

EAST COAST RAILWAY
KHURDA ROAD DIVISION

NO. 33

STATION WORKING RULES OF BADABANDHA STATION

BG Station.

Date of Issue: 29.10.13

Date brought into force: 01.11.13

NOTE:

The Station Working Rules must be read in conjunction with General & Subsidiary Rules, Block Working Manual and Operating Manual. These rules do not in any way supersede any rules in the above books.

1. STATION WORKING RULE DIAGRAM:

The Station Working Rule diagram No. SI/WRD/10834, ALT-C based on CSTE/East Coast Railway and Signal Interlocking Plan No. SI/10834, ALT-C shows the complete lay out of the yard, siding, normal position of points, the Signaling and Interlocking arrangements, Gradients and Level Crossings within the station limits. This must be referred to for giving details of the point numbers and signals when reporting accidents.

2. DESCRIPTION OF STATION**2.1. GENERAL LOCATION**

BADABANDHA (Code: BDBA) is a 'B' class four lined station on CTC-PRDP branch line on Double line electrified (BG) section in KUR division of East Coast Railway. It is situated at Km. 480.95 from Howrah. The station is provided with Standard-III Interlocking and equipped with Central Panel and Multiple Aspect Colour Light signal signals. The station is worked under Absolute Block System of GR & SRs.

[Refer GR 8.01 (1) (a), (b), 2 (b), 8.03 (1), (a), (b), (c) (ii), 8.05 (2) (3) & 8.06, 8.14, 8.15, 14.08 (a)]

2.2. BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLAYING SIDINGS:**2.2.i. BLOCK STATIONS ON EITHER SIDE AND THEIR DISTANCES:-**

BADABANDHA station is situated between PARADEEP (Code: PRDP) at East end situated at a distance of 11.05 Km. and RAHAMA (Code: RHMA) at West end situated at a distance of 12.317 Km.

2.2.ii. IBH/IBS/OUT LYING SIDING/DK STATION:

NIL

2.2.iii. PASSENGER HALT:

Bagadia PH is situated at Km. 488.3 from HWH between Badabandha & Paradeep.

2.3.a. BLOCK SECTION LIMITS ON EITHER SIDE OF THE STATION ON DIFFERENT DIRECTIONS:

Between Stations	The Point from which the 'Block Section' Commences	The Point at which the 'Block Section' end
BDBA-PRDP UP Direction	UP Advanced Starter Signal No. 11 of BDBA station	BSLB on UP line at PRDP station.
PRDP-BDBA DN Direction	DN Advanced Starter of PRDP station	Outer most facing point No. 22 A of BDBA.

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RHMA BDBA UP Direction	UP Advanced Starter Signal No. 7 of RHMA station	UP BSLB of BDBA.
BDBA-RHMA DN Direction	DN Advanced Starter cum DN Distant signal of L.C. Gate at Km. 479/8-6 of BDBA station	Outer most facing point No. 20A of RHMA.

b. **STATION SECTION:**

Station Section	The point from which the 'Station Section' Commences	The Point at which the 'Station Section' end
UP Line	UP BSLB of BDBA	UP Advanced Starter No. 11 of BDBA
DN Line	Outermost facing point No. 22 A DN line of BDBA	DN Advanced Starter cum DN Distant of L.C. Gate at Km. 479/8-6 of BDBA.

c. **STATION LIMIT:****UP LINE:**

From UP Gate Home cum UP Distant signal to UP Advanced Starter Signal No.11.

DN LINE:

From DN Distant Signal to DN Advanced Starter cum DN Distant Signal No.12.

2.4 **GRADIENTS :**a) **TOWARDS PRDP END: (UP AND DN LINES)**

From	To	Gradient
CSB	CH:711.00 M	1 in 4000 'F'
CH:711.00 M	CH: 2671.00 M	LEVEL

b) **TOWARDS RHMA END: (UP LINES)**

From	To	Gradient
CSB	CH: 563.00M	1 in 4000 'R'
CH: 563.00M	CH: 902.00 M	1 in 1206 'R'
CH: 902.00 M	CH: 2730.00 M	LEVEL

c) **TOWARDS RHMA END: (DN LINES)**

From	To	Gradient
CSB	CH: 563.00M	1 in 4000 'R'
CH: 563.00M	CH: 902.00 M	1 in 1206 'R'
CH: 902.00 M	CH: 1159.00 M	LEVEL
CH: 1159.00 M	Towards Block Section	1 in 1000 'F'

2.5 **LAYOUT:**

The station is provided with four running lines in the Main yard (namely DN Loop, DN Main, UP Main & Common Loop Line) and one non-running line i.e. Hot Axle siding cum machine stabling siding.

PLAT FORMS:

- 1) Line No. 4 (DN Loop) : R.L.P.F.
- 2) Line No. 1 & 2 (Common loop & UP main line) : R.L.P.F.

2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT & HOLDING CAPACITY IN CSL:

(a) The trains coming from RHMA end are UP trains and the trains coming from PRDP end are DN trains.

(b) HOLDING CAPACITIES:

Line No.1	Comm. Loop	880	Meters	(Electrified).	From Starter to Starter
Line No.2	UP Main line	893	Meters	(Electrified).	From Starter to SB
Line No.3	DN Main line	923	Meters	(Electrified).	From SB to Starter
Line No.4	DN loop	923	Meters	(Electrified).	From SB to Starter

2.5.2 NON-RUNNING LINES AND THEIR CAPACITIES IN CSL:

Hot axle siding cum 90 Meters (Electrified). DS to DS
machine stabling siding.

2.5.3.a. ANY SPECIAL FEATURES IN THE LAYOUT:

NIL

b. SPECIAL RESTRICTIONS:

- i) Shunting in the face of an approaching train is prohibited.
- ii) Hand shunting/fly shunting is prohibited at both ends of the yard.
- iii) The Over Run line must not be used for stabling of vehicles or harboring an engine with or without vehicles.

c. SPECIAL INSTRUCTIONS:

- (i) All the lines are track circuited. In case of failure of track circuit, the trains shall be admitted by taking 'off' Calling-on signal.
- (ii) After a non signal movement has taken place over a point operated by motor whether facing or trailing direction SM on duty shall operate the points to normal and reverse setting for the purpose of setting the point. After clamping and pad locking of both the points and the indication is correctly available, further movement may be permitted over the points.
- (iii) Movement of non-insulated push trolley is prohibited between BDBA-RHMA and BDBA-PRDP sections vide SR 15.25.04(c).
- (iv) In case of failure of Analog Axle Counters provided for monitoring Block Section at both end, the resetting should only be initiated for normalizing the Block Instrument after ensuring complete arrival of the train by physical verification of Last Vehicle by SM on duty.

2.6 LEVEL CROSSINGS:

- (a) There is a 'C' class manned traffic Interlocked L.C. Gate No. CP-42 situated at Km. 469/19-21 (UP) & 469/22-20 (DN) at BDBA end of the yard. Telephone communications is provided between Gate lodge and SM/RHMA.
- (b) There is a 'C' class mid-section manned non-interlocked L.C. Gate No. CP-43 situated at Km. 472/27-29 (UP) & 472/30-28 (DN) at BDBA-RHMA station. Telephone communications is provided between Gate lodge and SM/BDBA.
- (c) There is a 'A' class manned Interlocked L.C. Gate No. CP-48 situated at Km.479/5-7 (UP), 479/8-6 (DN) between BDBA-RHMA. Telephone communication is provided between the gate lodge and SM/BDBA.
- (d) There is a 'C' Class manned traffic interlocked level crossing gate No. CP-54 situated at Km. 490/3-5 (UP) & 490/6-4 (DN) towards BDBA end of the yard. Telephone communication is provided between the gate lodge and SM/RR/PRDP.

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- (e) There is an 'A' Class manned traffic interlocked level crossing gate No. CP-55 situated at Km. 491/17-19 (UP) & 491/20-18 (DN) towards BDBA end of coaching yard. Telephone communication is provided between the gate lodge and SM/RR/PRDP.

