

2.0 MAJOR HIGHLIGHTS 2019-20

2.1 Mobility and Operational efficiency

1. On Mobility parameter NGP division is on 3rd place in Indian Railways till Jan end.
2. Punctuality of M/Exp trains improved 0.6 % from 91.67% last year to 92.26%. The division is on top position in Indian Railway.
3. Average speed of Goods trains increased from 18.3 to 21.2 kmph.
4. **Granting of Engg blocks** rose by 38.10% from 13763:24 hrs. last year to 19007:02 hrs. This includes rise of 14.2% in Machine blocks and 67.8% in other Engg. blocks.
5. Improvement in PDD by 33.7% at NGP, 15.4% at Amla and 15.4% at BPQ depots.
6. At NGP, on diamond crossing there is a caution of 'Raise Pento/ Lower Pento' for trains going and coming from SECR. Now this caution order has been removed.
7. Dispensing with requirement of Banker for trains coming from SECR via GCC to Godhani. Now trains are directly admitted on Line no. 5 at Godhani.
8. **Division wagon balance** improved by 2.5% (166 wagons/day) from 6582 wagons/day last year to 6416 wagons/day. Over the target of 6600 wagons/day there is an improvement of 2.8%.
9. **NTKMs/Wagon day** increased by 4.1% from 11346 NTKMs/Wagon day to 11806 NTKMs/Wagon day. Over the target of 11750 NTKMs/Wagon day the rise is 0.5%.
10. **Wagon kms/wagon day** rose by 4.8% from 270 wagon kms/wagon day to 283 Wagon kms/wagon day. Over the target of 280 Wagon kms/wagon day it improved by 1.1%.
11. **Wagon turn round** improved by 9.6% wagon days from 1.46 wagon day last year to 1.32 wagon days. Over target of 1.42 wagon days it improved by 7.0%.
12. **Crack running** improved by 18.6% from 877 trains last year to 1040 trains in the current year.
13. **Speed** of freight trains rose by 15.8% from 18.3Kmph last year to 21.2kmph.
14. **AC Loco** usage improved by 3.8% from 346 Ekms/Eng day last year to 359Ekms/Eng day.
15. **DSL Loco usage** improved by 8.5% from 318 Ekms/Eng day last year to 345Ekms/Eng day.
16. Use of NRKR-AMI for running trains ET-NRKR-BD-WR-BPQ thus de-congesting NGP-WR over-saturated section. Avg. trains handed over at CNDB point went up from 2.4 trains/day last year to 4.4 trains/day in the current year. Development of COPS (Central Operating position system) system for dispersing position on-line dispensing with printing and physical distribution of positions to officers.
17. Availability of Round-the-clock movement of freight trains on-the-move with commissioning of DWAR (Data warehousing and analysis of reports) software.

18. At Ghuggus method of shunting of Brake-van has been changed. Brake-van reversed before placement on 'A' and 'B' ramp. This saved around 2 hours per rake.
19. EOL loading at UMSG, GGS, WANI and Chargaon sidings.
20. Stopping of BPQ crew working in Tadali-GGS circuit which was inefficient. 14 sets of crew from BPQ & GGS shifted to Tadali thus optimizing crew and reducing PDD at BPQ.
21. Establishment of NGP-NRKR-BD circuit for trains received Ex. SECR at NGP point for BD direction.
22. Establishment of ET-NRKR-BD-WR circuit for trains received ex WCR for SCR.

2.2 Infrastructural Development

1. Commissioning of 3rd line between CHJC-SNN and Sindi-Borkhedi-Butibori.
2. 3 nos of Stations have been provided with electronic Interlocking at Dhamangaon, Chandur and Malkhed station.
3. 1st Automatic Block Signalling Section Between Khapri and Ajni A Commissioned on 19.03.2020.
4. Block proving by axle counter along with dual detection provided at 13 Block sections over Nagpur division.
5. 5 Nos of Non Interlocked Level crossing gates have been interlocked with Electrical lifting barrier as well as sliding boom provided to improve safety at LC gates
6. Timtala-Badnera block section has been provided with Intermediate Block Signalling. This has improved train density in this section Electrification of Wani – Pimpalkhuti section: 100% ELECTRIFICATION ACHIEVED by NGP division - Milestone of 100% railway electrification has been achieved by Nagpur division.
7. Provision of PTFE N/s in place of 41 m type N/sat all 11 locations has been completed
8. Connectivity of TW shed at BTBR - At BTBR Tr.D depot, tower wagon shed's connectivity to the main line was not available since so many years, This connectivity is now made. This will help taking out the TW from the shed during emergency at the least time.
9. Commissioning of new crossover at KRI under Phase-II
10. One new crossover (270 m length) commissioned at KRI between location 823/27 – 824/6N at WR end. Now load from CONCOR siding can be dispatched towards WR.
11. Commissioning of IBS between TMT-BD-TMT commissioned.
12. Elimination of Level Crossings: 9 Nos. of LC gates have been eliminated in this year.
13. Rehabilitation of Bridges: 11 number bridges have been rehabilitated in 2019-20.
14. Construction of new Foot Over Bridge (FOB) at Hinganghat and Godhani.

