

दक्षिण मध्य रेलवे
SOUTH CENTRAL RAILWAY

WORK STUDY REPORT
ON
REVIEW OF STAFF STRENGTH
OF
ENGINEERING DEPARTMENT
OVER
SECUNDERABAD DIVISION

OVER
SOUTH CENTRAL RAILWAY

*** **

मार्गदर्शक

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

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विधि 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. Observation of the pattern of working
4. Critical examination of the existing system of working and
5. Assessment of manpower requirement for the existing work Load

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रूपरेखा SYNOPSIS

- फ़षय/Subject: Review of Staff Strength of Engineering Department over Secunderabad Division
- प्राधिकार/Authority: Annual Programme of Work studies 2020-21.
- अध्ययन सं/Study No: WSSCR-9/2020-21.
- संदर्भ फाइल सं/ Reference File No: G.276/2/WSSCR-9/ 2020-21.
- गतिविधि का क्षेत्र/ Area Of Activity: Engineering Department Over Secunderabad Division.
- As per the programme of work-studies 2020-21, the Central Planning Organisation of South Central Railway has taken up Work-study on "Review of staff strength of engineering department over SC 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.
- **Jan 2020 IR average and Bench Marking of SC division is as follows:**

| Organization | MPR of SC | IR avg. MPR | Bench Mark MPR |
|--------------|-----------|-------------|----------------|
| P.Way | 1.29 | 1.26 | 0.70 |
| Buildings | 0.05 | 0.17 | 0.03 |
| Bridges | 0.07 | 0.08 | 0.02 |

MPR of P.Way organization of engineering department over SC division is above IR average, where as that of the Works wing and Bridges wing is below IR average.

- Major changes have taken in the working system of Engineering department, as some works are being done on zonal contract. Many works have been outsourced. Recently the works department has out sourced number of activities in a big way House Keeping Services - Maintenance of service buildings.
In the P.Way wing, many works are outsourced such as track maintenance works.

The Work-study team made an analysis on the requirement of staff based on the following parameters.

- a) No. of activities under out sourcing in Engineering department.
- b) The activities permitted to work under Contract in Engineering department.
- c) Recommendation to surrender non-safety staff due to **Contract works/outsourcing** activities and **posts are lying vacant/redundant**
- d) Requirement of Artisan/Khalasi staff on need base

➤ **Requirement of Manpower of P.Way organisation:**

| | |
|--|--|
| IR Average of Jan-2020 | 1.26 men per ETKM |
| Total ETKM | 4233.66 |
| Requirement of manpower =IR averagexETKM | $4233.66 \times 1.26 = 5334.41$ say 5334 |
| Total sanctioned staff in P.way | 6193 |
| Staff excess to the requirement | 6193-5334=859 |

From the above table it is observed that requirement of P.Way organisation with respect to IR average is 5334 men for the ETKM of 4233.66. The sanctioned staff strength of P.Way organisation is 6193 and found 859 staff is excess to the requirement.

Most of the activities permitted to work under Contract in P.Way organisation.some works are being done on Zonal contract.The work load is being reduced due to contracts/ outsourcing of non-core activities. Hence the following 21 Non-safety/ redundant posts are recommended to surrender.

| S. No | Designation | Sanction | On Roll | Vacancy |
|-------|------------------|------------|------------|-----------|
| 1 | Assistant(P.Way) | 254 | 238 | 16 |
| 2 | GM Striker | 16 | 11 | 5 |
| | Total | 270 | 249 | 21 |

➤ **Requirement of Manpower of Works wing:**

- Most of the activities permitted to work under Contract in **Works wing**. Some works are being done on Zonal contract.The work load is being reduced due to contracts/ outsourcing of non-core activities. Hence the following 32 Non-safety/ redundant posts are recommended to surrender

| S. No | Designation | Sanction | On Roll | Vacancy |
|-------|-----------------|------------|-----------|-----------|
| 1 | Fitter Pipeline | 11 | 5 | 6 |
| 2 | COS/OS | 60 | 56 | 4 |
| 3 | Clerk/typist | 21 | 16 | 5 |
| 4 | Mason | 9 | 4 | 5 |
| 5 | Carpenter | 18 | 9 | 9 |
| 6 | Drivers | 7 | 4 | 3 |
| | Total | 126 | 94 | 32 |

➤ **Requirement of Manpower of Bridges wing:**

Most of the activities permitted to work under Contract in Engineering organization. Some works are being done on Zonal contract. The work load is being reduced due to contracts/ outsourcing of non-core activities. Hence the following 7 Non-safety/ redundant posts are recommended to surrender.

| S.No. | Designation | Sanction | On Roll | Vacancy |
|-------|--------------|-----------|-----------|----------|
| 1 | Assistants | 70 | 66 | 4 |
| 2 | Errector | 7 | 4 | 3 |
| | Total | 77 | 70 | 7 |

SUMMARY OF POSTS RECOMMENDED FOR SURRENDER

3.0 From the above references, it is recommended to surrender **21** non-safety/ redundant posts in P.way organisation, **32** non-safety/ redundant posts in Works organisation and **7** non-safety/ redundant posts in Bridges organisation. the summary of posts recommended for surrendering is as follows:

| S No | Organisation | no.of Posts recommended to surrender |
|------|--------------|--------------------------------------|
| 1 | P.Way | 21 |
| 2 | Works | 32 |
| 3 | Bridges | 7 |
| | Total | 60 |

Hence the following recommendation is made:

Recommendation: It is recommended to surrender **60** non-safety/ redundant posts in engineering department.

SUGGESTION: As per Railway Board Lr. No. E(MPP) 2016/1/59 dated 10/01/2017, non safety/ non core activities to be outsource in order to reduce the expenditure. The above non-safety/ non-core activities are outsourced considerably. Hence it is suggested to outsource the remaining activities and resultant posts may be surrendered. Status of outsourcing may be intimated to this office for further review of the work-study.

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1.0 प्रस्तावना 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 and also provide limited international services to Nepal, Bangladesh and Pakistan.

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 Organization 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 Organization 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.

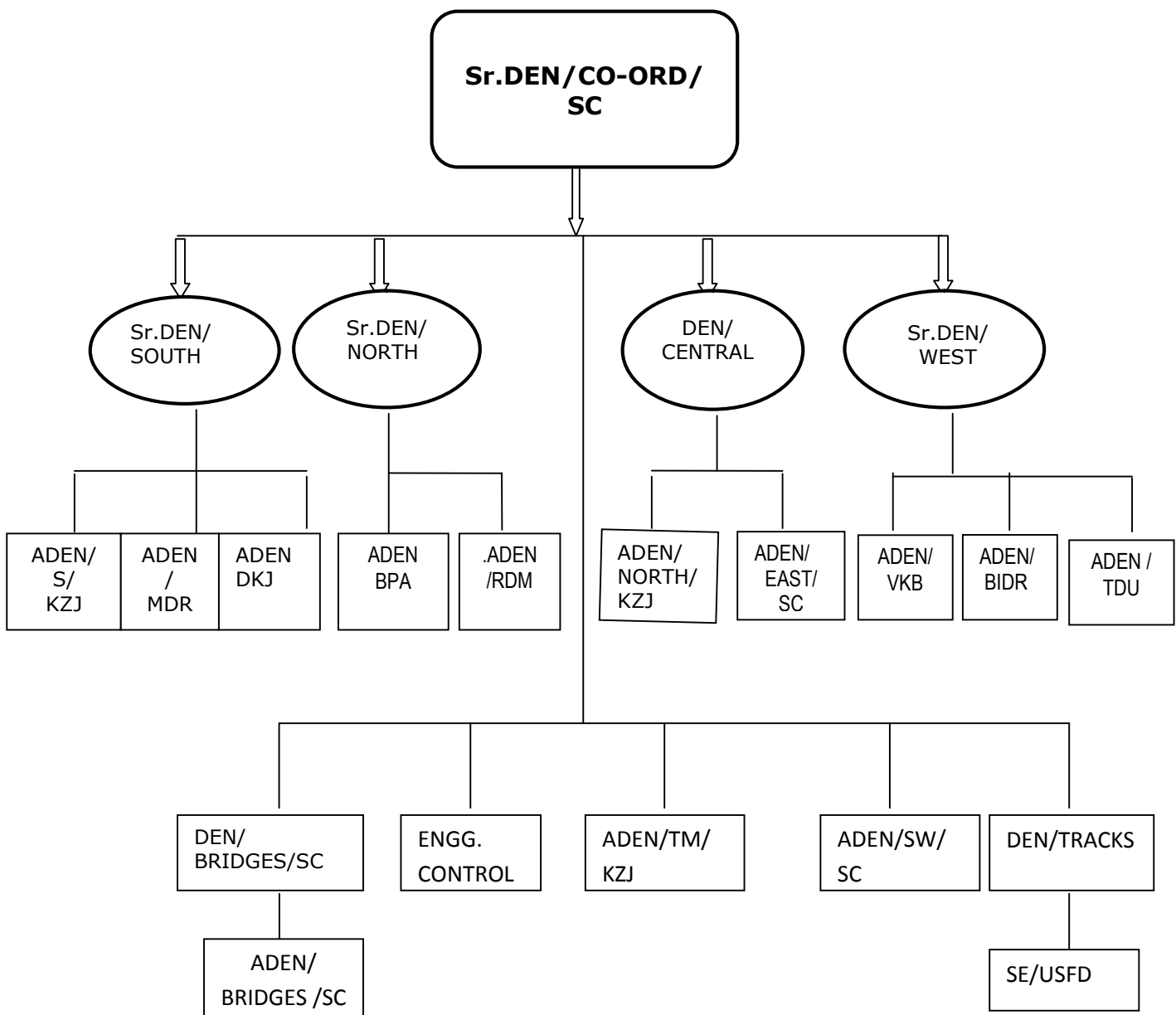
1.4

In view of the above, the Central Planning organization under the control of SDGM conducted work-study of Engineering department over SC Division of South Central Railway and humbly presents this report.

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2.0 EXISTING SCENARIO:

2.1 ORGANISATION: The Civil Engineering Department of Secunderbad Division is headed by Sr. DEN/Co-ord and assisted by Sr.DEN/South, Sr.DEN/North, Sr.DEN/C and DEN/West. In turn, Sr.DENs and DEN are assisted by ADENs and SSE/SEs/JEs. For the administrative convenience and close supervision and 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:



SSE/SE/JE's

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

| | | | |
|------------------|-----------------|-----------------|-------------------|
| SSE/P.WAY/SC | SSE/P.Way/N/KZJ | SSE/P.WAY/N/KZJ | SSE/Works/E/SC |
| SSE/P.Way/GT | SSE/P.Way/ALER | SSE/P.Way/ARMR | SSE/Works/MLY |
| SSE/P.Way/LPI | SSE/P.Way/MDR | SSE/P.Way/MTMP | SSE/Works/HYB |
| SSE/P.Way/VKB | SSE/P.Way/KI | SSE/P.Way/HMBD | JE/Works/VKB |
| SSE/P.Way/TDU | SSE/P.Way/DKJ | SSE/Works/SNF | JE/Works/TDU |
| SSE/P.Way/SEM | SSE/P.Way/BDCR | SSE/Works/KRMR | SSE/Works/BIDAR |
| SSE/P.Way/BIDAR | SSE/P.Way/BPA | SSE/Works/BPA | SSE/Bridges/SC |
| SSE/P.Way/UDGR | SSE/P.Way/SKZR | SSE/Works/RDM | SSE/Bridges/S/KZJ |
| SSE/P.Way/PARLI | SSE/P.Way/MAGH | SSE/Works/WL | SSE/Bridges/N/KZJ |
| SSE/P.Way/ZB | SSE/P.Way/MCI | SSE/Works/DKJ | |
| SSE/P.WAY/CR/KZJ | SSE/P.Way/PDPL | SSE/Works/MDR | |
| SSE/P.Way/MABD | SSE/P.Way/SNF | SSE/Works/W/KZJ | |
| SSE/P.Way/WL | SSE/P.Way/KRMR | SSE/Works/N/KZJ | |