3. **SYSTEM AND MEANS OF WORKING:**

Trains are worked under Absolute Block System by means of SGE type Double Line Lock and Block Instrument for BDBA-RHMA & BDBA-PRDP sections. The Block Instruments shall be operated by Station Master on duty and keys of the Block Instruments shall remain under personal custody of SM on duty. The authority for the Loco Pilot to proceed is taking 'OFF' of the last stop signal. The Block Instruments are of non co-operative. [Refer Chapter-XIV of GR & SRs, Chapter-VI of Block Working Manual and GR 14.08(a)]. Line clear is granted/obtained through the Block phone attached with the block instrument.

4. **SYSTEM OF SIGNALLING AND INTERLOCKING:**

- 4.1 This Station is provided with Standard-III interlocking with Multiple Aspect Colour Light Signaling having maximum equipment of signals. The aspects and indications of the MACLS is governed by GR 3.08 (4) (b). The Station is provided with Central Panel interlocking and having no end cabins. All signals and points are electrical operated from the central panel provided at SM's Office. Calling-on signals are provided below Home signals (i.e. in both UP & DN directions) as per GR 3.13 (1) (b), (2) (3) (4) & (6) (b). Central panel with miniature push buttons are provided in the Station Master's office to electrically control all signals, points, siding key, etc. The control panel is provided with SM's key which shall always remain in the personal custody of the Station Master on duty in terms of SR 3.36.03(a).

TRACK CIRCUITS:

All the lines are track circuited.

In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in both the directions are also provided. For Calling-on signal, 93M track circuits in rear of the DN Home signals and 95 M in the rear of the UP Home signal are provided. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited (i.e. 11AT and 12AT in UP and DN directions respectively). Indications for the above track circuits are available on panel at SM's office. Yellow light on panel indicates track clear and Red light indicates track occupied condition.

AXLE COUNTER:

- (i). The entire Block Section on both UP and DN Lines between the stations RHMA-BDBA & BDBA-PRDP are monitored by Analog Axle counter system. These Analog Axle Counters are provided for Last Vehicle check on either Block Sections as well as for dispatching a train in block section from either end of the section.
- (ii). These Analog Axle counter system counts the Axles 'IN' and counting axles 'OUT' in the respective block sections which indicate whether the concerned sections monitored by digital axle counters is clear or occupied.
- (iii). Fiberglass trolley wheels are to be provided for push trolleys in lieu of trolley suppression track circuits.

A pair of electronic axle counter is provided between RHMA-BDBA on UP line one just beyond UP Advanced Starter RHMA and another 1T1 beyond UP Home signal of BDBA. Similarly, a pair of electronic axle counter is provided between BDBA-PRDP on UP line one just beyond UP Advanced Starter of BDBA and another in 1T2 track circuit beyond UP Home signal of PRDP.

Another pair of electronic axle counter is provided between PRDP-BDBA on DN line one just beyond DN advanced starter PRDP and another 2T1 track circuit beyond DN Home signal of BDBA. Similarly, a pair of electronic axle counter is provided between BDBA-RHMA on DN line one just beyond DN Advanced starter of BDBA and another track circuit beyond DN Home signal of RHMA.

The position of the Block section whether cleared or occupied are reflected in the panel diagram provided in the Station Master's office which shows 'GREEN' when the Block Section is clear and 'RED' when occupied. Whenever a train enters in to the Block Section, "Block Section Clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of the train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and necessary action as per GR 14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, Advanced Starter Signal shall not come to OFF and the concerned instrument shall remain locked in last operated position.

A resetting arrangement for resumption of the system in case of failure of axle counter through cooperative feature has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the Train has arrived complete with its Last Vehicle at the receiving station, by exchanging Private Number then resetting to be complied with.

(Details of resetting procedure given in Appendix-'B')

- (iv) In case of failure of Axle Counter the re-setting of axle counter must be done as per the procedure given in Appendix-"B". In the event of failure of Track circuit the clearance of loop lines and main lines will be ensured by physical check by the SM on duty and train shall be admitted as per GR 3.69 and SR thereto.

NOTE:

Before taking off reception and dispatch signals for UP and DN directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication. The indication of track Axle counter will exhibit Red Light when track is occupied and white light when track is clear with route is set and signal cleared.

4.2 **CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF:**

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The relay room should be kept locked with two separate locks. The arrangement should be such that one key is kept with on duty SM and other key with Maintainer. Whenever required, the SM shall hand over the key to Maintainer with proper acknowledgement in basement/relay room register. The maintainer on receipt of key from SM may use the same and key in his custody to open the basement/relay room by inserting key one after another separately into earmarked locks. After completion of the work, the basement/relay room is to be locked using both the keys separately and designated key to be handed over to the SM. The details of the transaction are to be properly recorded in basement/relay room register maintained at the station and duly signed by the SM and Maintainer respectively.

4.3 **POWER SUPPLY:**

1. A changeover switch is provided in the Station Master's Office with the three power supplies viz. UP AT, DN AT and Local for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the supply.
2. Normally the switch will be kept towards UP AT or DN AT position. Whenever power block is to be given on the line, the on duty SM. must ascertain that power is available on the other AT.
E.g.: If power block is to be given on the UP line, DN AT must be available and vice-versa.
3. In case of failure of one of the AT supply without any power block, the on duty SM. has to check whether the circuit breaker has tripped. (Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is up and when tripped it goes down.) In case of failure of both AT supplies, the Local supply shall be utilized by operating the switch.

If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any other mean and a message shall be given to the AEE and CTFO/PSI for prompt rectification.

4. For IPS system that provides to Panel auto-change over has been provided.
5. Whenever there is a failure of power supply in one AT the SM shall take prompt action to inform to all concerned for the rectification. The SM, himself, during his daily checks, shall test the availability of power supply on both ATs and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

5 **TELECOMMUNICATIONS:**

- a) Telephone attached to SGE type Lock and Block Instruments for sections BDBA-PRDP and BDBA-RHMA.
- b) Railway Auto telephone is provided in this station.
- c) The Station is connected to CTC-PRDP, BRAG-KIS (VIA-NQR), BRAG-KIS (VIA-CTC) Control Circuit.
- d) VHF set is provided at this station.
- e) Telephone attached to L.C. Gates at Km. 479/5-7 (UP), 479/8-6 (DN), 472/27-29 (UP) and 472/30-28 (DN).
- f) BSNL phone is provided at the station.
- g) Telephonic communication is provided between Station Master on duty and both end location boxes.

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NOTE

- a. For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
- b. VHF & Walkie-Talkie sets should not be used for unnecessary discussion with Loco Pilot/Guards and any other staff.

6 SYSTEM OF TRAIN WORKING:

The movement of trains is controlled by section controller on duty whose orders shall be complied with provided they do not contravene any provisions of General Rules, Subsidiary Rules, Station Working Rules, Block Working Manual and any other safe working instructions issued from time to time.

In the event of suspension of control working the Station Master on duty shall work independently in conjunction with the Station Master of adjoining Block Stations and shall be responsible to ensure that there is no undue delay to train operation in general.

6.1 DUTIES OF TRAIN WORKING STAFF IN EACH SHIFT:

The following is the complement of operating staff provided at the station in each shift for train passing duty.

		<u>In each shift</u>
SS (In-Charge)	1 (One)	in each day shift
ASM/SM	1 (One)	In each night shift
Traffic points man (TPM)	1 (One)	in each shift

The above staff shall work as per roster issued from time to time by Divisional Railway Manager (P) and these rosters shall be conspicuously displayed in the Station Supdt's office and in Gate lodge for traffic gate man (Details duties are given in Appendix-'D').

6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINES AND ZONES OF RESPONSIBILITY:

The SM on duty is responsible to ascertain the clearance of the nominated line between BSLB/first facing point and advanced starter signal in each direction.

