needs of the employees and commuters. Since train services are working round the clock, water and other amenities are to be provided to the passenger so that smooth functioning is maintained. Round the clock water supply is also required for the Railway Hospitals and other service buildings in the division. In this direction engineering organization of SC division plays a major role in up keep of the same.

3.2 Yardsticks: In olden days, when these yardsticks were come into force, all these activities were managed by the depots' staff itself. However, now a days Zonal Contracts are introduced to make easy and procurement of required material to achieve the early performance in a satisfactory level without the help of our labour, as we are under going into these contracts for early achievement along with an intention to save some work force. yardsticks have become outdated and not suggestible to implement in Engineering Organization from the date when the Zonal Contracts for the activities have been introduced.

3.3 Application of Benchmarking Norms: Benchmarking is based on dynamic and comparative analysis and is a very useful tool to manage efficient deployment of staff and monitor effects of improvement in working practices, use of new technologies and level of outsourcing. Board in successive meetings has directed all units to achieve average of Indian Railway Benchmark.

3.4 March-2019 IR average and Bench Marking of HYB divn is as follows.

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3.6 Major changes have taken place in the working system of Engineering department, as several works are being done on zonal contract. Many works have been outsourced. In the P.Way wing & Works wing several works are being outsourced such as track maintenance works.

3.7 The Work-study team made an analysis on the requirement of staff based on the following referances:

- As per Railway board letter no.2011/E&R/2800/Rly.imp.vol VI/ (Corr) dated 09.06.2016 to bring down the manpower ratios for activities which are above the IR average atleast to the current IR average.
- No. of activities under out sourcing in Engineering organization.
- Recommendation to surrender due to the posts lying vacant.

3.8 Activities under Outsourcing in Engineering organization of HYB division.

SL.NO	P.Way contracts
1.	Pre-tamping and post tappings operations
2.	Surveying for design mode tamping-tenders under process.
3.	Casual renewal of rails.
4.	Casual renewal of sleepers.
5.	Casual renewal of cms crossings and switches.
6.	Provision of gapless joints.
7.	De-stressing of LWR.
8.	Fixing of check rails on curves and bridges.
9.	Repair welding.
10.	Casual renewal of Glued joints and SEJs.
11.	Lubrication of ERCs and sealing of liner contact area.
12.	Removal of seized ERC.
13.	Removal of jammed plate screws in P&C.
14.	Oiling, greasing and tightening of fittings on bridges.
15.	Greasing of plate screws in P&C
16.	Renewal of 10 mm thick rubber pads under CMS Crossings.
17.	Painting of rails in corrosion prone areas and station yards.
18.	Drilling of holes and fixing of joggled fish plates.
19.	Shallow screening of isolated locations.
20.	Loading, leading and unloading of P.Way materials.
21.	Collection and stacking of P.Way scraps.
22.	Overhauling of level crossings.
23.	Renewal of fittings of steel channel sleepers on girder bridges.
24.	Renewal of crushed/missing rubber pads/elastomeric pads under vsteel channel sleepers.
25.	De-silting of water ways.
26.	Clearing of drains, water ways and attention to cuttings.
27.	Unloading of BOBYs.
28.	Ballast Profiling.
29.	Cess repairs and attention to trolley refuges.
30.	De-weeding and jungle clearance.
31.	Rag picking and removal of debris along the track at the approaches of A1, A and B Class ststions.

3.9 Out sourcing activities in Engineering (Works) department

S.N	Name of work	Amount	LOA No & date
1	SG-GOC maintenance of Lawn/Garden at GM's bungalow No.99, Rail Nilayam, Hyderabad Bhavan and Lekha Bhavan	91,41,145	YW/148/WIII/ 32/ 18 Dt; 21.09.2018

2	GOC- House Keeping and maintenance of Officers Rest House including transit accommodation at Secunderabad for 2 years	57,34,729	YW/148/WIII/07/17 Dt; 05.08.2017
3	House keeping and maintenance of the Rail Nilayam toilets, corridors and common areas for 2 years	1,38,15,859	YW/148/WIII/48/17 Dt; 07.02.2018
4	Hyderabad division- House keeping and maintenance of Rail kalarang and dining hall for 2 years	19,54,174	YW/148/WIII/03/17 Dt; 12.07.2017