2.2 SCALE CHECK: The consolidated Scale check of Staff of Civil Engineering/SC is furnished below:

| S.No. | Designation | Grade Pay | Sanction | On Roll | Vacancy |
|-------------------|--------------------------------|-----------|----------|---------|---------|
| P.Way Wing | | | | | |
| 1 | Senior Section Engineer(P.Way) | 4600 | 149 | 114 | 35 |
| 2 | Junior Engineer(P.Way) | 4200 | 136 | 52 | 84 |
| 3 | Safety Counsellors | 4600 | 1 | 1 | 0 |
| 4 | Technician(MCM)/B.Smith | 4200 | 15 | 11 | 4 |
| 5 | Technician I /B.Smith | 2800 | 29 | 6 | 23 |
| 6 | Technician II /B.Smith | 2400 | 4 | 1 | 3 |
| 7 | Technician III /B.Smith | 1900 | 20 | 14 | 6 |
| 8 | Technician(MCM)/GM Striker | 4200 | 4 | 4 | 0 |
| 9 | Technician I /GM Striker | 2800 | 8 | 4 | 4 |
| 10 | Technician II /GM Striker | 2400 | 1 | 0 | 1 |
| 11 | Technician III /GM Striker | 1900 | 3 | 3 | 0 |
| 12 | Technician(MCM)/Welder | 4200 | 4 | 3 | 1 |
| 13 | Technician I /Welder | 2800 | 8 | 2 | 6 |
| 14 | Technician II /Welder | 2400 | 1 | 3 | -2 |
| 15 | Technician III /Welder | 1900 | 63 | 9 | 54 |

| | | | | | |
|---------------------|----------------------------------|--------------|-------------|-------------|------------|
| 16 | Track Maintainer I | 2800 | 596 | 330 | 266 |
| 17 | Track Maintainer II | 2400 | 1156 | 901 | 255 |
| 18 | Track Maintainer III | 1900 | 1156 | 1066 | 90 |
| 19 | Track Maintainer IV | 1800 | 2585 | 2779 | -194 |
| 20 | Assistant(P.Way) | 1800 | 254 | 238 | 16 |
| | | Total | 6193 | 5541 | 652 |
| Works Wing | | | | | |
| 1 | Senior Section Engineer(Works) | 4600 | 20 | 22 | -2 |
| 2 | Junior Engineer(Works) | 4200 | 27 | 17 | 10 |
| 3 | Senior Section Engineer(Drg) | 4600 | 19 | 15 | 4 |
| 4 | Junior Engineer(Drg) | 4200 | 12 | 6 | 6 |
| 5 | Technician(MCM)/Painter | 4200 | 3 | 4 | -1 |
| 6 | Technician I /Painter | 2800 | 2 | 4 | -2 |
| 7 | Technician II /Painter | 2400 | 2 | 2 | 0 |
| 8 | Technician III /Painter | 1900 | 2 | 3 | -1 |
| 9 | Technician(MCM)/Mason | 4200 | 4 | 1 | 3 |
| 10 | Technician I /Mason | 2800 | 5 | 0 | 5 |
| 11 | Technician II /Mason | 2400 | 0 | 0 | 0 |
| 12 | Technician III /Mason | 1900 | 0 | 3 | -3 |
| 13 | Technician(MCM)/Carpenter | 4200 | 6 | 1 | 5 |
| 14 | Technician I /Carpenter | 2800 | 10 | 3 | 7 |
| 15 | Technician II /Carpenter | 2400 | 1 | 0 | 1 |
| 16 | Technician III /Carpenter | 1900 | 1 | 5 | -4 |
| 17 | Technician(MCM)/FitterPipeline | 4200 | 3 | 2 | 1 |
| 18 | Technician I /Fitter Pipeline | 2800 | 8 | 3 | 5 |
| 19 | Technician II /Fitter Pipeline | 2400 | 0 | 0 | 0 |
| 20 | Technician II / Driver | 2400 | 0 | 1 | -1 |
| 21 | Technician III / Driver | 1900 | 7 | 3 | 4 |
| 22 | Ch.OS | 4600 | 22 | 20 | 2 |
| 23 | OS | 4200 | 38 | 36 | 2 |
| 24 | Sr.Clerk | 2800 | 20 | 4 | 16 |
| 25 | Jr.Clerk-cum-Typist | 1900 | 1 | 12 | -11 |
| 26 | Divisional Accountant | 4600 | 1 | 1 | 0 |
| 27 | Assistant(Lascar) | 1800 | 0 | 1 | -1 |
| 28 | Assistant(Works) | 1800 | 63 | 56 | 7 |
| 29 | Assistant(survey Khalasi) | 1800 | 3 | 9 | -6 |
| 30 | House Keeping Assistant(Works) | 1800 | 0 | 4 | -4 |
| | | Total | 280 | 238 | 42 |
| Bridges Wing | | | | | |
| 1 | Senior Section Engineer(Bridges) | 4600 | 5 | 4 | 1 |
| 2 | Junior Engineer(Bridges) | 4200 | 2 | 3 | -1 |
| 3 | Technician I/B.Smith | 2800 | 1 | 0 | 1 |
| 4 | Technician II /B.Smith | 2400 | 1 | 0 | 1 |
| 5 | Technician III /B.Smith | 1900 | 0 | 0 | 0 |
| 6 | Technician I/Sarang | 2800 | 1 | 0 | 1 |
| 7 | Technician(MCM)/Erector | 4200 | 2 | 0 | 2 |
| 8 | Technician I /Erector | 2800 | 3 | 1 | 2 |

| | | | | | |
|----|--------------------------|----------------|-------------|-------------|------------|
| 9 | Technician II /Erector | 2400 | 1 | 0 | 1 |
| 10 | Technician III /Erector | 1900 | 1 | 3 | -2 |
| 11 | Technician(MCM)/Revitter | 4200 | 1 | 0 | 1 |
| 12 | Technician I /Revitter | 2800 | 2 | 0 | 2 |
| 13 | Technician II /Revitter | 2400 | 1 | 0 | 1 |
| 14 | Technician III Revitter | 1900 | 1 | 0 | 1 |
| 15 | Assistant(Bridge) | 1800 | 70 | 66 | 4 |
| | | Total | 92 | 77 | 15 |
| | | G.Total | 6565 | 5856 | 709 |

2.3 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.Trolly 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.Trollyman:** 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 Khalasi:** 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.

2.4 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:

- Executive works.
- Store Works.
- Establishment works.
- Industrial relations, staff welfare etc.

The normal duties performed in the office of the SSE/SE (Works) are:

Official work:

- Maintenance of registers connected to staff quarters and service buildings.
- Periodical verification of stores and placement of indents for procurement of material.
- Maintain attendance, leave, pass and other staff welfare matters and office correspondence.

Field work: Inspection of

- staff Quarters
- Service / Welfare Buildings
- Roads sewage lines
- Maintenance of gardens after they are handed over by the contractor.
- 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' maintained 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 underground 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 maintained with the help of a valve-man for watering the plants.

2.5 DUTIES OF BRIDGE WING OFFICIALS:

General: generally responsible for the maintenance and safety of all way & works including bridges in his charge.

Inspection of Bridges: inspect every Bridge including Road over / under Bridges once a year by a date specified by Chief Engineer after monsoon. Inspect every tunnel in the sub division once a year before monsoon and maintain the records of his inspection.

Maintenance of Bridges and Structures: responsible for the maintenance and repairs to foundations, flooring, sub structures, protective works, bed blocks, track over bridges and the approaches including guard rails and other appurtenances, pipes, RCC Boxes, superstructure of all arches, RCC and PSC slabs, steel work of girder spans less than 12.2 m clear and other type of bridges except composite, RCC, PSC and steel girders of spans 12.2 m and more.

Inspection of Bridges and other structures: The officer nominated to be in charge of the Bridges shall scrutinise the Bridge Inspection register sent by Bridge Inspector and after necessary inspection of Bridges endorse a certificate of scrutiny and forward it to the Dy. Chief Engineer/Bridges by a nominated date responsible for carrying out detailed inspection of:

- a) All welded, RCC, PSC and composite girders and their bearing within one year of installation.
- b) Girders kept under observation, once a year or at intervals specified by the Chief Bridge Engineer.
- c) Floor system of early steel girders once a year.
- d) Superstructure including bearings of all Steel girders of span

Co-ordination with Permanent way, works and staff of other Departments: keep close co-ordination with the staff of way, works, signalling, electrical, traction and other departments, when they are required to work jointly.

Action in case of emergency: On receipt of intimation of the occurrence of an accident (including breaches) affecting any part of the bridge or approaches or restricting free passage of trains, the Bridge staff should proceed to site by the quickest available means.

3.1 CRITICAL EXAMINATION:

3.2 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.

3.3 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.

3.4 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.

3.5 Jan 2020 IR average and Bench Marking of SC division is as follows:

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MPR of P.Way organization of engineering department over SC division is above IR average, where as that of the Works wing and Bridges wing is below IR average.

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, 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:

- 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) Lr. No E(M&P)2016/1/59 dated 10.01.2017, to bring down the Divisions higher than the all India average to the AIBM(All India Benchmarking) level.

c) No. of activities under out sourcing in engineering organization.

d) Recommendation to surrender due to the posts lying vacant/ redundant.

3.8 As per letter no. E(MPP)96/1/15 dated 21.11.2017 [RBE No. 172/2017], the following activities come under safety category in Engineering Department:

| S No | Designation/ Post |
|------|--|
| 1. | JE/SSE / P.Way |
| 2. | JE/SSE Track Machines |
| 3. | JE/SSE / Bridges |
| 4. | JE/SSE / Works |
| 5. | Track Maintainer Gr.I, II, III,IV (i.e Mate, Keyman, Track man, Gate man, Petrol man, trolley man) |
| 6. | Black Smith |
| 7. | Welder |
| 8. | Technician (Track Machine) of open line and repair & maintenance depot/ workshops |
| 9. | Bridge Technician (Saran, Riveter, welder, Black smith, Grinder, Fitter, Machinist, Turner, and Driller) of open line organization and Bridge workshop |
| 10. | Helper of Black smith/ Welder |

P.WAY WING

3.9 Activities under Outsourcing/contracts in P.Way wing of engineering organization of SC division:

| SN | TRACK CONTRACTS-DEN/CENTRAL |
|----|---|
| 1 | SC-KZJ Section- Repairs to level crossing road surface and speed breakers in |
| 2 | SC-KZJ & SNF-MLY Sections: (i) CTR (P) of existing 52kg rails on PSC5 sleepers M+7/1660Nos /KM density with class-1 60kg rails (LWR) on new PSC6 sleepers 1660Nos/KM density for a length of 4.155KMs by PQRS/Manual method on UP, DN &SL lines and TRR(P) of existing 52kg rails on PSC6 sleepers on 1660Nos/KM density with 60kg rails (LWR) for a length of 22.099KMS on UP, DN & SL lines. |
| 3 | SC-KZJ Section: Through Turn out Rail Renewal of existing 1in 8.5/12/16 of 52/60kg CMS Crossings and switches with new 1 in 8.5/12/16 of 60kg CMS crossings & Switches with fittings 26sets (60kg).Through fitting Renewal of existing PSC sleeper for a length of 13.25KMs and Renewal of crushed GR pads for a length of 14.40KMs and Rear works behind BCM for a length of 62.736KMs. |
| 4 | SC-KZJ Section: - Proposed design mode tamping work and distressing of track from KM 252.60 to KM: 324.89 on UP & DN lines. Proposed shallow screening work, Proposed deep screening of points and crossing. |
| 5 | SC-KZJ SECTION:- CTR (P) of existing 52kg/90UTS rails with new 60kg rails on PSC6 sleepers at KM:196.21 to 196.69 for a length of 0.48km on third line. And at KM: 194.71 to 196.21 for a length of 1.50km on third line. TRR (P) exg. 60kg rails with new 60kg rails at KM: 195.00-196.00 & 197.00-198.00= 2.00KMs on UP line. Repairs to drain from skew bridge to bridge No.254 and repairing of formation under track near skew bridge. Proposed design mode tamping work and distressing of track from KM: 174.65 to KM; 252.60 on UP & DN lines. Proposed shallow screening work under. |
| 6 | SC-KZJ Section: Maintenance of yard surroundings by rag Picking along the |