6.1.3 ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER:

All staff before taking up independent charge of their duties at this station shall make a written declaration in the Assurance Register that they have read the SWR thoroughly and understood the system of working in force at the station and must sign such declaration.

No Railway servant shall be entrusted with any duty involving the safety of the public unless the SS is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS is responsible to see that all the staff are well conversant with the Station Working Rules of the Station and their signature obtained in the Assurance Register after he is satisfied that they have thoroughly understood the working Rules of the Station. In case of class-IV staff, their signature/thumb impression must be obtained after explaining full about their duties and responsibility.

The SS is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Group-'C' staff and other for Group-'D' staff & duplicate

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copy of the Assurance Register must be maintained and kept in the personal custody by the SS.

The declarations are to be renewed in the following cases:

- (i) Whenever there is any change in the Station Working Rules,
- (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days and over.

6.1.4 USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SS under lock and key by maintaining one register for this purpose.

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

Before granting a line clear to a train, the SM shall ensure that:

- (i) The whole of the last preceding train has arrived completely.
- (ii) All necessary signals have been put back to 'ON' behind the said train.
- (iii) The line is clear up to UP BSLB on UP Line for UP Trains and up to the outermost facing point No. 22A on DN line for DN trains.

NOTE:

- 1) The SM on duty shall ensure that all signal lights pertaining to the train is burning properly. If, the light of the reception signal is found not burning, line clear shall not be granted for train till such time it is ensured that the concerned Loco Pilot is notified of the fact in writing by the Station Master of the station to which such line clear is to be granted.
- 2) Before granting line clear to an UP train, the SM on duty shall ensure closure of the L.C. Gate at Km. 472/27-29 from the gateman on duty under exchange of private number.

RECEPTION OF TRAINS:

Before admitting a train on any line, it must be ensured that the correct route set indication for the respective line shows 'Yellow' indication in the illuminated panel diagram. To receive a train for which line clear is given, the Station Master on duty shall nominate a clear line in consultation with the Section Controller on duty.

He shall personally satisfy himself that the nominated line is clear and free from all obstructions by seeing the panel indication or by physical verification of the nominated route in case of failure of track circuit.

He shall suspend all non-isolated shunting and thereafter set the points of the nominated route by means of push button switch provided on the control panel. He shall then verify from the visual indication available in the panel that points are set to the desired route.

Unless the panel indication for the concerned line is 'Clear' is available even with other conditions satisfied, the operation of panel control button by the Station Master on duty will not permit the concerned Home signal to be taken "OFF". However, reception of trains will be possible in such case with "Calling-on signal" provided below Home signal unless the first track circuit in advance of home signal does not show Red indication, Calling-on signal cannot be taken 'off'.

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The Station Master on duty shall then operate the concerned push button on control panel for taking "OFF" the reception signal. He shall then verify on the panel that the correct reception signal is taken "OFF"

TAKING OFF CALLING-ON SIGNAL:

Miniature colour light Calling-on signal is provided below the Home signals in terms of GR 3.13 (6) (b). A Calling-on signal shows no light in the 'ON' position and 'Yellow' light when taken "OFF". A Calling-on signal will be taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line.

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit in rear of the signal. When a train occupies the track circuit a RED light strip will appear on the panel. The particular route on which train is intended to be received shall be set by operating the point push button and group button individually or by signal and route button pressing or by crank handling in the event of failure of operation of points through panel. After the route is set, the Calling-on signal switch 'C1A/B – 'C2A/B/C' (Red with White dot) (as the case may be), shall be pressed simultaneously along with the concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the Calling-on signal clears i.e. a Yellow light glows at the concerned Calling-on signal on the panel. Every such operation has to be recorded by the on duty SM along with the reasons to do so.

NOTE:

No train can pass through while receiving on Calling-on signal.

SHUNT SIGNALS:

Back shunt signals SH-10A/D and SH-9A/B/C/D are provided at PRDP and RHMA end respectively for shunting purpose.

6.2.1 ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN:

6.2.1.1 SETTING OF POINTS AGAINST BLOCK LINE:

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train, the points in rear shall be set against the blocked line except when shunting or any other movement is required to be done on-that line. [Refer SR 3.51.06(a)].

If all the lines at a station happen to be blocked, when line clear has been granted to a train, the point should be set for the line occupied by a stabled load or a Goods train. [Refer SR 3.51.06 (b)].

The above precautions shall be taken in addition to the observance of other precautions. [Refer SR 5.04.01 & SR 5.23.01].

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE:

Whenever trains are to be admitted on an obstructed line the calling-on signal may be taken off. If the calling-on signal failed then the SM on duty shall authorize the on duty TPM with from T/509, indicating the reason for such admission the line number and the nature of obstruction on that line.

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Before handing over the authority the SM on duty shall ensure the correct setting, clamping and padlocking of both facing and trailing end of the concerned route vide SR 3.69.03.

A stop hand signal shall be exhibited by the SM on duty at a distance of not less than 45m from the point of obstruction to indicate to the Loco Pilot as to where the train shall be brought to a stand.

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

Before receiving a train on non-signaled line, the SM shall ensure that

- a. The train is brought to a stand at the first stop signal.
- b. The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- c. All points over which the train has to pass are correctly set, the facing points and trailing points clamped and padlocked and
- d. The Loco Pilot is authorized to pass the approach stop signals at 'ON' through a written authority i.e. T/369 (3b). [Refer GR 5.10].

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:

Whenever a train is to be dispatched from a non-signaled line, a starting order on form T-511 shall be given to the Loco Pilot to start from the non-signaled line. Before handing over the written permission or T/369(3b) the SM shall depute his points man at the foot of the concerned point. The TPM on duty shall clamp and padlock the same after setting the point in the desired direction under the supervision of SM on duty then after handing over the authority he shall show the proceed hand signal to the Loco Pilot. [Refer SR 5.11.01].

6.2.1.5 DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL:
NIL

- 6.2.1.6.a. For receiving UP & DN trains on common loop, the clearance of the Sand Hump/ORL should be ensured.
- b. All the lines are track circuited. In case of failure of track circuits, the clearance of the nominated line has to be ensured physically before taking 'off' Calling-on signal.

6.3 CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:

The SM on duty shall nominate a clear line not only up to the starter but also for an adequate distance beyond it for reception of trains. [Refer GR 3.36, 3.38, 3.40, 3.47, 4.17 and SR 3.36.01, 3.36.02, 3.36.04, 3.40.01, 3.40.02, 3.42.02 (a) (iv), 3.42.03, 4.17.02 and Block Working Manual].

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO "ON":

If in an emergency a reception signal has to be put back to 'ON' position when a train is approaching it, the route over which the train would pass shall not be altered until the train has come to a stand except to avert an accident. In case of departure signal, before changing the points or allowing any other movements, the Loco Pilot of the train must be advised. [Refer SR 3.36.02 (a) & (b)]

6.4 **SIMULTANEOUS RECEPTION/DESPACTH OF TRAINS:**

The following simultaneous reception and dispatch facilities are provided at this station.

1.	While Receiving of an UP train on line No.1 (common Loop)	Dispatching of an UP train on line No. 2 (UP main line) OR Receiving/Dispatching of a DN train from line No. 3 or 4.
2.	While Receiving of a DN train on line No.4 (DN Loop)	Dispatching of a DN train on line No. 3 (DN Main line) or from the line No.1 (Common loop) OR Receiving/Dispatching of an UP train on/from line No. 1 or 2.
3.	While Receiving of an DN train on line No.1 (Common loop)	Dispatching an DN train from the line No. 3 (DN Main line) OR dispatching a DN train from line No. 4 (DN loop line)

ADEQUATE DISTANCE:

To take off the Home signals for admission of a train, the adequate distance (Signal Over Lap) as mentioned below shall be kept clear. [Refer GR 3.40 and SR thereto].