3.10 Activities under Contract – Works in progress

SN	Project ID	Nature of the work
1	11.03.29.1 6.4.52.002	JKM-BDHN Section: Proposal widening of LC No: 18 JB to cater the increased road traffic.
2	11.03.29.1 7.4.52.001	Hyderabad division- Provision of Interlocked Sliding type booms as stand by Lifting barrier Booms at 5 Interlocked LC gates.
3	11.03.29.1 7.6.52.001	Hyderabad division - Manning of Unmanned LC gate 225 between MZL-WDR and LC gate 216 between TMD-BKU stations.
4	11.03.30.1 3.3.52.067	Hyd div SC-MUE Elimination of Unmanned LC No. 229 at Km. 556/300-400 by constructing RUB. of size 1x4x4 M by open cut method without approach cove
5	11.03.30.1 5.1.52.001	Hyderabad division- subways in lieu of level crossing No. 117, 121, 123, 125, 126, 131, 146, 157, 159 & 161 (10 Nos)
6	11.03.30.1 5.1.52.003	Secunderabad-Dhone- subways in lieu of level crossing No. 17, 21, 32, 36, 37, 41,43 Secunderabad-Mudkhed- level crossing No. 220 (8 Nos)
7	11.03.30.1 6.1.52.002	Secundrabad-Dhone & Jankampet-Bodhan -Subways in lieu of level crossing No. 53 & 6-JB respectively
8	11.03.30.16. 3.52.001	HYDERABAD Division :- Improvements and Ancillary Works to the existing RUBs in SC-MUE section.
9	11.03.30.17. 3.52.001	SC-DHNE: Elimination of Manned LC No. 56 between Mahaboob nagar and Divitipalli stations at Km. 108/300-400 by constructing RUB .
10	11.03.31.16. 1.52.002	Mudkhed-Secunderabad - TBR-107 km
11	11.03.31.17. 3.52.001	SC-DHNE Section: CTR(P) for a length of 1.40 Km From Km 75 to Km 76.4 between BABR and GLY stations
12	11.03.31.17. 3.52.002	SC-DHNE Section: CTR(P) for a length of 1.40 Km From Km 76.4 to Km 77.8 between BABR and GLY stations

13	11.03.31.17. 3.52.003	SC-DHNE Section: CTR(P) for a length of 1.40 Km From Km 77.8 to Km 79.2 between BABR and GLY stations
14	11.03.31.17. 3.52.008	SC-DHNE Section: CTR(P) for a length of 1.40 Km From Km 90.6 to Km 92 between GLY and JCL stations
15	11.03.31.17. 3.52.009	SC-DHNE Section: CTR(P) for a length of 1.40 Km from Km 52.8 to Km 54.2 between TMX and SHNR stations
16	11.03.32.15. 1.52.001	Hyderabad Division - Repl of stone top culvert bridges with RCC boxes (10 bridges)
17	11.03.33.09. 4.52.011	IRISET-Provision of covered sheds for A&B Blocks & portico & development of garden at Officers Hostel-4.
18	11.03.33.10. 3.52.006	IRISET-Provision of covered car and scooter shed, repairs and improvements to nursery.
19	11.03.33.16. 3.52.003	IRISET - Renovation of rooms with Sound Proofing and improvements to rooms in Officers Hostel
20	11.03.53.16. 4.52.010	HYB divn.- Provision of MEA facilities including toilet facility for divyang people at various stations and long term facility/short term facilities.
21	11.03.53.16. 4.52.009	Nizamabad: Provision of butter fly type shelters of 16 Meters on PF 2/3 towards SC end, KRNT - 16m on SC end on PF No. 1, SBBJ - 16m.
22	11.00.64.12. 1.52.001	South Central Railway - Boundary wall / fencing to prevent encroachment on railway land (PB 821/2012-13/NR)
23	11.03.64.10. 4.52.012	Railnilayam - Face lifting of external surface with wall care putty of Rail Nilayam 'A' block for the left over portion
24	11.03.64.11. 4.52.006	Hyderabad division - Railnilayam - Provision of evaporative cooling system in PCE/SC's office at 4th floor.

3.11 Work load of P.Way wing of Engineering department:

S.No.	ADEN	SSE/SE/P W	Route Km	Track Km	ETKM	ITKM
1	KCG	MED	95.13	108.83	198.23	460.89
2		KCG	94.61	108.15	200.49	
3	KRNT	MBNR	91.94	91.94	155.03	471.60
4		KRNT	108.45	108.45	194.12	
5		GWD-RC Line	55.61	55.61	59.12	
6	NZB	NZB	98.35	98.35	164.42	361.42
7		UMRI	79.1	79.1	128.99	
8	ADEN/I/HYB		623.19		0	1095.04
9	ADEN/II/HYB				0	725.94