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| | track between SC-CHZ, PGDP yard and KZJ yard . |
| 7 | SC-KZJ Section: - safety related track works from KM: 252.60 to 300.30 on UP & DN lines. Miscellaneous track works (Other than track Works) from KM: 252.60 to 300.30 on UP & DN lines. |
| 8 | SC-KZJ Section: - safety related track works from KM: 300.30 to 324.89 on UP & DN lines . Miscellaneous track works (Other than track Works) from KM: 300.30 to 324.89 on UP & DN lines. |
| 9 | SC-KZJ Section: - safety related track works from KM: 202.30 to 252.60 on UP & DN lines of SC-KZJ section in SSE / P.Way /GT section. Miscellaneous track works (Other than track Works) from KM: 202.30 to 252.60 on UP & DN lines. |
| 10 | SC-KZJ Section: - safety related track works from KM: 190.30 to 202.30 on UP & DN lines of WD-SC-KZJ section and 11/8 to 22.10 on SL line on SNF- MLY Bye pass line . Miscellaneous track works (Other than track Works) from KM: 190.30 to 202.30 on UP & DN lines of WD-SC-KZJ section and 11/8 to 22.10 on SL line on SNF-MLY Bye pass line . |
| 11 | SC-WD, HSJ-HYB & SC-KZJ sections -Through renewal of Crushed /Damaged ER/GR pads and damaged or sick hook bolts, corroded Split/Cotter pins on bridge Nos.6,7,8,10,11, 31,35,39 &42, on SNF-MLY section , Br.Nos.239,UP, 239 DN, 242 UP, 242DN, 245UP, 245DN, 246 UP & 246 DN on HSJ-HYB section and Br.Nos.318 UP , 318 DN, 366 UP, 366 DN & 442 DN on SC-KZJ section . |
| 12 | SC-KZJ section:- (i) TTRR(TWS):- Through Turnout rails renewal of Exg. 52/60Kg switches, lead rails and crossings in running lines with new 60 kg thick web switches for a total 21Sets, (ii) TTRR (TWS & WCMSC):- Through Turnout rails renewal of Exg. 52/60Kg switches, lead rails and crossings in running lines with new 60 kg thick web switches, lead rails and weldable CMS crossings for a total 10Sets, (iii)TFR (All Fittings) :- Through Fitting Renewal of Exg. 52/60Kg with new fittings for a total 29.956KMs, (IV)Through renewal of Rubber pads for a length of 4.77KMs and (V)Renewal of SEJs 17sets and (VI) Renewal of glued joints 280Nos, (VII) Rear works behind BCM for a length of 6.10KMs between SC-KZJ stations, under DEN/ Central/ SC |
| 13 | SC-KZJ section:- CTR(P) of existing 52kg rails on PSC5 sleepers M+7/1660Nos/KM density with class-I 60Kg rails (LWR) on new PSC6 sleepers 1660 Nos./KM density for a length of 0.563 KMs by PQRS/Manual method on UP& DN lines and TRR (P) of existing 52Kg rails on PSC6 sleepers on 1660 Nos/KM density with 60Kg rails (LWR) for a length of 20.77KMs on UP & DN lines. |
| 14 | SC-KZJ section: Proposed repairs to cess work on UP & DN sides from KM; 272 to 295 in between PBP-IPG stations and station approaches between WP-KZJ. |
| 15 | SNF- MLY- Bye pass section : repairs to cess work on SNF – MLY bye pass line: SC- KZJ Section : Proposed repairs / widening of cess and side slopes from Km: 202 to 252 on UP & DN lines between MLY – WP stations . |
| 16 | SNF-SC-KZJ section- Reconditioning of worn-out switches and CMS crossings with H-3C double electrode (using two electrode system CP BUFFER 040(Buffer layer) & CP TOP 080(Hard surfacing layer) approved by RDSO . |
| 17 | Up gradation of facilities to the passengers at Kazipet Magistrate court. Signalling arrangements in connection with interlocking of LC No. 48 Km-301/20-22 between GHANPUR -IPPUDUDA stations |
| 18 | SC-KZJ Section: deep screening of points and crossings, shallow screening and dismantling of abundant lines . |
| 19 | SC-KZJ section: Conversion of siding No. 01 as Up loop No. 02 with passenger fit and siding No. 02 as goods loop with direct reception and dispatch signals at MLY station. |
| 20 | SC-KZJ section - loading and un loading of P.Way materials at P.Way depot. |
| 21 | SNF-SC-KZJ Section - Reconditioning of worn-out CMS crossings with H-3C double electrode (using two electrode system CP BUFFER 040 (Buffer layer) & CP TOP 080 (Hard surfacing layer)) approved by RDSO under Sr.DEN / Central / SC Section. |
| 22 | SC-KZJ section - Supplying, Filling, stitching and Loading of sand Bags into Railway Wagons and Supplying of stone boulders for the Monsoon Reserve. |
| 23 | SC-KZJ Section - Proposed in situ reconditioning of CMS crossings by using |

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| | Translamic Robotic Welder Technology. |
| 24 | SC-KZJ Section: Proposed repairs to L1, L6, L7, L8, L9&L10 for a length of 2.522Kms and repairs to pit line 3 in lower yard and washing line in upper yard for a length of 1.008 Kms. |
| 25 | SNF-MLY section: Supply , installation, Commissioning and maintenance of track based way side lubricator (Electronic type) with dual applicator / wiper bar as per RDSO specification (complete)at SNF-MLY section . |
| 26 | SC-KZJ Sections :- safety related track works from KM:300.30 to 324.80 on UP & DN lines of SC-KZJ section in SSE / P.Way /CR/KZJ section, SW-II :Proposed miscellaneous track works(other than Safety related track items) from KM:300.30 to 324.80 on UP & DN lines of SC-KZJ section . |
| 27 | WD-SC-KZJ Sections: - safety related track works from KM: 202.30 to 252.60 on UP & DN lines .miscellaneous track works (other than Safety related track items) fromKM: 202.30 to 252.60 on UP & DN lines. |
| 28 | WD-SC-KZJ Sections :- safety related track works from KM:190.30 to202.30 on UP & DN lines and 11/8 to 22.10 on SL line on SNF-MLY Bye pass line . miscellaneous track works(other than Safety related track items) fromKM:190.30 to202.30 on UP & DN lines and 11/8 to 22.10 on SL line on SNF-MLY Bye pass . |
| 29 | SC-KZJ SECTION: Through renewal of thick web Switches and Weldable CMS crossings. |
| 30 | SC-KZJ SECTION : TRR(P) of Exg. 60Kg/90UTS rails on PSC6 sleepers 1660 density with new 60Kg/90UTS rails (LWR) for a total length of 7.136 KMs on UP & DN line, between SNF to KZJ stations.Through Fitting Renewal on PSC sleeper track on UP & DN lines for a length of 32.59KMs , Rear Works behind BCM on UP & DN lines for a length of 9.664KMs under Sr.DEN/Central/SC section. |
| 31 | WD-SC-KZJ Sections :- safety related track works from SSE / P.Way /ALER section |
| 32 | WD-SC-KZJ Sections :- safety related track works from SSE / P.Way /SNF section, |
| | TRACK CONTRACTS-DEN/CORD |
| 1 | left over works at LC.No. 73 & 47 of VKB-PRLI Section. LC. No. 16&18 SC-WD Section and LC. No. 47 VKB-PRLI Section. Left over works at LC.No. 36 SC-KZJ Section. LC. No. 15 SC-WD Section and LC. No.52 &64 VKB-PRLI Section-Reg. |
| 2 | Left over works at LC. No. 25& 56 in VKB-PRLI Section. |
| 3 | Annual maintenance contract for USFD machine at weldkit (Digital mode) Model EISTIEN SL No 2401, 2400, 2393, 2395, 2397, 2398 & 2399. |
| 4 | Regular maintenance of sewerage system which includes preventive as well as trouble shooting. |
| 5 | Repairs to pathways between L6-L7 and L7-L8 in lower yard an repairs to two wheeler parking beside coach care building on PF No. 10 side. Repairs to storm water drainage system at Secunderabad station (Towards HYB end). Repairs to distribution system of recycled water to coach washing line at Lower & Upper yard, Garden lines and platform apron washing lines. |
| 6 | Ultrasonic testing of rails and welds of track using contractors hand operated ultrasonic rail tester covering area of rail section etc. |
| | TRACK CONTRACTS-DEN/NORTH |
| 1 | KZJ-BPQ section - Reconditioning of worn-out 52/60Kg CMS crossings and Tongue rails with "H 3C"class (using two electrode system CP BUFFER 040 (Buffer layer) & CP TOP 080 (hard surfacing layer) |
| 2 | BPQ-KZJ Section :- (i) TRR(S) of existing 52Kg/ 90R/ 85LBS Rails on PSC Sleepers M+4/ M+7 density with class-II 52Kg rails at GL-1,2,3 MAGH Yard, BPA Coal yard, and loop line of Old PRPI & New PRPI yards (ii) Renewal of improved 60kg SEJ's with fittings and (iii) Additional Alterations in BPA yard for freight train examination. |
| 3 | BPQ-KZJ section – 1) TRR (P) of existing from track Kms -1.68 on DN line & 10.36 on UP line total 12.04kms between BPQ-KZJ stations (2) TSR(P) of existing 52/60kg rails from km 345-349 on UP line of KZJ-BPQ section. (3) TRR(S) isolated of existing 52kg/72/90outs (S) rails with 60Kg (S) rails on PSC6 |