CLEARANCE OF ADEQUATE DISTANCE

FOR DN TRAINS:		
Line Number	From	To
1. Common Loop	Starter Signal No.4	Up to the end of sand hump or up to DN advanced starter cum DN Gate Distant Signal No. 12
3. DN Main line	Starter Signal No.8	Up to DN Advanced Starter Signal cum DN Gate Distant Signal No.12.
4. DN Loop line	Starter Signal No.6	Up to the end of sand hump. OR Up to DN Advanced Starter cum DN Gate Distant Signal No.12.
FOR UP TRAINS:		
1. Common Loop	Starter signal No.3	Up to the end of the Over Run Line OR up to the UP Advanced Starter Signal No.11.
2. UP Main line	Starter signal No.5	Up to the UP Advanced Starter Signal No.11.

6.5 **COMPLETE ARRIVAL OF TRAINS:**

The entire block section between BDBA-RHMA and BDBA-PRDP on both DN and UP Lines are monitored by electronics analog axle counter system and the position of the block section whether occupied or cleared is indicated in panel board at SM's office. As soon as train enters into that block section. The 'RED' indication appears on control panel. After whole train clears the block section 'GREEN' indication appears on the control panel. This confirms the complete arrival of train and the SM on duty shall give 'Train Out of Block Section' report on seeing the section clear indication (GREEN) on the control panel.

If a train passes the station without confirming the Last Vehicle Indicator, then the SM on duty shall advise the Station in advance to stop the train to see the complete arrival of the train under exchange of private number and he need not withhold closing of block section vide GR 4.17(3). After obtaining confirmation about the complete arrival of the

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said train under exchange of private number he may send another train into the concerned block section.

Train passing on the adjacent line shall be stopped and Guard and Loco Pilot shall be issued with caution order to proceed cautiously and stop short of any obstruction as per SR 4.17.03 until complete arrival of the said train is received.

In case of failure of Axle counter the SM on duty shall obtain Complete Arrival Certificate from the guard of the train in the Complete Arrival Register (T/1410) maintained at the station for stopping train. For through passing train the SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide SR 4.16.04 that the train arrived complete.

On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section, the SM on duty shall take action in terms of SR 15.25.03 (b) (vi).

6.6 **DESPATCH OF TRAINS:**

To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy himself by observing the visual indication on the panel board. He shall suspend all non-isolated shunting and then shall take "OFF" the concerned route starter and advanced starter cum DN gate distant signal for dispatching the DN trains. The 'OFF' aspect of the route starter and advanced starter is the authority to proceed into the block section. [Refer GR 3.38, GR 3.42, SR 3.36.04(b), 3.42.04 and BWM 2.07.5(a)]

The Station Master on duty shall watch the safe passage of the train with its last vehicle indicator. After the train passes the advanced starter complete, he shall send the train entering block section signal to the station in advance. If a train worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed. [Refer SR. 4.23.02 & 4.25.02]

NOTE:

Before dispatching a DN train into BDBA-RHMA block section, the SM on duty shall ensure the closure of the L.C. Gate at Km. 472/30-28 from the gate man on duty under exchange private number.

6.7 **TRAINS RUNNING THROUGH:**

The procedure detailed in Para 6.4, 6.5 shall be observed. The Station Master is responsible to observe/watch the condition of the vehicles on a passing train and shall wave green hand signal horizontally until anything wrong is noticed on train. For this purpose the Station Master on duty shall stand in such a position that he sees a clear view of the passing train and that his hand signals can clearly be seen by the Loco Pilot and Guard of the train. [Refer GR 4.17, 4.42 & SR 4.42.2]

He shall also depute his points man on duty to the other side for passing the train. The TPM on duty shall be responsible to observe/watch condition of the passing train and shall wave GREEN hand signal horizontally until anything wrong is noticed on the train. If he notices anything which is unsafe for the passing train then he shall at once show danger hand signal and report the same to the SM on duty.

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The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. [Refer GR 4.17 & SR 4.17.02]

6.8 **WORKING IN CASE OF FAILURE:**
PROCEDURE TO BE FOLLOWED FOR WORKING OF TRAINS DURING FAILURE
/SUSPENSION OF INTERLOCKING /SIGNALS/ POINTS:

a. **TRACK CIRCUIT:**

In the event of failure of track circuit in the yard i.e. DN Loop, DN Main line, UP main line and Common loop, train shall be admitted by taking 'off' Calling-on signal. Before taking 'off' Calling-on signal, the clearance of the track must be ensured by physical verification.

In the event of failure of track circuits in the advance of Advanced Starter and in the rear of Home signals then lock and Block working will be remain suspended with the concerned adjacent stations till its rectification and trains shall be piloted IN/OUT as the case may be.

b. **AXLE COUNTER:**

In the event of failure of axle counter of concerned block section initiation will be taken for resetting after ensuring the complete arrival of the train by either end SM. After resetting the first train will be piloted 'OUT' to the concerned Block section for normalizing the system of working. Details of operations involved in resetting of axle counter are given in Appendix-'B'.

c. **BLOCK INSTRUMENT(S):**

In the event of partial/total failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer SR 6.02.03 and SR 6.02.06].

During this period of time the authority will be T/369(3b) with identification number and Private Number issued from the station in advance written both in figure and words.

d. **RECEPTION OF TRAIN ON OBSTRUCTED LINE:**

Whenever trains are to be admitted on an obstructed line the calling-on signal may be taken off. If the Calling-on signal failed then the SM on duty shall authorize the on duty TPM with from T/509, indicating the reason for such admission the line number and the nature of obstruction on that line.

Before handing over the authority the SM on duty shall ensure the correct setting, clamping and padlocking of both facing and trailing end of the concerned route vide SR 3.69.03.

A stop hand signal shall be exhibited by the SM on duty at a distance of not less than 45m. from the point of obstruction to indicate to the Loco Pilot as to where the train shall be brought to a stand.

e. **RECEPTION OF A TRAIN ON NON-SIGNALLED LINE:**

Before receiving a train on non-signaled line, the SM shall ensure that

- (i). The train is brought to a stand at the first stop signal.

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- (ii). The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- (iii). All points over which the train has to pass are correctly set & both, the facing and trailing end of the points are clamped and padlocked and
- (iv). The Loco Pilot is authorized to pass the approach stop signals at 'ON' through a written authority i.e. T/369 (3b). [Refer GR 5.10].

f. **DEFECTIVE SIGNALS:**

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for which it applies and if it is found impossible to take OFF a signal, the setting of points on the route to which it applies shall be inspected by the Station Master on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c)].

In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, Station Master on duty shall before giving line clear initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.49 (4), 3.51, 3.68 to 3.77]

g. **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**

However, before declaring a signal is defective, the setting of the point on the route to which it applies shall be inspected by the Station Master irrespective of the position of the switches point laid down in GR with relevant SRs shall be followed. [Refer GR 3.68, 3.70 & SR 3.77.01(b)]

Initiate action in accordance with the procedure prescribed in GR and relevant Subsidiary Rules thereto. [Refer GR 3.49(4) and 3.68, 3.77]

h. **DEFECTIVE INTERLOCKING:**

When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping and padlocking of points for admission of train. [Refer SR 3.69.03(c)].

i. **DEFECTIVE/DAMAGED POINTS:**

When any point fails to operate normally by route setting operation or through panel, it is inevitable to operate the points with Crank Handle. The SS/SM on duty shall personally ensure clamping and padlocking all the facing and trailing points enroute. Crank Handles are interlocked with signals and interlocking system. When points become defective, the procedure for use of Crank Handle for motor operated points shall be followed as per Para 20.06 of Operating Manual.

<u>Sl. No.</u>	<u>CRANK HANDLE</u>	<u>CONTROL POINT</u>
1.	CH-1	20, 25
2.	CH-2	22
3.	CH-3	19
4.	CH-4	23, 26

CH-1, CH-2, CH-3, CH-4 are interlocked with the signaling and interlocking System at this Station and normally locked inside the RKT instrument at the Station Master's office Crank handle Keys can be taken out only when all Signals are in "NORMAL" position

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and the route is not locked for whatever reasons. Crank handles can be released by obtaining common "TRAINS" push button and control push button Number concerned simultaneously. When the Keys are taken out, no signal can be "taken off". This key can be electrically transmitted at both end locations of the yard for manual operation of the defective points.

SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An Emergency Crank Handle Register shall be maintained by the SM on duty at the station as per Para 20.06 (d) of the Operating Manual. Correct setting, clamping and padlocking of the points devolve on the SM on duty.

(Details of Use of Crank Handle as per Appendix B)

The cases of the failure of motor operated points should be reported to the concerned Signal Maintainer / Signal Inspector for immediate rectification

6.9 PROVISIONS FOR WORKING OF TROLLIES/ MOTOR TROLLIES/MATERIAL LORRIES ETC:

Motor trolleys are run in accordance with rules laid down in SRs. Material lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 6.11, 6.12, 6.13 of BWM]

7.0 BLOCKING OF THE LINES:

Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points at either end should immediately be set against the blocked line except during shunting movement and the concerned berthing route button (UN OR UN1) and group "TRANS" button is to be pressed to inactivate the concerned route button. A RED flashing indication appears near the route button on panel. To activate the route button concerned route button along with the Group 'RELEASE' button is to be pressed. After route button is activated the flashing indication will disappear. And also reminders collars shall be placed on the concerned point push button controlling the blocked line. A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained. The stable load or loose vehicles are to be secured to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01]

7.1 LOADING AND UNLOADING OF VEHICLES ON RUNNING LINES:

Except small loading and unloading of vehicles on running lines is prohibited unless permitted by DOM vide SR 5.19.01.

SECURING OF VEHICLES:

As far as practicable, loose vehicle shall not be allowed to stand on the running line. However, under unavoidable circumstances, if it is necessary to detach vehicle from a train or to stable a train and leave them standing on the running line, the SM on duty shall be responsible to secure the vehicle/stable loads to prevent rolling down of vehicles and arrest obstruction and fouling. [Refer GR 5.23 & SR 5.23.01]

USE OF REMINDER BLOCK COLLARS:

Whenever any running line is blocked or when a train is stopped to cross another train or detained for any other reason, even for a short while or during shunting operations, the reminder collars shall be used by the SM on duty on the push button concerned. [Refer SR 3.36.03 (b)]

ALTERATION OF A POINTS TO A CLEAR LINE WHENEVER A RUNNING LINE IS BLOCKED:

- a. When a running line is blocked by stable load, wagon, vehicles or by a train, which is to cross or to give precedence to another train or immediately after the arrival of a train at the station etc, the points at either end should immediately be set against the blocked line except when any shunting or any other movement is required to be done immediately in that direction on that line.
- b. If all the lines at a station happen to be blocked, when "Line Clear" has been granted to a train, the points should be set for the line occupied by a stable load or a goods train in that order, so that in case of any mishap, the chances of causalities are minimized. In case all the lines are occupied by passenger carrying trains, points should be set for a loop line to negotiate of which the speed of the incoming train would be reduced, which in turn would minimize the consequences/causalities. While doing so, points may be set for a loop occupied by a train, if any, whose engine is facing the direction of approach of the incoming train rather than for a loop occupied by a train whose passenger coach will in case, of collision, receive the impact.

8. SHUNTING:

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block working Manual. [Refer GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17, 5.19, 5.20 to 5.23, 8. 06, 8.14, 8.15]

The SM/Guard/Traffic Pointsman on duty is authorized to supervise shunting operation. Normally back shunt signals and caution aspect of starter signals shall be used for shunting operations. The official supervising shunting shall ensure the correct setting, clamping and padlocking of points in case of non-signaling movements.

The SM on duty and the official supervising shunting shall co-operate with each other regarding shunting operations. Neither reception signals nor departure signals shall be taken 'OFF' unless the shunting is isolated and the path of incoming/outgoing train is free from obstructions. The sand hump/ORL line may be used as shunting neck.

8.1 SHUNTING IN THE FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approaching train is prohibited.

8.2 SHUNTING OUTSIDE HOME SIGNAL:

- (i) When line clear has been given no shunting shall be permitted in the Block section in rear.
- (ii) Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and is blocked back.
- (iii) Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and is blocked forward vide GR 8.06(3).

SHUNTING OUTSIDE THE STATION SECTION:

Shunting outside station section may be permitted provided the section is blocked back/blocked forward.

8.3 PROHIBITION OF SHUNTING SPECIAL FEATURE IF ANY:

Hand/fly shunting is prohibited.

8.4 **SHUNTING IN THE SIDING TAKING OFF FROM STATION YARD:
HOT AXLE SIDING CUM MACHINE STABLING LINE:**

While shunting in the Hot Axle siding cum machine stabling line it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted as also the lines occupied in shunting. The relevant provisions in GR 5.14 and SRs thereto shall be meticulously followed for shunting operations.

Hot axle siding cum machine stabling line at PRDP end of the yard with both side entries is taking 'off' from line No. 1. The entrance and corresponding derailing switch are coupled and operated by ARC lever at the site. The entrance point is fitted with hand plunger lock. The hand plunger locks are released by pressing button 29 provided on the panel provided in the SM's office. UP Home signal No. 1, Calling-on Signal No.1 and SH10A UP Starter Signal No. 3 and DN Home signal No. 2A DN Calling-on signal No. C2A and SH signal 9A are electrically interlocked in such a manner that these signal cannot be cleared if the siding key "Q" is taken out from RKT provided in the SM's office.

9.0 **ABNORMAL CONDITION:**

1. **PARTIAL FAILURE:**

In the event of suspension of Lock and Block Instrument and during partial failure of other available means of communication, the procedures detailed below shall be followed for working of trains in different situations.

- a) Failure/Suspension of Block Instrument or Track Circuit or Axle counters-
Line Clear shall be obtained on the Telephone attached to the Block Instrument exchanging ID number and supported by Private Number.
- b) Failure/Suspension of Block Instrument or Track Circuit or Axle Counters or telephone attached to the Block Instruments or station fixed telephones-
'Line Clear' shall be obtained on Railway auto phone or BSNL phone by exchanging Identification Number supported by a Private Number.
- c) Failure/Suspension of Block Instrument or Track Circuit or Axle counters or telephone attached to the Block Instruments or Railway auto phone or BSNL phone.
'Line Clear' shall be obtained on control phone by exchanging Identification Number supported by a Private Number.
- d) Failure/Suspension of Block Instrument or Track Circuit or Axle counters or Telephone attached to the Block Instruments or Railway auto phone or BSNL phone or control phone.
'Line Clear' shall be obtained on the VHF sets by exchanging identification Number supported by a Private Number.

The authority to proceed for the Loco Pilot is T/369(3b) bearing identification Number and Private Number received from the station in advance written both in figure and words. [Refer SR 6.02.06 & Chapter-VI of BWM]

2. **TRAINS DELAYED IN BLOCK SECTIONS:**

If a train carrying passenger does not arrive within 10 minutes or if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control this fact. There after SMs at either end of the Block section shall immediately

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stop all trains proceeding into the block section on adjacent line in either direction and warn the Loco Pilots and Guards of such trains by issue of suitable Caution Orders.

