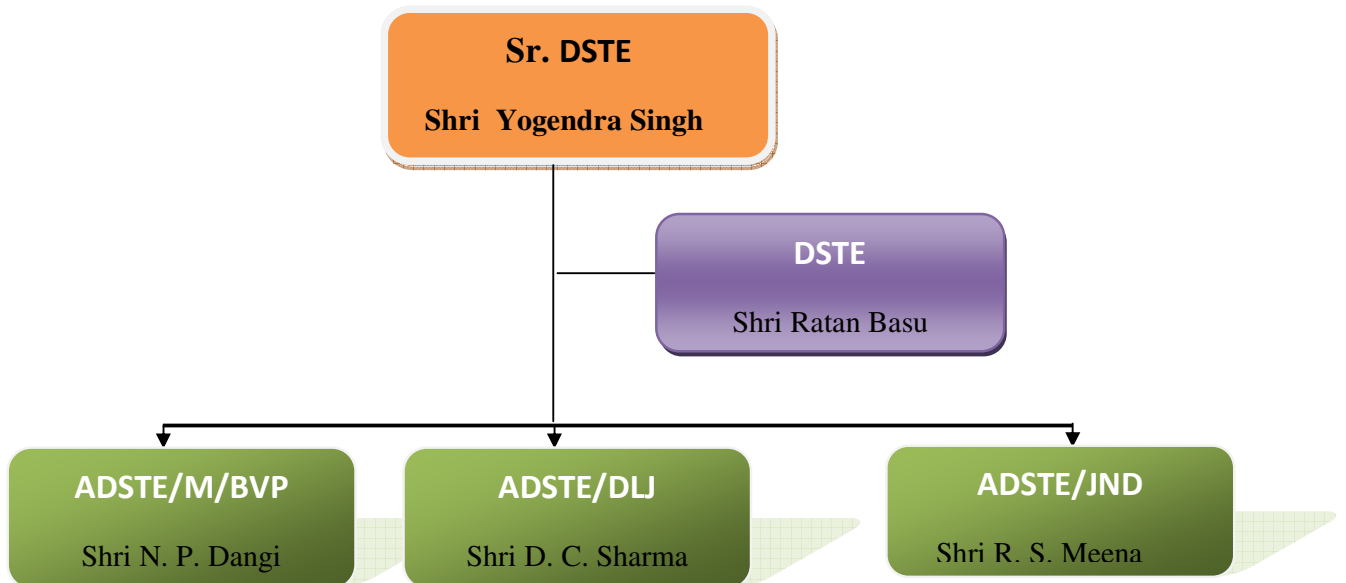


ORGANIZATIONAL STRUCTURE



SIGNALING

PANEL INTERLOCKING:

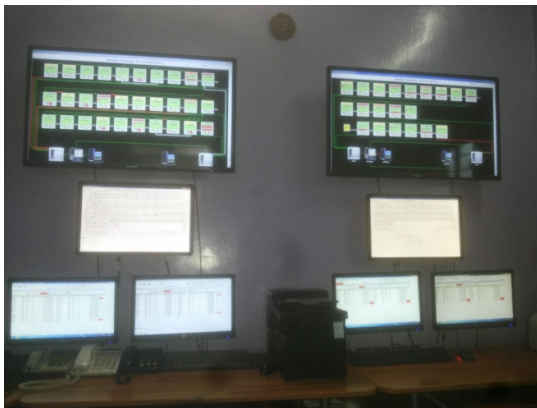
Out of 56 Station on BG section, panel interlocking is available on 50 stations. Five stations (Porbandar, Ranavav, Bhanvad, Gopjam and Lalpur jam) are provided with Electro Mechanical signalling. Only one station (Bhavnagar Jetty) is Non-interlocked station.