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| | sleepers 1540/1660Nos./km density total 2.319kms on Single line of MAGH-GDCR section as per Annexure-B.(4) CTR(S) of existing 52Kg rails on PSC5 1540/1660 sleepers, with 60kg 90UTS(S) rails LWR track on PSC6(S) sleepers 1660No./km density of Bye pass line 1.20 kms on Single line of MAGH-GDCR section. |
| 4 | Inter changing of rails on Curves from kms 135-240 in between BPQ-BPA stations, Shifting of starter signals to the boundary of track circuit on BPQ-KZJ section. |
| 5 | BPQ- KZJ Section: Reconditioning of worn-out Tongue rails with 'H 3C' Class (Using two electrode system CP Buffer 040 (Buffer layer) & CP TOP 080 (hard surfacing layer) single brand welding electrodes . |
| 6 | BPQ-KZJ section: Supply, stacking of 50 mm gauge hard and durable machine crushed stone ballast to Railway specification at Railway depot at Hasanparthi Road station SC division and loading the same into Railway hoppers/Traffic ballast wagons by mechanical means. |
| 7 | BPQ-KZJ Section: Repairs to cess side , Non-cess side (in between tracks) on UP & DN sides at various locations as per Annexure - VII. |
| 8 | BPQ-KZJ, MAGH-GDCR & PDPL- LPJL Section: TRR (P) of existing 60 Kg rails on PSC 6 sleepers 1660 Nos / Km density with New 60 kg. 90 UTS rails (LWR), Through Rail Renewal (S) of existing 52 kg/72 UTS Rails on PSC5 Sleepers M+4 density with 52 kg (SH)/ 90UTS rails SWR: Rear works behind ballast cleaning machine during deep screening of ballast: Through fitting renewal, Repairs to sand humps . |
| 9 | BPQ -KZJ Section: safety related track works from km. 315 to 365 on Up & DN lines; Miscellaneous track works from km. 315 to 365 on UP & Dn lines. Rail barricading at loading points where loading is being done through JCB at Uppal stations. |
| 10 | KZJ-BPQ,MAGH-GDCR & PDPL-LPJL section-Proposed Alumino Thermic welding of Rail Joints with compressed Air Petrol/ LPG pre-heating with Automatic tapping thimble & multiple use crucible with three piece pre-fabricated Moulds (using 3 piece mould pre-fabricated mould (Zircon washed) single shot crucible fitted with automatic thimble tapping of molten metal with latest amendments) in accordance with IRS Specification No.IRST-19-2012 with Advance correction slip No. 1 of June 2013 and as amended from time to time for various works and Manufacture and supply of welding portions with all consumables and accessories in ADEN/RDM section . |
| 11 | BPQ-KZJ & PDPL-LPJL sections – Repairs to non-interlocked lifting barriers,boom locking, winches, etc. at manned level crossing gates including annual maintenance of non-interlocked manned gates. BPQ-KZJ Section – Repairs to Automatic banner flag, LED lamp, dual tone warning bell and PN generation Machine at non-interlocked manned level crossings between MAGH-HSP stations under Sr.DEN/North/SC section. |
| 12 | PDPL - LPJL Section: - safety related track works from KM: 1.645 to 83.870 on Single line, miscellaneous track works (other than Safety related track items) from KM 1.645 to 83.870 on single lines, of PDPL-LPJL section. |
| 13 | BPQ - KZJ Section: Miscellaneous track works, Track maintenance work for patch tripling work in between RGPM - Peddampeta and MCI - MMZ. |
| 14 | Proposed Safety related track works on Up & Dn Line of BPQ- KZJ PDPL - LPJL Section. Miscellaneous track work in SSE/P.Way /PDPL Section. |
| 15 | PDPL - NZB Section - TRR(P) of rails on PSC-6 sleepers with new rails (LWR) from 35.53 to 83.605 of 48.075 Kms on SL between Karimnagar and Medipalli stations. |
| 16 | KZJ-BPQ Section: CTR(S) of exg. 85 LB/90R/52kg(SH),rails laid on PSC5 / ST / CST-9 (SH) sleepers, with 60 kg (SH) rails on PSC6 (SH)sleepers1540 density including recoupment and increasing of ballast cushion to 30 cm. and deep screening of ballast, TRR(P) of Exg. 60Kg / 90UTS rails on PSC 6 sleepers 1660 density with new 60Kg / 90UTS rails (LWR) on UP & DN lines, Rear works behind ballast cleaning machine during deep screening of ballast, Through fitting renewal,between Kazipet and Balharshah stations . |
| 17 | BPQ-KZJ Section: safety related track works from Km:166.00 to 204.00 on Up & |

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| | Dn lines. Miscellaneous track works from Km:166 to 204 on Up & Dn lines KZJ-BPQ section in SSE/P.Way/SKZR sections. |
| 18 | BPQ-KZJ & MAGH-GDCR Sections : safety related track works from KM:135.00 to 166.00 on UP & DN lines of KZJ-BPQ section & from 0.00 to 28/12 MAGH-GDCR branch line, miscellaneous track works from KM:135 to 166 on UP & DN lines KZJ-BPQ section & from 0.00 to 28 / 12 MAGH-GDCR branch line. |
| 19 | KZJ-BPQ section:- (i) TTRR(TWS):- Through Turnout rails renewal of Exg. 52/60Kg switches, lead rails and crossings in running lines with new 60 kg thick web switches for a total 100Sets, (ii) TTRR (TWS & WCMSC) :- Through Turnout rails renewal of Exg. 52/60Kg switches, lead rails and crossings in running lines with new 60 kg thick web switches, lead rails and weldable CMS crossings for a total 7Sets between KZJ- BPQ stations. |
| 20 | BPQ- KZJ Section - Supply of sand, stone boulders, filling, stitching, loading in to railway wagons & supply of quarry dust, filling in empty cement bags and loading into railway wagons in Sr.DEN/North/SC jurisdiction for recoupment of monsoon Reserve stock. |
| 21 | BPQ - KZJ Section - safety related track works from Km.241.75 to 272.85 on Up & Dn lines. Miscellaneous track works from Km.241.75 to 272.85 on Up & Dn lines of KZJ - BPQ Section. |
| 22 | KZJ - BPQ Section: cutting, widening & Repairs to cess on Up & DN lines in between KZJ - BPQ Stations. |
| 23 | KZJ-BPQ section:PDPL-LPJL section proposed shifting of existing manned "C" class level crossing no.39 from km.79/3-4 to 79/4-5 in between Mallal-Lingampet Jagityal stations, Pro. Of lifting barriers at manned level crossing gate, construction of gate lodge, improvement of road surface & widening of road. Provision of height gauges. |
| 24 | MAGH-GDCR section-Supply, stacking of 50mm gauge machine crushed hard durable and angular stone ballast of approved quality as per Railway specifications to Ballast depot at GADCHANDUR station and loading the same into Railway hoppers/Traffic ballast wagons by Mechanical means. |
| TRACK CONTRACTS-DEN/SOUTH | |
| 1 | KZJ-BZA & MTMI-JPTN sec - safety related track work bet.KMT- MDR stns; |
| 2 | KZJ-BZA & MTMI-JPTN sections: Repairs to link road from LC No: 08 at Km. 7/10-11 to LC No: 09 at Km. 8/2-3 for closing of unmanned LC No: 08 between MTMI-JPTN stations. Improvement of approach road and widening of road at manned LC Nos.73, 74, 75, 76, 79, 80, 83, 84, 85, 86, 87 & 88 bet.NKD - GLA stns; Improvements of approach road and widening of road at manned LC Nos.60, 61, 62, 63A, 64, 65, 66, 67, 68, 69, 70 & 72 bet.KZJ-INK stns; Provision of rail barricading at manned LC Nos.62, 65, 69, 72 & 74 bet.KZJ-INK stns; Provision of shifting of manned gate lodge Nos.60, 83, 118 & 119 in connection with widening of road bet.KZJ-MTMI stns. |
| 3 | KZJ - KI sec - safety related track works from kms.488 to 568 on Up & Dn lines bet.KMT - KI stns and kms.0.00 to 31.00 bet.MTMI - JPTN stns S/line |
| 4 | KZJ - BZA, DKJ - MUGR & MTMI - JPTN sec - Proposed Alumino Thermic welding of rail joints with compressed Air petrol/LPG pre-heating with automatic tapping thimble & multiple use crucible with three piece pre-fabricated Moulds (using 3 piece mould pre-fabricated mould (Zircon washed) single shot crucible fitted with auomatic thimble tapping of molten metal with latest amendments) in accordance with IRS specification No.IRST-19-2012 with Advance Correction Slip No.1 of June 2013 and as amended from time to time for various works and Manufacture and supply of welding portions with all consumables and accessories. |
| 5 | KZJ - BZA sec - Supply & stacking of 50mm gauge hard machine crushed stone ballast to Railways specification at Railway Depot at Gangineni station in Secunderabad Division and loading the ballast same into Railway Hoppers / Traffic ballast wagons by mechanical means. |
| 6 | KZJ - KI sec - miscellaneous track works from km.368/80 to 407/18 on Up & Dn lines bet KZJ - NKD stns of SSE/P.Way/WL sec; kms.km.407/18 to 457/80 on Up & Dn lines bet NKD - GLA stns. |
| 7 | KZJ - KI sec - safety related track works from kms.368/80 to 407/18 on Up & Dn |

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| | lines bet.KZJ - NKD stns of SSE/P.Way/WL sec, from kms.407/18 to 457/80 on Up & Dn lines bet.NKD - GLA stns of SSE/P.Way/MABD sec, from kms.457/80 - 487/46 on Up & Dn lines bet.GLA - PNDP stns, from kms.0/00 - 16/00 on SL of DKJ - KRA stns & from kms 0/00 to 10/00 on SL of KRA - SYI stns of SSE/P.Way/DKJ sec and from kms.16/00 to 104/00 on SL bet KRA - MUGR stns of SSE/P.Way/BDCR sec. |
| 8 | KZJ - KI sec - (i) CTR (P) of extg 52kg/90 & 72 UTS rails on PSC sleepers M + 7 density with new 60kg/90UTS rails (LWR) on new PSC6 sleepers in BDCR Yd main line from kms.54/100 - 54/650; (ii) TRR (S) of extg 52kg/90R on PSC sleepers with Cl.II 52/60kg rails as per annexure (iii) Rear works behind BCM during deep screening of ballast bet BZA - KZJ stns. |
| 9 | KZJ - KI sec - Prop miscellaneous track works from kms.457/80 to 487/46 on Up & Dn lines bet.GLA - PNDP stns , from kms.0/00 to 16/00 on on SL of DKJ - KRA stns & from kms 0/00 to 10/00 on SL of KRA - SYI stns of SSE/P.Way/DKJ sec and from kms.16/00 to 104/00 on SL bet KRA - MUGR stns |
| 10 | KZJ - KI sec - (i) CTR (P) of extg 52kg/90 & 72 UTS rails on PSC 5 sleepers M + 7 density with new 60kg/90UTS rails (LWR) on new PSC6 sleepers incl recoupment and increasing of ballast cushion to 350mm and deep screening of ballast bet kms.469/25 - 469/974 on Dn line for a total length of 0.724kms; (ii) TRR (P) of extg 60kg rails on PSC 6 sleepers with new 60kg, 90UTS rails from kms.377/737 - 378/000, 382/000 - 383/274, 390/000 - 391/971, 392/960 - 394/733, 395/746 - 396/000, 494/000 - 495/000, 518/061 - 518/906, 521/800 - 522/060, 526/000 - 527/000, 527/25 - 528/015 Up line & 544/121 - 545/025 Dn line for a length of 10.309kms bet WL - GNN stns; (iii) TSR (P) of extg 60kg/90 UTS railson PSC6 sleepers with new PSC6 sleepersincl recoupment and increasing of ballast cushion from kms.451/00 - 453/00 on Dn line . |
| 11 | Shallow screening and de-stressing of LWR track works. |
| 12 | DKJ MUGR sec - CTR (P) of extg 52kg rails on PSC5 sleepers M+7/1540 Nos/km density with Cl.I 60kg rails (LWR) on new PSC6 sleepers 1660 Nos/km density for a length of 14.536kms from km.0.00 to 14.536 by PQRS/Manual method on Single line; SW2) Repairs to pit line at BDCR yard . |
| 13 | Repairs to LC Rd surface at Manned/Unmanned LCs on KZJ - BZA & DKJ- KRA-SYI sec, incl speed breakers under SSE/P.Way/DKJ sec; DKJ - MUGR sec Repairs to LC Rd surface at Manned/Unmanned LCs, incl speed breakers bet. KRA-MUGR stns Repairs to LC Rd surface at Manned/Unmanned LCs on KZJ - BZA & MTMI-JPTN sec, incl speed breakers. KZJ-BZA sec - Provn of road sign boards at manned LCs bet.KZJ-KI stns; Provn of road sign boards at manned and unmanned LCs bet.DKJ-MUGR & MTMI-JPTN sec & KZJ-BZA sec - Repairs to LC Rd surface and toilets at manned LCs bet.KZJ-GLA stns . |
| 14 | KZJ - KI sec - Supplying, filling, stitching and loading of sand bags, quarry dust and boulders into Railway wagons at DKJ and MDR yards for the monsoon reserve. |
| 15 | KZJ - BZA sec - supplying & laying of Biaxial Geo Grid and non-woven Geotextile made from polypropylene underneath the track in weak formation locations on Dn line bet.MDR - GNN stns |
| 16 | KZJ - KI sec:Rear works behind BCM during deep screening of ballast; TFR pads only as per Annexure;TTR renewal of extg 60kg switches, lead rails and crossings in running lines with new 60kg curved switches, lead rails and CMS Xings for total sets = 50 at various stations TRR (S) of extg 52kg/72UTS rails on PSC 5 sleepers with 52kg/90UTS rails SWR. |
| 17 | KZJ - KI; MTMI - JPTN & DKJ - MUGR sec - Re-conditioning of worn-out 52/60kg CMS crossing and Tongue rails. |
| 18 | KZJ - KI sec - In situ reconditioning of CMS crossing using Translamic Robotic Welder Technology. |
| 19 | KZJ - KI & DKJ - MUGR sec - extn of shunting neck by 200m at BZA end (by removal of hard rock strata) to accommodate full length Gods train; Repl of extg 60kg conventional SEJs without strap with 60kg Improved SEJs - 23Nos; TSR (S) of ballast siding at GNN Yd |
| 20 | Safety related track works on Up & Dn lines bet MDR - KI stns; track maintenance miscellaneous works on Up & Dn lines bet.MDR - KI stns under |