The SM of each station shall arrange to send one railway servant into the block section to collect information from the train crew about the train and the condition of the train and nature of assistance if any required. The railway servant, deputed shall bring full particulars of the cause to the nearest SM & then action will be taken according to the circumstances of the case. [Refer GR 6.04 & SRs thereto]

FAILURE OF AXLE COUNTER/BPAC:

- (a) If any Block proving Axle Counter section fails, the Last Stop Signal at the rear station cannot be taken 'OFF' and Block instrument at Advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last vehicle Checking Device is to be resorted to either Section.
- (b) No train should be allowed on signal to leave a station in any particular direction unless:-
Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF.
- (c) A resetting arrangement for the resumption of the track circuit by means of Axle counter under failure condition at either end Station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the receiving station and is certified in this respect by the SM on duty at the receiving station through exchange of Private Number.
- (d) Reset arrangements are provided in the operation cum indication panel in the SM's office for sections BDBA-RHMA and BDBA-PRDP with DLBI. The UP & DN resetting key along with reset push button for all sections are provided on the resetting Panel for resetting the axle counter in case of its failure. Every such operation of the resetting button and shall be recorded giving details of date of use, train number, time, number registered on the counter and reasons for resetting and initial each such entry.
 - (i) Procedure for emergency operation of points by crank Handle: The detailed procedure for emergency operation of points by crank Handle of Motor operated points is given in Main body.
 - (ii) Procedure for emergency operation of points with point zone axle counter / Track circuit failure & emergency route release: (Refer Appendix-B)
 - (iii) Certification of clearance of track before calling on signal, operation initiated: Before taking 'Off' calling on signal during failure of track circuits / Axle counter, the route & the clearance of the track over which train would pass to be verified SM on duty.
 - (iv) Reporting failure of points, Track circuit / Axle counter and interlocking:- Whenever there is a failure of points, track circuit / Axle counter or any other interlocking gear at the station, the failure should be reported by SM / ASM on duty to the concerned signaling maintenance staff on duty responsible for attending to the and only after receipt of the written memo from signaling maintainer for rectification of the fault, SM / ASM should restore the normal working.

The entries in failure register to be done with message to SCR.

9.1 **TOTAL FAILURE OF COMMUNICATION:**

DOUBLE LINE SECTION:

In the event of total failure of communications between BDBA-RHMA and BDBA-PRDP i.e. when line clear cannot be obtained by any one of the following means stated in order of preference viz.:

- A. Block Instruments, Track Circuits or Axle counters.

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- B. Telephone attached to the Block Instruments.
- C. Fixed telephones such as Railway auto phones & BSNL phones.
- D. Control telephone.
- E. VHF sets.
- (i) Each train before being allowed into the Block Section should be stopped and the Guard and Loco Pilot of the train apprised of the situation.
- (ii) The SM on duty will hand over an authority for working of trains during total failure of communication on Double line section (T/C 602) which includes:
 - (a) An authority to proceed without 'Line Clear'.
 - (b) An authority to pass the Last Stop Signal at its "ON" position.
 - (c) A caution order restricting the speed to 25 KMPH by day when view ahead is clear and 10 KMPH when view ahead is not clear.
- (iii) No train shall be allowed to enter the Block Section until there is a clear interval of 30 minutes between the train about to leave and the train, which has immediately proceeded?
- (iv) Fixed signals except the last stop signal may be taken "OFF" for the dispatch of the train and for the reception of the train at the next block station and reception signals may be taken only after the train has been brought to a stand outside it.
- (v) On arrival at the next block station the Loco Pilot shall hand over the authority to proceed without line clear to the SM on duty who will preserve the same for further inspection.

Before resuming normal working when any means of communication is established. SM of either end must satisfy that there is no train in the block section. [Refer SR 6.02.03].

9.2 **TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:**

During temporary single line working on one clear line when one line is obstructed either between BDBA-RHMA and BDBA-PRDP, trains shall be worked as per the procedure as detailed below. [Refer SR 6.02.01]

- a. Before introducing single line working the SM on duty must satisfy that the line on which single line will be introduced is clear and free from all obstructions.
- b. The Lock and Block instrument will be suspended.
- c. SM proposing single line working must issue a message with the cause of introduction of single line working, Line on which the single line will be introduced, Source of information about the clearance of the line on which single line will be introduced, Place of obstruction, restriction of speed, If any, last train arrived/left the station assurance about keeping the last stop signal at 'ON' position if the train runs on right lines and in case of wrong line all signals are to be kept at 'ON' position.
- d. SM of the other end block section will acknowledge the message and confirm the same by a Private Number.
- e. After obtaining line clear for the train from the Advance station the Loco Pilot must be given an authority (T/D 602) for temporary single line working on double line indicating there in.
 - (i) The line on which single line is introduced.
 - (ii) The kilo-meter ages of obstruction.
 - (iii) Any other speed restriction if anything existing.
 - (iv) An authority to pass the last stop signal at its 'ON' position. The approach stop signals at the station in advance may be taken "OFF". In case a train proceeding on wrong line, the train shall be piloted out and at the receiving station, the train shall be piloted 'IN', on the authority of T/369(3b).
- (v) An endorsement will also be made in the Caution Order given to the Loco Pilot of the 1st train to inform all the gateman and gang men on the way about introduction of temporary

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single line working and specifying the road on which the train will run. This information shall be conveyed through the Loco Pilot of a subsequent train also, if necessary.

- (vi) The speed of the first train is to be restricted to 25 KMPH subject to other speed restriction.

On being ensured that the obstructed line is clear of all obstructions, SM on duty will resume normal working after exchanging message with the SM on duty of the other concerned end supported by private number in consultation with the SCR on duty. A goods train or an engine may be allowed on wrong line by blocking back the section without introducing single line working. [Refer SR. 6.02.05 (g) (i)]

Whenever total interruption of all communication occurs during single line working on double line, the procedure detailed in GR 6.02.02 should be followed. [Refer SR 6.02.01]

9.3 **DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:**

Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provisions, which are summarized as follows. [Refer SR 6.02.05]

- (a) SM will suspend the absolute block system of working and both SM's concerned should arrange for running of trains on the authority of Block Ticket.
- (b) SM at the dispatching end will hand over to the Loco Pilot the BLOCK TICKET as the authority which includes.
- (i) An authority to pass the signals at 'ON' position.
- (ii) CAUTION ORDER: existing speed restrictions shall be indicated in the Caution order. The speed restriction of 15 KMPH in day when view ahead is clear and 10 KMPH in night, when view ahead is not clear shall be indicated clearly.
- (c) Before resumption of normal working a message between the SM's of the concerned section shall be exchanged with private number. [Refer SR 6.02.05 (d) (vi)].
The block ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstructions from the Loco Pilot/Guard of the train and cancels it.

10. **VISIBILITY TEST OBJECT:**

UP & DN starter signals of common loop (Line No. 1) are nominated as VTO to enable the SM on duty to take action in term of GR 3.61.2 (b) (iii). The light of these signals shall be verified by the SM on duty to take action as stated above.

11. **ESSENTIAL EQUIPMENT AT THE STATION:**

(Details are given in Appendix-'E')

12. **FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FO:
FOG SIGNALLING:**

In case of thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco Pilot of an approaching train the locality of a signal, the SM on duty at station shall arrange for signaling in terms of General Rules 3.61 and Subsidiary Rules thereto. The assurance of the staff shall be obtained in the month of October every year in the Fog Signal Register vide SR 3.61 as a token of their acknowledgement in fog signaling Rules.

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Fog signalmen shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gang man and must not be substitutes or casual labour but regular employees of the railway.

STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

INSTRUCTIONS:

- a. This register contains the following parts.
 - Part. - I: Particulars of fog signal men posted at the station from time to time.
 - Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.
 - Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.
 - Part – IV: Particulars of issue and testing of fog signals at the station.
- b. As soon as a man is posted to or detailed for duty at a station as a Fog Signalman, the Station Master must satisfy himself that the man is fully acquainted with and understands the rules relating to the placing of detonating (fog) signals at stations during thick or foggy weather. As an assurance of this, the Station Master shall take the signature or thumb impression of such men in the appropriate column of Part - I of this register.
- c. In charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects.
- d. Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

APPENDICES

- APPENDIX-A : WORKING OF LEVEL CROSSING GATES.
- APPENDIX-B : SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.
- APPENDIX-C : ANTI COLLISION DEVICE (RAKSHA KAVACH).
- APPENDIX-D : DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT.
- APPENDIX-E : LIST OF ESSENTIAL EQUIPMENTS PROVIDED AT THE STATION.
- APPENDIX-F : RULES OF WORKING OF DK STATION, HALTS, IBH, IBS AND OUTLYING SIDINGS.
- APPENDIX-G : RULES FOR WOKING OF TRAINS IN ELECTRIFIED SECTIONS.