15. World class station redevelopment of Wardha done and appreciated all over IR Railway.
16. Renovation of Goods shed at wardha
17. Renovation of Casualty at DRH, Disaster Management Room and Cash office at RCC building, Entrance and passage of RCC building done

2.3 Track Modernisation

1. In BCM working, division surpassed the Railway board's target of 17.0 Kmph and achieved 21.83 Km deep screening per month Record 1918 hours block availed by TRD which is highest in last 30 years. 177.75 Kms Deep screening done by BCM against the target of 149.0 Kms during the year 2019-20.
2. 1st time Nagpur division has carried out 12 nos. Turnouts shoulder ballast cleaning work by engaging FRM.
3. Renewal of Diamond crossing of Nagpur was carried out.
4. Development of track side nurseries one is at Diamond crossing Nagpur.
5. Starting of weekly mega block practice in NGP-SEGM section During this blocks assets which are overaged are renewed & TRR, TSR, Destressing with TFR activities carried out.
6. 05 Kms TFTR by geogrid geotextile arrangements in SEGM BPQ section carried out.
7. TSR work carried out manually to ensure safety on out of turn basis NGP-SEGM section.
8. Welding equipments of 13 sets are procured & distributed among all the CPWI for improving welding quality.

2.4 System Improvement and innovations

1. Launching of Data-Warehousing & Analysis of Reports (DWAR) software.

- Gives updated position of all interchange points on desktop and mobile.
- Pre-departure detention to trains and status of crew running hours.
- Dispensing with registers maintained by CHC(Goods)

2. Development of Live yard position system (LYPS)

At all major yards live position of lines can be viewed over the app. Will benefit Controllers, CHC(Goods), CHC(Coal) and officers. Development of this app. is under process.

3. COPS mobile app. (Central Operating position system)

Now PDF files of all morning positions are distributed online over this app. It is being used to share position by all departments of NGP division viz. Operating, TRO, TRD, Engg., Commercial, Mechanical etc. As a result, no printed position is given to officers.

This is effectively saving about 13,000 pages per month apart from man-hours consumed in printing, organizing and physically delivering these positions

4. First ever E-trr (Electronic Railway Receipt) prepared over Indian railways from NGP div. for following traffic-
5. **Commissioning of new SCADA** - Existing SCADA system (specification 986) of M/s. NELCO/CGL was commissioned in 2006-07 and its AMC is upto 2021, but owing to commissioning of new sections as well as slow speed of data transfer, it is not possible to accommodate additional posts in existing SCADA.
6. **Provision of anti climbing arrangement for monkey** - Most of the CB trippings in the division are due to monkey menace in dense forest area along the tracks. Earlier barbed wire with few turns was erected around OHE mast but it was ineffective. Work awarded for erection of monkey anti climbing developed by RDSO for 1088 nos., total work completed at 799 locations so far.
7. **Online lubrication device for ATD** - Online lubrication and measurement of X-value from ground level is feasible with due care. However Y-value is measured with tape without any block. A live line oiling device and Gauge for X-value measurement have been developed and Y-value can be measured with tape only.
8. **Gauge to measure contact wire height in running condition** - Contact wire height measuring device has been developed to measure the height of contact wire during maintenance by TW in running condition. In this device, a chain is attached with pantograph which further connected with a pointer slides on a pre-calibrated scale.
9. **Gauge for Turnout checking** - In order to measure the height of contact wires of turnout at horizontal level, gauges with spirit level has been developed by depots. Now height and level of contact wire of Turnout can be measured accurately.
10. **Drone camera based condition monitoring of TRD assets** - In order to switch into directed maintenance, division has taken initiative for condition monitoring of Tr.D assets, so that assets can be attended well before the breakdown. As a pilot project, hi-resolution (20 MP – 4K) camera mounted on Drone is being used to closely check the equipments, jumpers and connections in switching posts without power block and plan the maintenance accordingly.
11. **New Technology adopted in TRD depot**
 - GPS based Vehicle Tracking System (VTS) in TW and trucks.
 - GPS based Personnel Tracking System (PTS) for foot patrolling staff.
 - IP based camera mounted on deck of TW.
 - CCTV at Depot, TSS and SP/SSP.
12. **e-Gradient Chart:** App based gradient chart of NGP division has been prepared for easy accessible of gradients to the running staff in train operation
13. **e-TRO Darpan**”:TRO has taken an initiative to educate the running staff on safety & technical aspects and also to bring out the other soft talents of the LP / ALPs in e-format. Through ‘e-TRO Darpan’ published and circulated among all staff.
14. **“e-Case Failure Studies”**”:TRO has also initiate to “e-Case Studies” for running
15. **Control in embedded empty wagons:** Division has outsourced the work of repair to rejected wagons for loading at: ACC Siding, GGS, 2) WCL coal siding GGS, 3)WCL coal siding, UMSG. In addition to it, repair to rejected wagons for loading