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| | SSE/P.Way/KI sec in ADEN/MDR sub-divn. |
| 21 | KZJ-KI sec -safety related track works on Up & Dn lines bet KMT - MDR stns and bet MTMI - JPTN stns (S/Line); track maintenance miscellaneous works on Up & Dn lines bet KMT - MDR stns and bet MTMI - JPTN stns (S/Line) . |
| 22 | KZJ-KI Section - (i) TTRR (TWS) –Through Turnout rail renewal of Exg. 52/60kg Switches, lead rails and crossings in running lines with new 60 kg thick web switches for total 94 sets; (ii) TTRR (TWS & WCMSC) – Through Turnout rail renewal of Exg. 52/60kg Switches, lead rails and crossings in running lines with new 60 kg thick web switches, lead rails and weldable CMS crossings for total 06 sets between KZJ-KI stations,. |
| 23 | KZJ - KI sec -TRR(P) of extg 60kg/90UTS rails on PSC 6 sleepers 1660 density with new 60kg/90UTS rails (LWR |
| 24 | WL - Development of Freight Terminal. |
| 25 | KZJ - KI & DKJ - MUGR sec - Deep screening of loop lines, bridge approach lines. |
| 26 | DKJ - MUGR sec - Strengthening of yard renewal and laying of Points & Xings at RUSG Sdg Yd under DEN/South/SC sec. |
| 27 | KZJ-KI sec - Proposed development of freight examination facilities at DKJ Jn yard |
| 28 | MTMI-Vishnupuram section: (1) CTR(S) of existing 90 R/52 Kg rails on ST/CST--9/PSC sleepers 1310/340/1540 Nos/KM density with CI-II 52 kg,72/90 UTS rails & CI-II PSC5/PSC6 sleepers SWR track at road No.1,2,4,5&6 yard lines at Jaggayyapeta station |
| 29 | KZJ-KI Section : Supply, installation, commissioning and maintenance of track based wayside lubricator(Electronic type) with dual applicator/wiper bar as per RDSO specification . |
| 30 | KZJ-KI & DKJ-MUGR sections- Rear works behind ballast cleaning machine during deep screening of ballast between KZJ-KI stations on UP & DN lines and DKJ-MUGR stations on SL line . |
| 31 | DKJ-MUGR Section: Proposed laying of loop lines in connection with proposed New crossing station at POCHARAM station. |
| | TRACK CONTRACTS-DEN/WEST |
| 1 | SC-WD & VKB-PRLI sections - Reconditioning of worn out CMS crossings and Switches with H 3B class welding electrodes. |
| 2 | SC-WD section-Proposed strengthening of existing 90 R rails on PSC sleepers M3 density with free rail joints with 52 kg CI-I rails, PSC sleepers to increasing of sleeper density 1540 Nos/KM: along with increasing of ballast cushion to 300 mm and LWR track at KM: 0/0 to 5.00 for a length of 2.50 KMs on CCI lead line at Tandur stations. |
| 3 | WD-SC section: - (i) CTR (P) of existing 52kg rails on PSC5 sleepers M+7/1660Nos/KM density with class-I 60Kg rails (LWR) on new PSC6 sleepers 1660 Nos./KM density by PQRS/Manual method on UP line and VKB-PRLI & SC-WD Sections :- Proposal for trolley refuges with released PSC sleepers . |
| 4 | Anti corrosive treatment by way of painting of rails and sealing of liner contact area ,Miscellaneous works (other than safety related track items), Rear works behind ballast cleaning machine during deep screening of ballast between WD-DRR stations. |
| 5 | Miscellaneous track works on UP & DN lines od WD-SC section , WD-SC ,VKB-PRLI Section. |
| 6 | WD-SC section: Proposed strengthening of existing 90R rails on PSC sleepers M+3 density with free rail joints with 52Kg(CI-I) rails, PSC sleepers to increasing of sleeper density 1540Nos/KM along with increasing of ballast cushion to 300mm and LWR track on CCI lead line at Tandur station. |
| 7 | Through Turn out Rail Renewal of existing 1 in 8.5/12 52/60Kg CMS crossings and Switches with new 1 in 8.5/12 60/52Kg CMS crossings & Switches with fittings 21sets (1 in12 - 18sets (60Kg), 1 in 8.5- 3sets (60Kg). Through Fitting Renewal (with rubber pads only) of existing PSC sleeper. Rear Works behind BCM. |
| 8 | WD-SC Section:- safety related track works , other than track works(miscellaneous works) . |

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|----|---|
| 9 | WD-SC section:- (i) CTR(P) of existing 52kg rails on PSC5 sleepers M+7/1660Nos/KM density with class-I 60Kg rails (LWR) on new PSC6 sleepers 1660 Nos./KM density for a length of 18.833 KMs by PQRS/Manual method on UP & DN lines and TRR(P) of existing 52 kg rails on PSC sleepers on 1660 Nos/KM density with 60 kg rails (LWR) . Trolley refuges with released PSC sleepers |
| 10 | WD-SC Section: repairs to cess work on Up & Dn sides from Km. 47/0 to 90.30 in between KQT-DRR stations and station approaches between KQT-DRR stations |
| 11 | KHNP-HMBD Section:repairs to cess work from Km. 0.65 to 38.5 on single line between Khanapur-Humnabad stations |
| 12 | SC-WD & VKB-PRLI Sections: Repairs to level crossings road surfaces and gate lodges SC-WD Section: Repairs to road surfaces by providing hard stone paver blocks at LC Nos. 2, 3, 3t, 4, 7, 9, 10, 12, 13 & 15 . |
| 13 | Manning of unmanned level crossing No. 23 at Km: 44/4-5 between MRF-KOHR stations on VKB-PRLI section. SC-WD & VKB-PRLI sections - Repairs to Non-interlocked level crossings, lifting barriers, winches and boom locking etc., SC-WD & VKB-PRLI Sections - Repairs to non-interlocked gates, automatic banner flags and PN generation machines etc |
| 14 | Wadi - Secunderabad section - Supply, stacking of 50mm gauge hard and durable machine crushed stone ballast to Railway's specification at Railway depot at SHANKARPALLY station |
| 15 | VKB-PRLI Section:repairs to cess work in between PNF- GTU stations , between GTU-PRLI stations |
| 16 | WD-SC Section: Proposed repairs to cess work on Up & Dn sides from Km.3/0 to 47/0 in between WD-KQT stations and station approaches between WD-KQT stations. |
| 17 | Through Turnout Rails Renewal of Exg. 52/60 Kg switches, lead rails and crossings in running lines with new 60 Kg thick web switches . TFR (All Fittings) - Through Fittings Renewal of Exg. 52/60 Kg with new fittings (3) Renewal of glued joints 235 Nos. Rear works Behind BCM between WD-SC stations. |
| 18 | CTR(P) of existing 52kg rails on PSC5 sleepers M+7/1660Nos/KM density with class-I 60Kg rails (LWR) on new PSC6 sleepers 1660 Nos./KM density |
| 19 | Khanapur - Additional facilities at pit line and coach maintenance. |
| 20 | safety related track works on WD-SC section |
| 21 | VKB-PRLI section: safety related track works. |
| 22 | SC-WD & VKB-PRLI sections:repairs to sand humps and lifting of sand humps and provision of pucca CC dead ends under ADEN/VKB & ADEN/BIDRT sub divisions. |
| 23 | Bidar - Sultanpur section of new BG line between Bidar - Gulbarga stations - Maintenance of newly laid BG track from Ch.36500m to Ch.96000m between Humnabad (incl.) and sultanpur (Excl.) stations including Loop lines / sidings, Points & Crossings etc., in Humnabad, Hallikhed(K), Kurukotta and Kamalapur yards |
| 24 | BTNR-LPI - TLPR-RCPTMaintenance of yard surroundings by Rag picking (09) MMTS stations (BTNR-BRBD-HTCY-HFZ-CDNR-LPI-TLPR-BHEL-RCPT) |
| 25 | WD-SC section:- CTR(P) of existing 52kg rails on PSC5 sleepers M+7/1660Nos/KM density with new 60Kg/90UTS rails (LWR) on new PSC6 sleepers 1660 Nos./km including recouplement and increasing of ballast cushion to 35cm and deep screening of ballast for a total length of 6.204 KMs on UP & DN between TDU - LPI stations TRR(P) of Exg. 60Kg/90UTS rails on PSC 6 sleepers 1660 density with new 60Kg/90UTS rails (LWR) for a total length of 15.571 KMs on UP line between TDU-LPI stations. |
| 26 | SC-WD section: TFR (All fittings) on PSC sleepers track for a length of 19.82 Kms at various locations. SC-WD & VKB-PRLI section: Through Ballasting of track along with deep screening by BCM for a length of 33.35 KMS at various locations.TTR of existing ST/Wodden layouts with FSL-2 Nos and derailing switch 01 nos and TTRR of existing 52/60 kg switches, lead rails-19 sets |

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

| S.No | Section SSE/Pway / ADEN / DEN / Sr.DEN | Jurisdiction | | ETKM |
|------|--|--------------|--------|---------------|
| | | From KM | To KM | |
| 1 | 2 | 3 | 4 | 5 |
| 1 | MAGH | 135.00 | 166.00 | 169.05 |
| | MAGH - GDCR | 0.00 | 28.65 | |
| 2 | SKZR | 166.00 | 204.00 | 152.04 |
| 3 | BPA | 204.00 | 241.74 | 161.27 |
| | ADEN / BPA | | | 482.36 |
| 4 | MCI | 241.74 | 272.85 | 152.15 |
| 5 | PDPL | 272.85 | 315.00 | 193.185 |
| 6 | KRMR (PDPL - KRMR) | 0.00 | 83.605 | |
| 7 | N/KZJ | 315.00 | 365.00 | 176.04 |
| | ADEN / RDM | | | 620.29 |
| 8 | WL | 368.80 | 407.10 | 150.69 |
| 9 | MABD | 407.10 | 457.80 | 185.54 |
| | ADEN/S/KZJ | | | 336.23 |
| 10 | DKJ | 457.80 | 487.46 | 177.07 |
| 11 | BDCR (DKJ - MUGR) | 0.00 | 103.83 | 156.55 |
| | ADEN/DKJ | | | 333.62 |
| 12 | MDR | 487.46 | 532.80 | 239.37 |
| 13 | MTMI - JPTN | 0.00 | 31.90 | |
| 14 | KI | 532.80 | 568.00 | 144.74 |
| | ADEN / MDR | | | 384.11 |
| 15 | SC - SNF | 174.65 | 194.36 | 97.33 |
| | | 179.00 | 184.90 | |
| 16 | SC | 194.36 | 201.56 | 124.75 |
| 17 | GT | 201.56 | 252.60 | 193.61 |
| | ADEN / E & SW / SC | | | 415.69 |
| 18 | ALER | 252.60 | 300.13 | 173.97 |
| 19 | C/ KZJ | 300.13 | 324.89 | 146.02 |
| | BPQ - KZJ- BZA | 365.00 | 368.80 | |
| | ADEN/ N / KZJ | | | 319.99 |

| | | | | |
|----|--------------------|--------|--------|----------------|
| 20 | VKB | 90.20 | 129.40 | 164.27 |
| 21 | LPI | 129.40 | 174.65 | 189.62 |
| 22 | ZB | 0.51 | 64.72 | 100.97 |
| | ADEN / VKB | | | 454.86 |
| 23 | SEM | 3.00 | 47.00 | 180.37 |
| 24 | TDU | 47.00 | 90.20 | 163.11 |
| | ADEN / TDU | | | 343.48 |
| 25 | BIDR | 64.72 | 129.81 | 140.020 |
| 26 | UDGR | 129.81 | 200.92 | 106.25 |
| 27 | PRLI | 200.92 | 267.77 | 113.35 |
| | ADEN / BIDR | | | 359.62 |
| 28 | New Lines | | | 183.41 |
| | GRAND TOTAL | | | 4233.66 |