All stations on MG section are having Mechanical/ Electro Mechanical signaling except at 3 stations (viz. DAS, BTD and VRL) on DAS-JLR, SUNR-DLJ & KJV-VRL section respectively on which panel interlocking is available

DATA LOGGER :

Data loggers are available on all 50 Panel interlocking station and all are networked with control office at Division. Connectivity with zonal HQ office has already done.

Data Logger Server Room at
DRM's Office Bhavnagar



Data logger front end Processor
at DRM's Office Bhavnagar



LED SIGNALS:

LED signals have been provided on 50 panel interlocking station as well as 03 MG station.

INTEGRATED POWER SUPPLY SYSTEM :

Integrated Power supply system has been provided at all 50 PI stations & 14 LC gates.



BLOCK PROVING BY AXLE COUNTER :

Block Proving by Axle Counter (BPAC) has been installed in Wadhwan city-Surendranagar block section along with Surendranagar RRI work.

LC gates (Interlocking & manning):-

There are 161 Interlocked LC gates and 145 Non- Interlocked LC gates on which telephones are available. The Route wise position of LC Gates is as under:

Status of interlocking of LC Gate	ROUTE		
	BG	MG	Total
Interlocked	111	50	161
Non Interlocked	60	84	144
Total	171	134	305

TELECOMMUNICATION:

CONTROL & BLOCK CIRCUITS:

On BG section, control & block circuits are working on OFC & 4/6 Quad cable.

On MG section (for Controlled Section), control & block circuits are working on Composite Cable (6 Quad + 8 Fibers), OFC Cable & 6 Quad Cable.

On MG section (for Non Controlled Section), block circuits are working on Composite Cable (6 Quad + 8 Fibers).

Control Communication Equipment on OFC

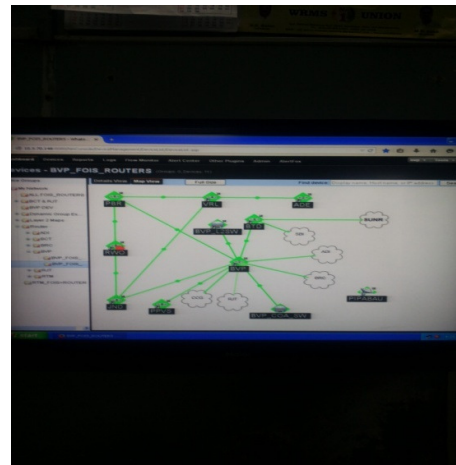
Provided at NOCC/DRM's Office



NMS Installed at NOCC/Bhavnagar Para

FOIS/ COIS/CMS/TMS:

FOIS/COIS/CMS/TMS has been provided at 16 locations (FOIS at 1 location, COIS at 4 locations, CMS at 3 locations & TMS at 8 Locations) over BVP division.



RAILNET:

Railnet connectivity has been provided at 9 locations (viz. Bhavnagar Terminus, Bhavnagar Para, Dhola Jn., Botad Jn., Gandhigram, Junagadh, Jetalsar, Veraval and Porbandar).

Railnet Server Provided at DRM's Office

DSLAM Provided at DRM's office



VHF SETS & BSNL TELEPHONES:

25W VHF Sets & BSNL telephones have been provided on all BG & MG stations (Total 90 nos.) of BVP division.

ELECTRONIC EXCHANGES:

There are 8 electronic exchanges provided in the division (viz. Bhavnagar Para, Dhola Jn., Botad Jn., Gandhigram, Junagadh, Jetalsar, Veraval and Porbandar) and one exchange at BG Workshop at Bhavnagar Para.

IP based Exchange at DRM's Office Bhavnagar Para



COACH GUIDANCE SYSTEM:

PC based coach guidance system have been installed at 6 stations (Bhavnagar Terminus, Botad Jn., Gondal, Junagadh, Veraval and Porbandar) of BVP division. The information regarding Type of coach, Train number & Coach Number etc. is provided by coach guidance system.