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1.0 WORKING OF 'C' CLASS LEVEL CROSSING GATE NO. CP-43 SITUATED AT KM. 472/27-29 (UP) & 472/30-28 (DN) BETWEEN BDBA AND RHMA STATION.

1.1 BRIEF DESCRIPTION:

1.	Number of Level Crossing Gate	CP-43
2.	Engineering gate or Traffic Gate	Engineering
3.	Under the control	SSE/ (P.Way)/GRKN
4.	Location at Km.	Km. 472/27-29 (UP) & 472/30-28 (DN)
5.	At Station	-
6.	In between station	BDBA-RHMA
7.	BG/MG/NG	BG
8.	Single line/ Double line	Double Line
9.	Normal position	Closed to Road Traffic
10.	Interlocked/ Non-Interlocked	Non – Interlocked
11.	Means of Interlocking	-
12.	Provision of Gate Signal	UP- - DN- -
13.	Signaling Arrangements	-
14.	Means of communication	Telephone with SM/BDBA
15.	Width of the Level Crossing Gate	7.50 m.
16.	Type of Road	Others
17.	Name of Road	Pankapal
18.	Metaled/Non-metaled	Metaled
19.	Approach Road	Black Top
20.	Width of the Road	5.50 m.
21.	Angle of road crossing (in case of SKEW Gates)	-
22.	Road gradient	a. North/East side : 1: 40 b. South/West side : 1: 40
23.	Road alignment (Straight / Curve)	a). North/East side: Straight b). South /West side: Straight
24.	Provision of height gauge	Yes
25.	Type of Barrier	Lifting
26.	Length of check Rail	9.50 m.
27.	Road surface in between Level-Crossing Gates	C.C. Block
28.	Length of Rumble strip/speed breaker	10.0 m
29.	Road Signs	Available
30.	Speed breakers indication boards...	Available
31.	TVU	3519 on August - 2012
32.	Census next due on	August - 2015
33.	Demarcation for placement of detonators	Available
34.	No. of gateman working	2 (Two)
35.	Nearest Rly. medical Assistance	Paradeep
36.	Nearest private Medical Assistance available (if any)	Pankapal
37.	List of equipment available Yes/No	Yes

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1.2 A EQUIPMENT TO BE AVAILABLE AT THE GATE:

1.	LED tri-color hand signal lamp	3
2.	Hand signal flag Green	1 mounted on stick
3.	Hand signal flag Red	3 mounted on sticks
4.	Banner flag Red	3
5.	Posts for exhibiting Red banner flag	2
6.	Spare chains with padlocks	2 With stop mark
7.	Detonators	10 in tin case
8.	Gate Lamps	2
9.	Tommy bar	1
10.	Mortar pan	1
11.	Spade/Fowrah	1
12.	Rammer	1
13.	Pick axe	1
14.	Tin case for flag	1
15.	Can for oil	1
16.	Water pot/Bucket	1
17.	Canister for Muster roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate.	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small size chain with Pad lock	2

B. RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- (i) Gate Working Instructions in Hindi/English.
- (ii) Gate Working, Instructions in local vernacular language.
- (iii) Gateman Rule Book in local vernacular language.
- (iv) List for tools and books.
- (v) Duty Roster.
- (vi) Certificate for working as Gateman.
- (vii) Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- (viii) Accident Register.
- (ix) Record of last census of road traffic at Level Crossing Gate.
- (x) Public Complaint Book.
- (xi) Inspection Book.

1.3. MODE OF OPERATION:**NORMAL WORKING OF THE LEVEL CROSSING GATE (NON-INTERLOCKED):**

The level crossing gate is normally kept closed against road traffic and it will be opened for passage of road traffic only when it is necessary and safe to do so. The Gateman on duty before opening the gate shall ensure that he has not exchanged any Private Number with the station or if he has exchanged Private Number with the station, the

whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged Private Number with him for any movement immediately in the rear of that train or on the adjacent line (s). Before opening the gate, he shall display a banner flag across the track.

1.4 **DUTIES OF GATEMAN:**

(1) **ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

(2) **POSITION DURING PASSAGE OF TRAINS:**

During passage of trains, gateman will stand in the manner indicated below:

- (i) Gateman will stand attentively in front of the gate lodge facing the approaching train.
- (ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- (iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- (iv) He shall keep the whistle slung around his neck from a cord.

(3) **ROUTINE DUTIES OF GATEMAN:**

- (i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- (iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- (v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- (vi) Gateman shall also be prepared to repeat any signal which Guard may give to Loco Pilot on walkie-talkie or in any other way.
- (vii) If lifting barriers / leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- (viii) Gateman shall report to the nearest SM, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- (ix) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (x) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xi) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xiv) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.

- (xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- (xvi) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xvii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

(4) **ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN :**

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco Pilot / Guard of the passing train by showing red flag by day and red light by night.
 - (ii) He shall simultaneously try to draw the attention of the Loco Pilot / Guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
 - (iii) If Loco Pilot/Guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
 - (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
 - (v) He shall endeavor to attract the attention of the Loco Pilot/Guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
 - (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5). **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
 - (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connecting by telephone, regarding the defects/ obstructions at the gate, under exchange of private number.
 - (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (a) The gateman shall protect the line as under:-
- (i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - (ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - (iii) Gateman shall then proceed to protect the gate along with detonators, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night.
 - (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place on detonator on the line. Thereafter, he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.

- (v) Thereafter he shall proceed on the other line, showing red hand signal, similarly place detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- (vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
- (vii) In case the gateman observes or hears train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- (viii) Thereafter, he shall light up LED tri-color hand signal lamp to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by light repeatedly.

(b) **OTHER ACTION TO BE TAKEN BY GATEMAN:**

- (i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- (iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

1.5 **EXCHANGE OF PRIVATE NUMBER:**

- (i) The normal position of the level crossing gate is "Closed to Road Traffic".
- (ii) The Station Master before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master in assurance of gate being closed & locked against road traffic.
- (iii) The Station Master shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of Private Number.
- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
 - (v) He has not exchanged any private number with the station as per 1.5 (ii) above, or
 - (vi) If he has exchanged private number with the Station Master, the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station Master has not exchanged private number with him for any other movement immediately in rear of that train or on the adjacent line (s).
 - (vii) Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag/red hand signal lamp ready by his hand to stop approaching train if any.
 - (viii) In case the Gateman is not responding on the telephone or incase the telephone becomes defective or private number is not received from the Gateman, the Station Master shall adhere to the procedure prescribed in SR 16.03.04.
 - (ix) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from

the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag/red hand signal lamp ready in his hand to stop approaching train if any.

1.6 **FAILURE OF TELEPHONIC COMMUNICATION**

When telephonic communication fails or it does not get any response from gateman despite 2 or 3 attempts, the following procedure should be adopted:

- (i) Station master at dispatching end shall issue caution order to the Loco Pilot of the departing train.
- (ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
- (iii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gate man. If hand signal is not seen, the Loco Pilot should prepare to stop short of the gate and depute his assistant Loco Pilot to see the condition of the gate. If gate is closed, the assistant Loco Pilot will give all right signal and if the gate is not closed the assistant Loco Pilot must close the gate and then give all right signal. In the absence of the assistant Loco Pilot, the Loco Pilot may take the assistance of assistant Guard/Guard.
- (iv) In case of an approaching train, the station master shall advise the station master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The station master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) The station master shall advise the gateman through gangman/patrol man or the Loco Pilot of the first train that the telephone has become defective.
- (vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

1.7 **FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track.
- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light at night to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing train.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to rectify the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff rectify the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

1.8 OBSTRUCTION AT THE GATE:

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
- (iii) Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- (iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (v) Gateman shall then rush with detonators, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate vide GR 16.07.
- (vi) Thereafter he shall protect the gate from the other direction also.
- (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
- (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- (x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate on green hand signal of the gateman, if the gate is broken, but clear of any obstruction.
- (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
- (xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

1.9 OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 1.8 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

2.0 WORKING OF 'A' CLASS MID-SECTION MANNED INTERLOCKED LEVEL CROSSING GATE NO. CP-48 SITUATED AT KM. 479/5-7 (UP) & 479/8-6 (DN) BETWEEN BDBA-RHMA.