3.11 Present manpower of P.Way wing of Engineering department:

| P.Way Wing –Safety category | | | | | |
|--|--------------------------------|------------------|-----------------|----------------|----------------|
| S.No. | Designation | Grade Pay | Sanction | On Roll | Vacancy |
| 1 | Senior Section Engineer(P.Way) | 4600 | 149 | 114 | 35 |
| 2 | Junior Engineer(P.Way) | 4200 | 136 | 52 | 84 |
| 3 | Safety Counsellors | 4600 | 1 | 1 | 0 |
| 4 | Track Maintainer I | 2800 | 596 | 330 | 266 |
| 5 | Track Maintainer II | 2400 | 1156 | 901 | 255 |
| 6 | Track Maintainer III | 1900 | 1156 | 1066 | 90 |
| 7 | Track Maintainer IV | 1800 | 2585 | 2779 | -194 |
| 8 | Technician(MCM)/B.Smith | 4200 | 15 | 11 | 4 |
| 9 | Technician I /B.Smith | 2800 | 29 | 6 | 23 |
| 10 | Technician II /B.Smith | 2400 | 4 | 1 | 3 |
| 11 | Technician III /B.Smith | 1900 | 20 | 14 | 6 |
| 12 | Technician(MCM)/Welder | 4200 | 4 | 3 | 1 |
| 13 | Technician I /Welder | 2800 | 8 | 2 | 6 |
| 14 | Technician II /Welder | 2400 | 1 | 3 | -2 |
| 15 | Technician III /Welder | 1900 | 63 | 9 | 54 |
| | | Total | 5923 | 5292 | 631 |
| P.Way Wing –Non-safety category | | | | | |
| S.No. | Designation | Grade Pay | Sanction | On Roll | Vacancy |
| 1 | Assistant(P.Way) | 1800 | 254 | 238 | 16 |
| 2 | Technician(MCM)/GM Striker | 4200 | 4 | 4 | 0 |
| 3 | Technician I /GM Striker | 2800 | 8 | 4 | 4 |
| 4 | Technician II /GM Striker | 2400 | 1 | 0 | 1 |
| 5 | Technician III /GM Striker | 1900 | 3 | 3 | 0 |
| | | Total | 270 | 249 | 21 |
| | Grand Total | | 6193 | 5541 | 652 |

3.12 Requirement of Manpower of P.Way organisation:

| | |
|---|--|
| IR Average of Jan-2020 | 1.26 men per ETKM |
| Total ETKM | 4233.66 |
| Requirement of manpower =IR averagexETKM | $4233.66 \times 1.26 = 5334.41$ say 5334 |
| Total sanctioned staff in P.way | 6193 |
| Staff excess to the requirement | 6193-5334=859 |

From the above table it is observed that requirement of P.Way organization with respect to IR average is 5334 men for the ETKM of 4233.66. The sanctioned staff strength of P.Way organization is 6193 and found 859 staff is excess to the requirement.

Most of the activities permitted to work under Contract in Engineering organization. Some works are being done on Zonal contract. The work load is being reduced due to contracts/ outsourcing of non-core activities. Hence the following 21 Non-safety/ redundant posts are recommended to surrender.

| S.No. | Designation | Sanction | On Roll | Vacancy |
|-------|------------------|------------|------------|-----------|
| 1 | Assistant(P.Way) | 254 | 238 | 16 |
| 2 | GM Striker | 16 | 11 | 5 |
| | Total | 270 | 249 | 21 |

WORKS WING

3.13 Activities under Outsourcing/contracts in Buildings wing of engineering organization of SC division:

| | BUILDINGS CONTRACTS- DEN/CENTRAL |
|----|--|
| 1 | Repairs to fly proof mesh to windows and doors shutters, repairs to broken glasses of windows and repairs to old and leakage AC sheet roofing of verandah to staff quarters in DLS/KZJ colony. Proposed shifting of SM panel room to existing waiting hall at PQL. |
| 2 | Repairs to staff quarters, plastering, flooring, kitchen, bath and toilets, doors and windows, damaged compound walls and damaged drainage system. Repairs to officers rest house, store room and toilets for watchmen of ORH at KZJ. Proposed repairs to old sick line shed service building for trainee's hostel. SNF- Repairs to running room and proposed conversion of open place into counselling room between crew lobby – lounge |
| 3 | Repairs to open drains and sewer lines of multi-storeyed quarters in DLS colony at KZJ. Augmentation of water supply to stations and colonies. Repairs to old RCC water tanks and pipe lines of multi storied quarters in DLS colony at KZJ. |
| 4 | Annual Maintenance of RO plant of 3.2 Lakh capacity /KZJ |
| 5 | Providing housekeeping and maintenance service to Civil Engineering Training school and hostel for Group C & D at KZJ Providing housekeeping and maintenance of Officers Rest House and Sub-ordinate Rest House at Kazipet |
| 6 | Repairs to Electric Loco shed by replacing the AC sheet roofing with galvalume sheeting at ELS/KZJ |
| 7 | Proposed repairs to SSE/ P.way/SC stores at Secunderabad. Repairs to Lallaguda Station building. False ceiling and solar reflective index for running rooms |
| 8 | Proposed repairs to side drains on SNF-MLY bye pass line, between SC -MLY stations |
| 9 | Replacement to door and windows with mosquito proof mesh at CHZ, GT, ALER, ZN & DLS/KZJ |
| 10 | Kazipet - Repairs to P.Way depot shed, by replacing AC sheet roofing and side walls with galvalume sheeting and provision of dwarf compartments in sheds for stacking P.Way fitting. |
| 11 | Repairs to approach road to SNAG in Goods complex/SNAG at SNF |
| 12 | SC-KZJ Section- Proposed 3.0 Mts. wide FOBs at Raigir and Pembarti Stns |
| 13 | Maintenance, repair /replacement in respect of petty works in station building, service buildings and staff quarters at MLY. |
| 14 | WD-SC section: Repairs to Compound wall at OHE Depot and Repairs to SSE/OHE/SNF office, roof sheeting for Work shop, Lorry shed, Tower car shed, Rolling shutter & Repairs to Station name boards at SNF& NCHS stations |
| | BUILDINGS CONTRACTS- DEN/ CORD |
| 1 | Repairs to platform flooring on platform No 3&4 and 5&6Repairs to Dy SS office on platform No 1. |
| 2 | Repairs to existing GI pipe line for carriage watering hydrant lines in between road No 1&2 and 3&4 and 5&6. Repairs to RCC catwalk, battery steps, flooring and other miscellaneous repairs on lower yard pit lines |
| 3 | Repairs to mosquito proof doors and windows for staff quarters at HYB, BMT and HSJ Jn stations. Repairs to windows , doors, flooring in bed rooms and toilets, kitchen platform, rain water & sewage pipe line system for staff quarters art Begumpet station |
| 4 | Sanchalan Bhavan- Repairs to multipurpose meeting hall on 5 th floor Repairs/replacement of dilapidated PVC water tanks and repairs to pipe line., ELS/LGD: Repairs to compound wall on north Lallaguda side, toilets of administration buildings & SSE/Genl office, roof trusses and shifting of parking area, paving of open areas to facilitate movement of men and material and luppam finishing to administration building and other buildings, water supply and drainage lines |
| 5 | SC station: Improvements to retiring rooms. Repairs and improvements to PF |

| | |
|----|---|
| | surface and sitting pedestals on PF No 01 towards HYB end. Repairs and improvements to PF floorings on PF No 1 at entry and exit gate Nos 02 & 03 and Non-slippery area and repairs to granite sitting pedestals. Provision of toilet facilities at various stations over SC division for PWD (SC & HYB stations) |
| 6 | Secunderabad-Repairs to platform flooring on platform No 01 by the sides of entry and exit gate |
| 7 | Secunderabad-Repairs to SSE/W/SC office & staff room and repairs to shed in front of inward parcel office. Repairs to existing Dy SS/Lower yard office at HYB end and repairs to flooring and drainage arrangements of outward parcel office. Repairs to Divisional store at ADSTE/SC office near RRI/SC. Repairs to steps of FOB stair way and stone craft area and floorings on platform No 8&9. Emergency repairs to track in AC coaches maintenance shed of IOH shed |
| 8 | Secunderabad: Repairs and strengthening of Mezzanine floor over sleeper class waiting hall and slab of old retiring rooms on platform No.1.Dismantling of damaged catwalk and pipe lines and provision of pipe line and pathways for pit line in upper yard. Repairs to linen room and storage facility in bed roll section on platform No 1 and repairs to toilet block in TTE's rest room and improvements and replacing of damaged shed of outward parcel office with RCC slab and platform No.1 |
| 9 | Hyderabad-Repairs to AC shed flooring. Repairs to pathways and drainage in SP-1 & SP-2 yards. Repairs to RMS TMO, parcel sorting and packet sorting office building I ground floor and first floor, express parcel office RMS building: Removing old leaky roofs, removing of plastering and re-plastering and raising of the flooring. |
| 10 | Repairs to officer's chambers, Concourses at Sanchalan Bhaba. Repairs to RPF Barrack of SC Division. |
| 11 | Maintenance of existing Gardens/Lawns/Landscape and replacement of damaged/dried up landscapes at Secunderabad station and yard and Sanchalan Bhavan and DRM SC |
| 12 | BPQ-KZJ, WD-SC, VKB-PRLI and SC-KZJ sections- Updating, Reconciling and certifying of Railway land boundaries |
| 13 | Secunderabad - Extension of Intermediate over Hauling shed. |
| 14 | Hyderabad: Rain water harvesting system to capture rain water from roof and non roof area.Hyderabad: Improvements to gardens, provision of shady tree cover organic garden and vertical gardens. |
| 15 | Secunderabad: Repairs to waste water recycling plant. Repairs to platform surface, Non-Slippery portion, Approach ramp, water troughs, rain water and drainage arrangements on platform No.2&3 from central FOB to KZJ end. Repairs to KOTA Stone flooring on platform No.10 between KZJ end FOB to HYB end FOB. Repairs to all FOB steps on PF No.1,2&3 and 4&5, 6&7 and 10. James street: Repairs to Damaged masonry compound wall with PCC wall on platform No.2. |
| 16 | Repairs to damaged flooring, Sanitary fittings, water supply system, Drainage system and Improvements to passenger Amenities at SJVP, JET, LKDP and NLRD stations. Improvements / Repairs to Roof leakages of COP's on PF.No.1, 2&3, 4&5 and 6&7 at "Secunderabad" station. |
| 17 | Maintenance, repair / replacement in respect of petty works in station buildings, Service buildings and staff quarters. |
| 18 | Maintenance, repair -Annual Zonal contract – Secunderabad (including) and BG Divl. Office Complex to James street (including) |
| 19 | Maintenance, repair -Annual Zonal contract – Hyderabad (including) and Begumpet (Including)-Hussansagar Jn (including) |
| 20 | Improvements to RPF out post at Begumpet station. Secunderabad-Repairs/renovation of waiting halls, booking office, waiting rooms on platform No 1 side. |
| 21 | Up-keeping of Sanchalan Bhavan Circulating area and other allied offices of SC Division (Sr DEE/M/SC, uniform cell, SSE/USFD office, ADENs offices, Record rooms of Engineering, Accounts, Personal department, staff lunch room, JE/W/SB/SC office, stores) |
| 22 | Repairs to health unit at CKL, Repairs to approach road and internal roads in |