10	ADEN/BRIDGE				0	242.00
11	DEN/LGD				0	80.55
		Total			1100.4	3437.44

3.12 Requirement of Manpower of P.Way and Works organisations as per IR average:

P.WAY	
IR Average of March-2019	1.28 men per ETKM
Total ETKM	1100.4
Requirement of manpower =IR average x ETKM	1100.4x1.28 =1408.5 say 1409
Total sanctioHYB staff in P.way	2059
Staff excess to the requirement	2059-1409 = 650 staff
WORKS	
IR Average of March-2019	0.18 men per ITKM
Total ITKM	2143.53
Requirement of manpower =IR average x ETKM	2143.53x0.18 = 385.83 say 386
Total sanctioHYB staff in Works	713
Staff excess to the requirement	713-386 = 327
Total staff excess to the requirement in P.way + Works	650+327 = 977

3.13 For operational convenience the total section is divided in to units, which are controlled by SSE and each SSE unit is further divided in to small gang units. Each gang unit will be responsible for maintainance of 6-7 track kilometers. Sectional track kilometers and no. of gang units in each gang unit of the Hyderabad Division is as follows:

S No	SSE section	Section length IN KMs	No.gang units
7.	KCG	110	19
8.	MBNR	91.8	14
9.	KRNT	162.8	46
10.	MED	120	19
11.	NZB	100	16
12.	UMRI	80	13
	Total	664.6	127

3.14 Unit wise SAVE position of Track Maintainers:

S No	SSE/Unit	San	Act	vac
1	KCG	306	250	56
2	MBNR	285	203	82
3	KRNT	342	231	111
4	MED	302	238	64
5	NZB	244	160	84
6	UMRI	192	138	54
	TOTAL	1671	1220	451

3.15 Requirement of Track Maintainers as per Practical observation in Engineering Organisation of HYB Division:

- Total track kilometers in HYB division = 623.19Km
- Total SSE Units in HYB Division = 6 units
- Total no.of Gang Units = 127
- Each Gang unit has 6-7 track kms of track to maintain.
- To maintain 6-7 Track kilometers 11 track Maintainers are required.
- LR 12.5% = $11 \times 12.5\% = 1.34$ say 2
- Total requirement of Track Maintainers for each gang unit = $11 + 2 = 13$
- Hence requirement of Track maintainers for 127 gang units = $13 \times 127 = 1651$
- Total sanctioned posts of Track Maintainer = 1713
- Requirement of Track Maintainers = 1651
- Excess to the requirement = $1713 - 1651 = 62$

3.16 Comparative statement of staff requirement:

	Total staff	Staff required	Excess
As per IR Average	2772 (P.Way+ Works)	1795	977
As per Practical observation	1713 (Track Maintainer)	1651	62

3.17 From the above, it is observed that staff excess to the requirement as per the Indian Railway Average Benchmarking is 977 and as per Practical observation is 62 track Maintainers. For convenience of the department and to bring down the organisation nearer to the Indian railway Average benchmarking gradually, the work study team considered Practical observation.

3.18 In view of the above, the following recommendation is made.

Recommendation: It is recommended to surrender 62 vacant posts of Track Maintainer which are excess to the requirement in Engineering Organisation.

** ** *

CHAPTER – 4

4.0 FINANCIAL IMPLICATIONS:

- 4.1 When the recommendations are accepted, the recurring savings on surrender of the following posts in Engineering department over HYB Division will be as follows:

S No	Category	Scale		No. of posts	Mean Pay	DA @ 12 %	Emoluments P.M (in Rs.)	Total Emoluments P.A (in Rs.)
		From	To					
1	Group-D	18000	56900	62	37450	4494	2600528	31206336
	TOTAL			62				31206336

On implementation of the recommendations of Work-study report, an annual savings of **Rs. 312.06 lakhs** can be achieved.

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R E C O M M E N D A T I O N

Sl. No.	Description	Para No.
01	It is recommended to surrender 62 vacant posts of Track Maintainer which are excess to the requirement in Engineering Organisation.	3.18

SOUTH CENTRAL RAILWAY



SDGM's (Plg) Office,
General Branch.
Secunderabad

No. G.276/2/WSSCR-02/2019-2

Date: 07.06.2019

Sr.DEN/Co-ord/HYB

Sub: Review of Work study of Engineering Department over Hyderabad Division.

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1. As per the programme of work studies 2019-20, the planning cell has conducted a work study on Review of Staff strength of Engineering Department and recommended to surrender 62 posts.
2. During interaction with Sr.DEN/Co-ord/HYB, it is observed that Re-structuring is under process in Track maintainer cadre of Engineering Organisation.
3. Hence the work study is reviewed and recommended to surrender 28 posts of Track maintainer in addition to the earlier recommendation of surrender of 62 posts.
4. Hence the total posts recommender for surrender will be 90 from Engineering organization of Secunderabad Division.