also attended departmentally at Wani and Majri area. In 2019-2020, **total 51476 wagons (87%)** were attended on load.

This has resulted in additional incremental loading and additional revenue generation of approx.**Rs.339.74 crores**.

16. **Online Monitoring of Rolling Stock (OMRS):** - Installation of another WILD under Online Monitoring of Rolling Stock is under progress in WR-NGP section at mid-section between BOK & BTBR stations. Installation and commissioning of same is expected to be complete in May 2020.
17. **Conversion of existing rakes to LHB rakes :** Division has converted rakes of 9 primary maintained trains to LHB coaches.
18. **Utkrishta rakes:** Division has successfully upgraded the 2 rakes of train no. 12140 / 12139 NGP-CSMT Sevagram express under project Utkrishta in 1 st phase..
19. **USTAAD (Undergear Surveillance Through Artificial Intelligence Assisted Droid) -** Division has developed a robot for assisting undergear examination of trains. Use of this robo can easily eliminate the chance of mistake of overlook by human eye thus reduce chances of human error.
20. **Installation of Automated Train Examination System:** To ensure safety of Rolling stock, ATES (Automated Train Examination System) developed & designed by KRCL is commissioned at 2 locations (i.e. at near A cabin Ajni on Down main line & on local line near BTC/C&W/AQ) in Dec 2018. The system enabled to record axle box bearing temperature, cases of brake binding & capture video recording to under gear of Rolling stock. Further, system will enable to send SMS for warning & alert messages of Rolling stock.
21. **Quick watering :** Booster pumps have been installed and other arrangements for quick watering have been made at Nagpur station and now, train can be watered in 5 minutes.
22. **Waste to Bio-Gas plant (Organic Waste Treatment Plant) -** Waste disposal is one of the major problems being faced by Indian Railways. As per directives of Hon'ble National Green Tribunal and as per Hq's instruction on
23. **Project Swarn:** Nagpur division has upgraded the 4 nos. 1st class AC coaches of primary maintained trains to SWARN standard to ensure better on-board experience, cleanliness and hygiene to passengers of premium class. This includes provision of PU paint of approved colour on exterior, vinyl films in lavatories entrance area and passenger seating area, installation of fire retardant curtains, Installation of HD sceneries on aluminum composite sheets, epoxy flooring in lavatories, floor

2.5 Other Achievements

1. **ISO 14001:2015 (Environmental Management System)** was successfully achieved at six stations over Nagpur division which include Nagpur, Wardha, Sewagram, Balharshah, Chandrapur & Betul stations.
2. **ISO 14001 Certification for Nagpur station :** -Division has taken another leap in Eco management from December 2019. Nagpur Railway Station of Central Railway awarded ISO 14001: 2015 certificate by the Green Tribunal of India

(NGT). This certificate has been given to Nagpur Railway Station to provide facilities to the passengers in a clean and green environment.

3. Initiative taken by Electrical (G) department for gating Green Rating under Green Station Rating System which is being awarded by IGBC. Nagpur station achieved GOLD rating.
4. High Monumental National Flag installed at NGP, Betul and Wardha
5. Mission 100% LED lights at all Stations Service Buildings and Staff Quarters:

2.6 Passenger Amenities Works

1. Ladies waiting room at Nagpur station was renovated by cera panel, POP ceiling, and toughened glass door, Refurbishing of furniture's i.e. sofa set and tea table, and also by providing
2. To promote the regional tourist places, Wild Life Tourism a Tourism Facilitation Centre has been started by IRCTC at Nagpur station which offers current Bharat Darshan packages to the passengers. Its Marketing, promotions, and booking of Air, Rail & Road domestic as well as international tour packages is done by IRCTC
3. Plastic Bottle Recycling Machine installed at Wardha station on 25/07/2019.
4. Coach Guidance Display Board:- Nagpur, Ajni, Ballarshah and Wardha .
5. Single line single phase display board:- Nagpur, Ajni, Ballarshah and Wardha.
6. Double line single phase display board:- Nagpur, Ajni Ballarshah and Wardha.
7. Train at a glance:- Nagpur, Ajni, Ballarshah and Wardha .
8. Free-Wireless-Fidelity (WI-FI) has been provided at 69 Nos (24 by RCIL & 45 Nos by Tata Trust) stations. (All stations recommended by Railway Board provided over division).
9. GPS Double Face Clocks have been provided at 4 stations.
10. Improvement in station façade at Timtala, Dhamangaon, Pulgaon, Wardha, ButiBori and Godhani
11. Water Filters sponsored by Yes Bank are provided at different stations.
12. Complete renovations of all asects at wardha, Dhamnagaon , Timtala and BTBR
13. Upper Class Waiting Room newly constructed at wardha
14. Construction of New Booking Office Building at Wardha station
15. Conversion of Non AC Dormitory to AC Dormitory at Wardha
16. Development of Garden in circulating area at Wardha station
17. 1300 Nos Steel benches provided over Nagpur division.
18. Extension of COP towards platforms at Wardha station
19. Installation of one ATVM at Katol station.
20. Post PRS commissioned at..... stations
21. STBA commissioned at..... stations

22. Lifts are provided at stations
23. ATVM installed at..... stations
24. Electric Body Massager Chair at Nagpur
25. Fitness & Wellness Center' at Nagpur Railway Station
26. Tourist Assistance Booth' at Nagpur Railway Station
27. Health ATM - This digital Machine give report of 21 Health Vitals to users in 5 minutes including BP, Sugar and BMI Fat, Kidney health etc in printed form. Charge per use just Rs 60/-.
28. Note to Coin Kiosk machine at Nagpur
29. Development of track side nurseries one is at Diamond crossing Nagpur.
30. Provision of Escalators at PF No.2/3, PF No.4/5, PF No. 6/7 of Nagpur Station.
31. Improvement of Platform Surface at Amla, BZU etc and development of circulating area at Amla, Betul, Pandhurna etc.
32. Provision of Toilet for Divyangjan at 34 wayside stations.
33. Extension and raising of Godhani station home platform for accommodation of 24 coaches and extension of Sewagram home platform to accommodate 24 coaches completed.
34. At Nagpur on Platform No.8 – Cover over platform of proflex sheet is provided giving better aesthetic view and minimum maintenance.
35. Installation of 36 Nos. passenger lift at 11 stations planned and tender for this work from both the department i.e. Electrical and Engineering department done work at 11 location is in progress.. At WR station Two Nos. and at DMN station One No. Passengers Lift installed. One no. lift installed at Officers rest house in civil line at NGP
36. Electronic Passengers Information System IN PRIMARY COACHES OF NGP division.

2.7 Staff Welfare works

1. Improvement of Casualties room of DRH & provision of pensioners room at DRM office premises.
2. E-lobby in the DRM office premises of Central Railway, Nagpur division with facility of E-banking, internet banking Kiosk, ATM, printing of pass book
3. Staff Canteen has been commissioned at Dhamangao and Nagpur
4. Improvement of Casualties room of DRH & provision of pensioners room at DRM office premises.
5. Provision of ACs in Station master's Chamber at All 'A' class station has been done.
6. Provision of ACs in all running rooms at AMF, NGP, BPQ(New & old) , Ghugush and Majri stations completed.
7. Provision of ACs in TTE rest room at NGP station done.
8. Total Empanelled hospital including Dental clinics and Pathology & Radiology

9. services is 38 including remote areas of division via Chandrapur
10. Complete renovation and air conditioning of Main Medicine store and medicine
11. dispensary done
12. Pharmacy counters are air conditions.

2.8 First on CR/IR

1. First Division of Indian Railways

- Award contract to brand all type of Mobile Assets. (Viz.Locomotives, Passenger Train & Goods Train)
- Award earning contract for Fitness Center.
- Award contract for smart luggage and Mobile Lockers.
- Award Vehicle Mounted ATM contract
- Rail Nail Art & Mehendi Centre dedicated to the service of women at Nagpur station ladies waiting room.

2. First Division of Central Railways

- Award Video-wall contract under RDN.
- Award Locomotive Branding contract.
- Award OYO Tourist Assistance Booth contract.
- Award E-Lobby contract to a schedule Commercial Bank.
- Award Floor Branding contract.
- Award Marketing Stall contract at DRM office.
- Award Electric Body Massager contract.
- Award Health ATM contract.
- Generation of e-TRR for **ContainerEx** ACDA to JNPT on 02.08.2019.