| | |
|----|---|
| | ELS/LGD |
| 23 | Repairs to health unit at chilakalaguda, Repairs to approach road and internal roads in ELS/LGD shed |
| 24 | Repairs / Rehabilitation of RCC distress beams, Columns, Slab, Facia at Terrace level and External Brightening of Sanchalan Bhavan. Secunderabad :- Remodelling of Parcel office. |
| | BUILDINGS CONTRACTS- DEN/ NORTH |
| 1 | Repairs to health unit at BPA. Repairs to officers Rest House, Sub ordinate rest house at Karimnagar. False ceiling and solar reflective index for old and new Running rooms at Pandarpavani, RDM and BPA. |
| 2 | Repairs to A/C sheets of front veranda and toilet roof, Repairs to roof leakage & plastering of Quarters at BPA, RECH, ASAF, SKZR, SRUR, MKDI, WIRR,VHGN, MAGH.Repairs to toilet and kitchen of Quarters, court yard flooring of Quarters ,doors and windows of Quarters, court yard doors of Quarters at BPA, SKZR, MAGH and other stations in ADEN/BPA section. Repairs to roof leakages in S & T buildings in ADEN/BPA section |
| 3 | BPQ-KZJ Section - Provision of toilets, water facilities including pumping arrangement, storage tank, etc., at manned level gates between MAGH-HSP stations.BPQ-KZJ & MAGH-GDCR Sections - Provision of furniture and infrastructure, water facilities including Pumping arrangement, storage tank, etc., at manned level gates . Repairs to fibre reinforcement precast RCC centre & outer blocks at manned level crossings and Supply and installation of Bio-toilet 5 nos of manned level crossings between MAGH-HSP stations. |
| 4 | Providing house- keeping and maintenance for Officers Rest House at RDM, KRMR, BPA,SKZR and BPQ, Subordinate Rest House at RDM BPQ, BPA, SKZR and TTM rest room at RDM, PDPL, SKZR, BPA WIRR & MAGH |
| | BUILDINGS CONTRACTS- DEN/ SOUTH |
| 1 | Provision of additional bore wells at YP MDR & BKL and deepening of open wells at CKN, BKL, MDR & GNN Repairs to staff quarters, plastering, flooring, doors & windows, mosquito mesh and verandah roofing; Repairs to circulating area surface at PNDP, CKN, BKL & MDR. |
| 2 | BKL- Repairs to water supply line of service bldg & Rly colonies; Repairs to Type II & III qrtrs; Type I qrtrs |
| 3 | BDCR - Repairs to water supply pipe line repairs to open drains and sewerage pipe line at BDCR colony. Deepening of open wells and drilling of bore wells at CLE, YGL, INK, GUU, GLA, NKD,KDM & MABD. |
| 4 | Repairs to staff staff quarters at GLA, GUU, MABD & CLE stns |
| 5 | Repairs to boundary walls in BDCR stn and colony |
| 6 | KMT – Improvements to colony drains by covering with precast covers |
| 7 | Improvements to East side façade at WL stn. |
| 8 | Repairs and conversion of 2Nos of Type I qrtrs (28/01&02) into RPF barrack at MABD. Improvements to office and stores of SSE/P.Way/MABD. |
| 9 | Repairs to deep bore wells and delivery pipe line at WL, CLE and YGL stns Repairs to flooring at P/F Nos 1, 2 & 3 and Improvements to waiting hals at KMT stn. |
| 10 | Providing Housekeeping & maintenance for Officer's Rest House at WL, DKJ, BDCR, MUGR, Sub-ordinate Rest House at DKJ, BDCR, MUGR and TTM Rest Room at MABD |
| 11 | KMT-Repairs to RPF office at Khammam.Repairs to circulating area and road to saloon siding at Bhadrachalam Road station. |
| 12 | repairs to staff quarters flooring, walls, roof leakage, toilets, doors, windows, kitchen platforms, water supply & drainage systems at BDCR&MUGR colonies |
| 13 | Provn of pathways for Divyang persons, interconnecting platforms at DKJ & PPY. Repairs to platform name boards at MTMI, BKL, NVC, CKN, PNDP, MDR, TNGM, YP, GNN & CVV stations. |
| | BUILDINGS CONTRACTS- DEN/ WEST |
| 1 | Repairs to inside flooring with ceramic tiles and repairs to drainage arrangements to staff quarters. Repairs to colony roads and circulating areas at DRR, GDQ, VKB, CTF& GGD stations. Repairs to front verandah sheds with |

| | |
|---|---|
| | Galvolume sheets and clearance of debris in colony. |
| 2 | Repairs to staff quarters at Seram, Kurgunta, Malkhaid Road, Chittapur&Suheli stations, SW-2- Repairs to colony roads and circulating areas at RMY,MVH,TDU,NAW,KQT,SEM,MQR & CT stations. |
| 3 | Repairs to station Buildings ,Platform surfaces ,Pay and use toilets, Drainage arrangements, Water troughs at DRR, GDQ, VKB,CTF, GGD&SKP Stations Repairs to OHE tower car sheds & PSI office at TDU, SEM, MQR & VKB stations. |
| 4 | Repairs to S&T service buildings in ADEN/Bidar Sub-Division. Provision of Rolling in examination facilities at Bidar & Parli Stations. condemnation of old vacant abandoned staff quarters |
| 5 | Repairs to staff quarter's doors and windows with fly proof mesh, leaky roofs, front verandah, flooring, plastering and toilets at PRLI, LTRR, UDGR, BHLK & BIDR stations. |
| 6 | Proposed for plantation, green patch, Rain water harvesting pits, Digging ponds and water efficient fixtures, RO plant at PARLI, BIDAR, BHALKI, UDGR, LATUR ROAD, ZAHIRABAD & VIKARABAD under ADEN/VKB and ADEN/BIDR section. |
| 7 | Maintenance of repair / replacement in respect of petty works in station buildings, service buildings and staff quarters |

3.14 Work load of Works wing of Engineering department:

| S.N | ADEN | Plinth Area of Service & Resident ial Building s | Pumping stations & Purificati on Plant | Pipe line length | Platform Length | | Roads | Length of Foot Over Bridge | Circul ating Area |
|-----|--------------------|--|--|----------------------------------|-----------------|---------------|-----------------------------------|----------------------------|-------------------|
| | | 1 ITKM = 1500 Sq.m | 1 Station = 5 ITKM | Water pipe line, Sewer Pipe line | Cove red PF | Uncove red PF | Inside colonies, Outside colonies | | |
| 1 | ADEN / BPA | 81.74 | 160.00 | 34.67 | 3.40 | 16.01 | 50.46 | 10.20 | 1.272 |
| 2 | ADEN / RDM | 40.43 | 30.00 | 27.43 | 18.12 | 24.72 | 36.10 | 16.97 | 5.35 |
| 3 | ADEN /S/KZ J | 18.76 | 45.00 | 31.93 | 9.82 | 11.93 | 17.63 | 7.44 | 3.06 |
| 4 | ADEN /DKJ | 31.71 | 30.00 | 42.15 | 1.09 | 1.89 | 34.96 | 2.32 | 3.21 |
| 5 | ADEN / MDR | 17.40 | 55.00 | 29.67 | 2.50 | 13.24 | 15.20 | 7.44 | 4.21 |
| 6 | ADEN / E & SW / SC | 0.00 | 145.00 | 93.25 | 51.08 | 24.68 | 40.75 | 28.05 | 11.43 |
| 7 | ADEN / N / KZJ | 0.00 | 80.00 | 51.41 | 9.81 | 32.66 | 53.09 | 12.75 | 4.43 |
| 8 | ADEN / VKB | 24.33 | 85.00 | 10.00 | 9.13 | 1.82 | 12.56 | 26.32 | 6.24 |
| 9 | ADEN / TDU | 19.27 | 60.00 | 19.40 | 7.88 | 10.73 | 24.32 | 11.28 | 2.23 |
| 10 | ADEN | 16.27 | 85.00 | 20.60 | 5.84 | 21.10 | 23.37 | 3.92 | 4.25 |

| | | | | | | | | | |
|--|------|--------|--------|--------|--------|--------|--------|--------|-------|
| | / | | | | | | | | |
| | BIDR | | | | | | | | |
| GRAND TOTAL | | 249.91 | 775.00 | 360.52 | 118.67 | 158.77 | 308.44 | 126.69 | 45.68 |
| Total ITKM of Works wing of Engineering Department =2143.68 | | | | | | | | | |

NOTE :

1500 Rm of Pipe line = 1 ITKM

5000 Sq.m of UnCovered PF = 1 ITKM

1500 Sq.m of Covered PF area = 1 ITKM

5000 Sq.m of Circulating Area = 1 ITKM

500m of Roads = 1 ITKM

50m of FOB length = 1 ITKM

1 Pumping Station = 5 ITKM

3.15 Present Manpower of Works wing of Engineering department:

| Works Wing –Safety category | | | | | |
|--|---------------------------------|------------------|-----------------|----------------|----------------|
| S.No. | Designation | Grade Pay | Sanction | On Roll | Vacancy |
| 1 | Senior Section Engineer(Works) | 4600 | 20 | 22 | -2 |
| 2 | Junior Engineer(Works) | 4200 | 27 | 17 | 10 |
| 3 | Senior Section Engineer(Drg) | 4600 | 19 | 15 | 4 |
| 4 | Junior Engineer(Drg) | 4200 | 12 | 6 | 6 |
| | Total | 78 | 60 | 18 | |
| Works Wing –Non-safety category | | | | | |
| S.No. | Designation | Grade Pay | Sanction | On Roll | Vacancy |
| 1 | Technician(MCM)/ FitterPipeline | 4200 | 3 | 2 | 1 |
| 2 | Technician I /Fitter Pipeline | 2800 | 8 | 3 | 5 |
| 3 | Technician II /Fitter Pipeline | 2400 | 0 | 0 | 0 |
| 4 | Ch.OS | 4600 | 22 | 20 | 2 |
| 5 | OS | 4200 | 38 | 36 | 2 |
| 6 | Sr.Clerk | 2800 | 20 | 4 | 16 |
| 7 | Divisional Accountant | 4600 | 1 | 1 | 0 |
| 8 | Assistant(Works) | 1800 | 63 | 56 | 7 |
| 9 | House Keeping Assistant(Works) | 1800 | 0 | 4 | -4 |
| 10 | Technician(MCM)/Painter | 4200 | 3 | 4 | -1 |
| 11 | Technician I /Painter | 2800 | 2 | 4 | -2 |
| 12 | Technician II /Painter | 2400 | 2 | 2 | 0 |
| 13 | Technician III /Painter | 1900 | 2 | 3 | -1 |
| 14 | Technician(MCM)/Mason | 4200 | 4 | 1 | 3 |
| 15 | Technician I /Mason | 2800 | 5 | 0 | 5 |
| 16 | Technician II /Mason | 2400 | 0 | 0 | 0 |
| 17 | Technician III /Mason | 1900 | 0 | 3 | -3 |

| | | | | | |
|----|---------------------------|--------------------|------------|------------|-----------|
| 18 | Technician(MCM)/Carpenter | 4200 | 6 | 1 | 5 |
| 19 | Technician I /Carpenter | 2800 | 10 | 3 | 7 |
| 20 | Technician II /Carpenter | 2400 | 1 | 0 | 1 |
| 21 | Technician III /Carpenter | 1900 | 1 | 5 | -4 |
| 22 | Technician II / Driver | 2400 | 0 | 1 | -1 |
| 23 | Technician III / Driver | 1900 | 7 | 3 | 4 |
| 24 | Jr.Clerk-cum-Typist | 1900 | 1 | 12 | -11 |
| 25 | Assistant(Lascar) | 1800 | 0 | 1 | -1 |
| 26 | Assistant(survey Khalasi) | 1800 | 3 | 9 | -6 |
| | | Total | 202 | 178 | 24 |
| | | Grand Total | 280 | 238 | 42 |

3.16 Requirement of Manpower of Works wing:

Fitter Pipeline: This activity is a non-safety & noncore activity. Most of the plumbing activities in the Engineering organization are outsourced and the activity is not regular work. Hence, this activity became redundant and vacant posts may be surrendered.