AUTO ANNOUNCEMENT SYSTEM:

PC based announcement system have been installed at 7 stations (Bhavnagar Terminus, Dhola Jn., Botad Jn., Gondal, Junagadh, Veraval and Porbandar). Microprocessor based announcement system have been installed at 3 locations (viz. Songadh, Dhasa Jn. and Gandhigram). Manual Announcement system has been installed at 5 stations (Jetalsar, Dhandhuka, Dholka, Savarkundla and Mahuva).

TRAIN ARRIVAL/DEPARTURE BOARDS:

Microprocessor based Train Arrival/Departure indicator boards have been installed at 6 stations (Bhavnagar Terminus, Botad Jn., Gondal, Junagadh, Veraval and Porbandar) of BVP division.

CLOCK:

Digital clock at 16 stations, Analog clock at 27 stations and Tower clock at 3 stations have been provided in BVP division.

UTS:

UTS has been provided at 56 locations and UTS cum PRS are provided at 39 locations in Bhavnagar division.

PRS:

PRS has been provided at 13 locations covering 09 important stations, 01 Post office, Diu, Somnath Temple & Sanskar Mandal at Bhavnagar city of BVP division. DRM office has also been provided with PRS terminal for non-cash handlings.

POET:

POET has been provided at 3 locations i.e. Bhavnagar Terminus, Veraval and Gandhigram stations.

CCTV:

CCTVs are provided at PRS center at Gandhigram, Veraval and Bhavnagar Terminus stations and at Parcel Office at Veraval. DRM office has also been provided with CCTV.

BIOMETRIC BASED TOKEN DISPLAY SYSTEM:

Biometric based Token Display system is provided at PRS center at Gandhigram station.

FARE DISPLAY SYSTEM:

Fare Display System is provided at PRS and UTS counter at Gandhigram and Bhavnagar Terminus stations.

TWO WAY INTERCOM MICROPHONE SYSTEM:

Two Way Intercom Microphone System is provided at PRS counter at Gandhigram and Bhavnagar Terminus stations.

MOBILE JAMMER:

Mobile Jammer is provided at PRS center at Gandhigram and Bhavnagar Terminus stations as an anti-touting measure.

Highlights of S&T Department:

Signaling:-

Sliding type Boom barriers:-

Sliding boom have been provided at 15 numbers of LC Gates and will be commissioned soon at 5 numbers of LC Gates. It will facilitate trains to pass on signal in case of breakage of boom and thereby avoiding the need for piloting of trains.

Generation of Exception reports by Data-logger:-

Division has implemented modified Data-logger software for generation of exceptional report and 44 Nos. of Fault Logics is being monitored for preventive maintenance of Signalling Gears at all 50 PI Stations in Bhavnagar Division.

Fuse monitoring & Auto changeover system:-

This system has been installed at 8 stations. In case of blowing off of one fuse, signalling circuits will work through standby fuse thereby will avoid the signalling failures. For 35 stations the work has been sanctioned in LB-12-13 and NIT issued for 14 Nos. Stations on non-PRCL section, tender was opened on 08/10/13 but discharged for non-PRCL section. Tender awarded on 21.08.2014. Consent asked from PRCL for 21 Stations on PRCL section.

Interlocking of LC gates:-

Two numbers of new LC Gate commissioned with Electric lifting barrier:

1) New manned LC gate No 100/X 'B' class Engg. Interlocked with Electric lifting barrier at Km. 136/9-137-10 between Lushala and Keshod stations commissioned on 03/07/14.

2) Providing new level crossing No.155/X 'A' class Engineering manned with interlocked lifting barrier at KM-168/8-9 between Sarangpur-Botad railway station on Sabarmati-Botad MG section commissioned on 30/10/2014.

3) Manning of unmanned level crossing gate No.129 C Class (Engg) and up gradation to B-1 Class with interlocked lifting barriers at Km 125/1-2 between MHV and Rajula Jn station commissioned on 19/03/15.