COS/OS, Clerk/typist: This activity is a non-safety & noncore activity. This activity became redundant and vacant posts may be surrendered.

Mason: This activity is a non-safety & noncore activity. Most of the mason activities in the Engineering organization are outsourced and the activity is not regular work. Hence, this activity became redundant and vacant posts may be surrendered

Carpenter: This activity is a non-safety & noncore activity. Most of the carpenter activities in the Engineering organization are outsourced and the activity is not regular work. Hence, this activity became redundant and vacant posts may be surrendered

Drivers: This activity is a non-safety & noncore activity. Outsourced Vehicles are being used in the Engineering organization. As this activity became redundant, vacant posts may be surrendered

Most of the activities permitted to work under Contract in Engineering organization.some works are being done on Zonal contract.The work load is being reduced due to contracts/ outsourcing of non-core activities. Hence the following 32 Non-safety/ redundant posts are recommended to surrender.

| S.No. | Designation | Sanction | On Roll | Vacancy |
|-------|-----------------|------------|-----------|-----------|
| 1 | Fitter Pipeline | 11 | 5 | 6 |
| 2 | COS/OS | 60 | 56 | 4 |
| 3 | Clerk/typist | 21 | 16 | 5 |
| 4 | Mason | 9 | 4 | 5 |
| 5 | Carpenter | 18 | 9 | 9 |
| 6 | Drivers | 7 | 4 | 3 |
| | Total | 126 | 94 | 32 |

BRIDGES WING

3.17 Activities under Outsourcing/Contracts in bridges wing of engineering organization of SC division:

| SN | BRIDGES CONTRACTS- DEN/CENTRAL |
|----|--|
| 1 | SC-KZJ Sec: Repairs to bridge protective work |
| 2 | SC-KZJ section- Bridge No.388/A -extension for provision of additional water way |
| | BRIDGES CONTRACTS- DEN/CO-Ord |
| 1 | Complete painting of bridges and structures |
| 2 | Painting to Bridges and structures comprising of FOB's at VKB, BIDR,LTTR,BKLK,KHNP,PRLI, Bridge No's 33,182 and patch painting to various structures and provision of hand railing arrangement for bridges in VKB-PRLI Section-Reg. |
| 3 | KZJ-BZA Section. Proposed Construction of additional vent way to existing road under Bridge No. 482A (Subway) at km 376/19-21 as pre cast RCC Box between KZJ-WL stations by pushing method reg. |
| | BRIDGES CONTRACTS- DEN/NORTH |
| 1 | BPQ-KZJ section:- Repairs to Bridge protective works such as flooring, steps, pitching, face walls. Toe wall, epoxy grouting, epoxy plastering, scour fittings, curtain/drop walls, pointing etc |
| 2 | SC-Division.SW-1BPQ-KZJ Section: Proposed extension of water way of existing bridge No.203 (UP) at km.210/9-11 between SKZR-ASAF stations due to inadequate water as pre-cast RCC Box by pushing method |
| | BRIDGES CONTRACTS -DEN/SOUTH |
| 1 | SC Divn - KZJ-BZA sec - Repairs to bridge protective works such as flooring, steps, pitching, face walls, jacketing, epoxy plastering, cement grouting, toe wall, curtain/drop walls, wing walls, pointing, etc. |
| 2 | SC Divn - DKJ - MUGR sec - Repairs to bridge protective works such as scour filling, flooring, steps, pitching, de-silting, toe walls, wing walls, curtain / drop walls, pointing, etc at Br.Nos.45kk at kms.44/2-3 & 65 at kms 57/6-7 bet BTPD - GLE stns under ADEN/DKJ sec. |
| 3 | SC Divn - KZJ - BZA sec - Provision of flamed granite for steps and gangway of central FOB at WL stn; Prop extn of extg 2.5mts wide FOB from PF 2/3 to PF No.4 at WL stn at BZA end. |
| | BRIDGES CONTRACTS -DEN/WEST |
| 1 | Repairs to sand humps. Repairs to ballast retaining walls at Bridge approaches, Supply, Filling, Stitching and loading of sand bags into Railway wagons and supplying of stone boulders for monsoon Reserve stock. |
| 2 | Repairs to Foot over bridges steps, landings and gangway slabs at GGD, CTF, SKP, DRR, GDQ Stations. Repairs compound walls and plinth protection to staff quarters. Repairs to doors, kitchens and Roof leakages of staff quarters. |
| 3 | Repairs to existing crushed -damaged channel sleepers, ER-GR pads, damaged or sick hook bolts, corroded Split-Cotter pins for all channel sleepers fittings and repair to Re-railing ramp on major & important girder bridge |

3.18 Work load of Bridges wing of Engineering department:

| S.No | Section SSE/Pway / ADEN / DEN / Sr.DEN | Major Bridges | | Minor Bridges ROB / RUB/FOB / Tunnels | |
|--|---|------------------------------|------------------|--|------------------|
| | | Linear water way in Meter | 100m = 3 ITKM | Linear water way in Meter | 100m = 2 ITKM |
| 1 | ADEN / BPA | 2303.00 | 69.09 | 1975.00 | 39.50 |
| 2 | ADEN / RDM | 5180.00 | 155.40 | 1850.00 | 37.00 |
| 3 | ADEN/S/KZJ | 699.58 | 20.99 | 1233.08 | 24.66 |
| 4 | ADEN/DKJ | 1629.60 | 48.89 | 1060.20 | 21.20 |
| 5 | ADEN / MDR | 1829.66 | 54.89 | 1079.46 | 21.59 |
| 6 | ADEN / E & SW / SC | 539.34 | 16.18 | 756.16 | 15.12 |
| 7 | ADEN/ N / KZJ | 1194.58 | 35.84 | 618.01 | 12.36 |
| 8 | ADEN / VKB | 497.54 | 14.93 | 757.78 | 15.16 |
| 9 | ADEN / TDU | 1156.07 | 34.68 | 583.12 | 11.66 |
| 10 | ADEN / BIDR | 488.00 | 14.64 | 510.00 | 10.20 |
| | GRAND TOTAL | 15517.37 | 465.52 | 10422.81 | 208.46 |
| Total ITKM of Bridges wing of Engineering Department = 673.98 ITKM | | | | | |

3.19 Present manpower of Bridges wing of Engineering department:

| Bridges Wing-Safety category | | | | |
|----------------------------------|--------------|-----------|----------|----------|
| Designation | Grade Pay | Sanction | On Roll | Vacancy |
| Senior Section Engineer(Bridges) | 4600 | 5 | 4 | 1 |
| Junior Engineer(Bridges) | 4200 | 2 | 3 | -1 |
| Technician I/B.Smith | 2800 | 1 | 0 | 1 |
| Technician II /B.Smith | 2400 | 1 | 0 | 1 |
| Technician III /B.Smith | 1900 | 0 | 0 | 0 |
| Technician I/Sarang | 2800 | 1 | 0 | 1 |
| Technician(MCM)/Revitter | 4200 | 1 | 0 | 1 |
| Technician I /Revitter | 2800 | 2 | 0 | 2 |
| Technician II /Revitter | 2400 | 1 | 0 | 1 |
| Technician III Revitter | 1900 | 1 | 0 | 1 |
| | Total | 15 | 7 | 8 |
| Bridges Wing-Non-safety category | | | | |
| Designation | Grade Pay | Sanction | On Roll | Vacancy |
| Assistant(Bridge) | 1800 | 70 | 66 | 4 |
| Technician(MCM)/Erector | 4200 | 2 | 0 | 2 |

| | | | | |
|-------------------------|--------------|-----------|-----------|-----------|
| Technician I /Erector | 2800 | 3 | 1 | 2 |
| Technician II /Erector | 2400 | 1 | 0 | 1 |
| Technician III /Erector | 1900 | 1 | 3 | -2 |
| | Total | 77 | 70 | 7 |
| Grand Total | | 92 | 77 | 15 |

3.20 Requirement of Manpower of Bridges wing:

Assistants: This activity is a non-safety & noncore activity. Most of the activities in the Engineering organization are outsourced vacant posts may be surrendered

Errector: this activity became redundant and vacant posts may be surrendered

Most of the activities permitted to work under Contract in Engineering organization.some works are being done on Zonal contract.The work load is being reduced due to contracts/ outsourcing of non-core activities. Hence the following 7 Non-safety/ redundant posts are recommended to surrender.

| S.No. | Designation | Sanction | On Roll | Vacancy |
|-------|--------------|-----------|-----------|----------|
| 1 | Assistants | 70 | 66 | 4 |
| 2 | Errector | 7 | 4 | 3 |
| | Total | 77 | 70 | 7 |

SUMMARY OF POSTS RECOMMENDED FOR SURRENDER

3.21 From the above references, it is recommended to surrender **21** non-safety/ redundant posts in P.way organisation, **32** non-safety/ redundant posts in Works organisation and **7** non-safety/ redundant posts in Bridges organisation. the summary of posts recommended for surrendering is as follows:

| S No | Organisation | no.of Posts recommended to surrender |
|------|--------------|--------------------------------------|
| 1 | P.Way | 21 |
| 2 | Works | 32 |
| 3 | Bridges | 7 |
| | Total | 60 |

Hence the following recommendation is made:

Recommendation: It is recommended to surrender **60** non-safety/ redundant posts in engineering department.

SUGGESTION: As per Railway Board Lr. No. E(MPP) 2016/1/59 dated 10/01/2017, non safety/ non core activities to be outsource in order to reduce the expenditure. The above non-safety/ non-core activities are outsourced considerably. Hence it is suggested to outsource the remaining activities and resultant posts may be surrendered. Status of outsourcing may be intimated to this office for further review of the work-study.

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ध्याय-4
CHAPTER – 4

4.0 वित्तीय परिणाम FINANCIAL IMPLICATIONS:

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

| S N o | Category | Scale | | No. of po sts | Mean Pay | Level | DA @ 17% | Emolumen ts P.M (in Rs.) | Total Emoluments P.A (in Rs.) |
|-------------|-----------------------|-------|---------------------------|------------------------|-------------|-------|-------------|--------------------------------|--|
| | | From | 10 th level | | | | | | |
| 1 | Assistants P.Way | 18000 | 23500 | 16 | 20750 | 1 | 3528 | 388448 | 4661376 |
| 2 | GM striker | 18000 | 23500 | 5 | 20750 | 1 | 3528 | 121390 | 606950 |
| 3 | Fitter pipe line | 18000 | 23500 | 6 | 20750 | 1 | 3528 | 145668 | 1748016 |
| 4 | COS/OS | 35400 | 46200 | 4 | 40800 | 6 | 6936 | 190944 | 2291328 |
| 5 | Clerk/Typist | 18000 | 23500 | 5 | 20750 | 1 | 3528 | 121390 | 1456680 |
| 6 | Mason | 1800 | 23500 | 5 | 20750 | 1 | 3528 | 121390 | 1456680 |
| 7 | Carpenter | 18000 | 23500 | 9 | 20750 | 1 | 3528 | 218502 | 2622024 |
| 8 | Drivers | 18000 | 23500 | 3 | 20750 | 1 | 3528 | 72834 | 874008 |
| 9 | Assistants Bridges | 18000 | 23500 | 4 | 20750 | 1 | 3528 | 97112 | 1165344 |
| 1 0 | Erector | 18000 | 23500 | 3 | 20750 | 1 | 3528 | 72834 | 874008 |
| | TOTAL | | | 60 | | | | | 17756414 |

On implementation of the recommendations of Work-study report, an annual savings of **Rs.1.77 crores** can be achieved.

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संस्तुती / सुझाव

RECOMMENDATION / SUGGESTION

| Sl. No. क्रम सं. | Description | Para No. |
|------------------------|--|-------------|
| 01 | <u>सिफारिश</u> Recommendation: It is recommended to surrender 60 posts from sanctions of Engineering department over SC division. | 3.21 |