The work of interlocking of LC gate commissioned during last year (LC-13 between Ribda-Bhakti Nagar section).

The Work of Widening of Interlocked LC gates No 11 and 12 (Engineering) between Bhaktinagar-Ribda stations on Rajkot-Somnath section commissioned.

Networking of Data-logger:-

Data-logger is available at all 50 Panel Interlocked stations and all are in networked with divisional HQ (Signal Control office BVP) and HQ/CCG.

Integrated Power Supply:-

IPS improves the reliability of signalling system. 64 Nos of IPS have been installed in entire division out of those 50 Nos at Stations and 14 Nos at LC Gates.

Replacement of Semaphore signal by Colour light LED Signal:- NIL

Signal failure & Punctuality:-

There is a constant improvement in the performance of the signalling gears. During last year 2013-14 there were 620 signal failures as per actual signal failures record against 453 failures during this year 2014-15 for the period April to January i.e. there is **27%** reduction during the year 2014-15.

There is a one case of punctuality of train as in this year up to January-15.

Replacement of shelf type Relays by Q-series Relay:-

All shelf type track relays have been replaced by Q- series relays.

Manning of LC Gates:-

Target for Manning of Unmanned LC gates during current year is 04 Nos. of LC gates.

Completion of track circuiting Work:-

Provision of loop line track circuiting work commissioned at Lalpur Jam, Gop Jam, Bhanvad and Ranavav stations (Porbandar-Kanalus Jn. section). Now all 55 BG interlocked stations are having with complete track circuiting on station yard.

FM to FM track circuiting work on main line by providing digital axle counter commissioned at 9 out of 10 on Dhasa-Jetalsar MG section and 14 stations on Botad-Sabarmati MG section.

Over-head block line diverted to Telecom Cable:

All block sections are working on underground cable.

Platform lightening system through signalling system:

The work completed for automation of 70% platform lighting circuit through signalling system at 3 No. of stations Bhavnagar Para, Sihor Jn. and Songadh.

Shifting of KLCR in ASM office:

To minimize the effect of failure of cable, Crank handle relays and CH keys transferred from location box to ASM office. Work has completed at 49 out of 50 stations and will be completed at remaining Veraval Jn. soon

Progress NKR/RKR work:

Independent detection in point circuits has been done at 19 stations over BVP Division.

Yard remodeling:

The work for removal of 03 Nos. Diamond Crossing over BG & MG along with MG Line no. 03 in Junagadh Yard has been done departmentally.

TELECOMMUNICATION

UTS connectivity provided at stations on OFC, VSAT and BSNL leased circuits.

DSLAM commissioned at DRM Office-Bhavnagar Para, Dhola Junction, Botad, Gandhigram, Junagadh, Jetalsar, Veraval and Porbandar Station thereby facilitating Railnet/Internet connectivity to all officers and supervisors at these 08 locations.

CCTV commissioned at PRS Centre at Gandhigram, Bhavnagar Terminus Station and Veraval Station and at Parcel Office at Veraval station.

POET commissioned at Gandhigram, Bhavnagar Terminus and Veraval Station.

Fare Terminal Repeater commissioned at PRS/UTS window at Gandhigram and Bhavnagar Terminus Station.

Two Way Intercom Microphone System commissioned at PRS counter at Gandhigram and Bhavnagar Terminus Station.

Mobile Jammer provided at PRS Centre at Gandhigram and Bhavnagar Terminus Station as an anti-touting measure.

Standby Voice Logger commissioned at NOCC at DRM Office, Bhavnagar Para.

Power Supply from IPS room with B & C protection extended to OFC hut at all stations of BVP-SUNR Section.

Solar Charging facility to power plant for OFC equipments commissioned on Botad-Gandhigram section.

Railnet connectivity provided to PRIME Server to provide access to PRIME Server for entry of data required for preparing salary bills of employees from remote locations.