2.1 BRIEF DESCRIPTION:

1.	Number of Level Crossing Gate	CP-48
2.	Engineering or Traffic	Engineering
3.	Under control of	PWI/ GRKN
4.	Location at Km	Km. 479/5-7 (UP) & 479/8-6(DN)
5.	At station	-
6.	In between station	BDBA-RHMA
7.	BG/MG/NG	BG
8.	Single line /Double line	Double Line
9.	Normal position	Open to Road Traffic
10.	Interlocked/Non-interlocked	Interlocked
11.	Means of interlocking	Gate Stop Signal
12.	Provision of gate Signal	UP Gate Stop Signal at Km. 478/31-479/1 & DN Gate Stop Signal at Km. 479/16-479/14.
13.	Signaling arrangement	UP Gate Home & DN gate Home, DN Advanced Starter-cum DN Distant and UP Distant.
14.	Means of communication	Magneto Telephone with SM/BDBA
15.	Width of Level crossing gate	6.50m
16.	Type of Road	Others
17.	Name of Road	Kajanga-Balitutha Road
18.	Metalled/Non Metalled	Black Top
19.	Approach Road	5.00m
20.	Width of the Road	---
21.	Angle of road crossing (in case SKEW Gates)	---
22.	Road gradient (If any)	a. North/East side : 1:30 b. South/East side : 1:30
23.	Road alignment (Straight/ curve)	a. North/East side : Curve b. South/East side : Straight
24.	Provision of height gauge	---
25.	Type of Barrier	Lifting
26.	Length of check Rail	9.0m
27.	Road surface in between L-Xing gates	C.C. Block.
28.	Length of Rumbled strip/speed breaker	6.0m
29.	Road Signs	Available
30.	Speed breakers indication boards	Available
31.	TVU	45080 on August - 2012
32.	Census next due on	August - 2015
33.	Demarcation for placement of detonators.	Available
34.	No. of gateman working	02 (Two)
35.	Nearest Railway Medical Assistance	Paradeep
36.	Nearest Private Medical Assistance	Kujanga
37.	List of equipment available Yes/No	Yes

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2.2 EQUIPMENTS TO BE AVAILABLE AT THE GATE:

1.	LED tri-colour hand signal lamp	3
2.	Hand signal flag Green	1 mounted on stick
3.	Hand signal flag Red	1 mounted on sticks
4.	Banner flag Red	3
5.	Posts for exhibiting Red Banner Flag	2
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy bar	1
10.	Mortar pan	1
11.	Spade/Fowrah	1
12.	Rammer	1
13.	Pick axe	1
14.	Tin case for flag	1
15.	Cane for oil	1
16.	Water pot/Bucket	1
17.	Canister for Muster roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall clock	1
23.	Small chain with padlock	2

2.3. RECORDS TO BE KEPT AT GATE LODGE

In addition to the above equipment, following records shall also be kept at the Gate Lodge.

- (i) Gate Working Instructions in Hindi/English.
- (ii) Gate Working, Instructions in local vernacular language.
- (iii) Gateman Rule Book in local vernacular language.
- (iv) List for tools and books.
- (v) Duty Roster.
- (vi) Certificate for working as Gateman.
- (vii) Bio-data particulars of Gatemen, including date of passing vision test, initial/refresher course, safety camp, etc.
- (viii) Accident Register.
- (ix) Record of last census of road traffic at level crossing gate.
- (x) Public Complaint Book.
- (xi) Inspection Book.
- (xii) S&T Inspection Register.

2.4. INTERLOCKING AND NORMAL WORKING:

The gate is normally kept open for road traffic and is closed against the road traffic for the safe passage of trains as and when required. The gate is interlocked with the UP Gate Stop Signal & DN Gate Stop Signal. A four lever ground frame is provided at the gate lodge for the operation of signal and locking of gate booms.

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The function of the lever frame is as under:

Lever No.1	Spare.
Lever No.2	Boom locking lever
Lever No.3	UP Gate Stop Signal.
Lever No.4	DN Gate Stop Signal.

Before any train is allowed to enter into the block section from either direction the Station Master on duty shall advise the Gateman over telephone to close and lock the gate against road traffic giving him the number and description of the train. He shall also inform the gateman about the expected departure of the train from his station. On receipt of such advice the gateman on duty will repeat the train number and close the gate against road traffic considering the departure time of the train from the station. Then the Gateman shall close the gate barrier by operating the winch provided at the gate lodge. He shall then take "OUT" key 'M' from the winch and insert it in the lock of lever No. 2 and turn. This lever No. 2 when reversed affects boom locking and releases UP Gate Stop Signal & DN Gate Home Signal lever No. 3 & 4 respectively.

The signal No-3 GF of LC gate will function as UP Gate Stop Signal as well as UP Distant of BDBA and the arrangement is such that the signal will not display a less restrictive aspect than the stop unless that concerned LC gate at KM 479/5-7 is closed and locked against the road traffic and the gate Home signal is taken OFF in UP direction. The signal No-12 of BDBA will function as DN advanced starter of BDBA cum DN gate distant of LC gate No-CP-48 at KM 479/8-6 and the arrangement is such that the signal will not display a less restrictive aspect than the stop unless the line clear has been received from the station RHMA. Signal is taken OFF and the signal will display proceed aspect unless the concerned LC No-CP-48 at KM 479/5-7 (UP), 479/8-6(DN) is closed and locked against the road traffic and Gate Stop signal is taken OFF" in DN direction.

After passage of train, these signal lever be normalized and these lock lever to be made normal. This will unlock the gate booms and allow the key to be taken out. This key will be inserted in the winch and unlock to open the gate by operating the winch.

To avoid the detention to the road traffic at the Level crossing gate, the gate signals should not be taken off too early in advance and LC gate should not be kept closed for more than 10minutes at a stretch according to SR. 16.03.01(b)

2.5 **DUTIES OF GATEMAN:**

- (1) **ALERTNESS:** The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.
- (2) **POSITION DURING PASSAGE OF TRAINS:**
During passage of trains, gateman will stand in the manner indicated below:
 - (i) Gateman will stand attentively in front of the gate lodge facing the approaching train.
 - (ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
 - (iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
 - (iv) He shall keep the whistle slung around his neck from a cord.
- (3) **ROUTINE DUTIES OF GATEMAN:**
 - (i) Gateman shall place red banner flag during emergencies and obstruction on the track.

- (ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- (iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- (iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- (v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vaccum cylinder or any other situation endangering safe running of trains.
- (vi) If lifting barriers/gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- (vii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- (viii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- (ix) At the gate whose signal have become defective, the gateman shall close and lock and lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco Pilot to report the defect at the next station.
- (x) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- (xi) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- (xii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- (xiii) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- (xiv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- (xv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- (xvi) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- (xvii) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

(4) ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN :

- In case gateman observes anything unusual with a passing train, he shall take following action.
- (i) He shall take prompt action to warn the Loco Pilot / guard of the passing train by showing red flag by day and red light by night.
 - (ii) He shall simultaneously try to draw the attention of the Loco Pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
 - (iii) If Loco Pilot/guard fails to take notice, gateman shall immediately inform the Station Master, to take appropriate action, under exchange of private number.
 - (iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.

- (v) He shall endeavor to attract the attention of the Loco Pilot/guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- (vi) In case the train does not stop, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

(5) ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- (i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, in the 'ON' position.
 - (ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, regarding the defects/obstructions at the gate, under exchange of private number.
 - (iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- (a) The gateman shall protect the line as under:-
- (i) If both lines are obstructed the gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - (ii) Gateman shall then proceed to protect the gate along with detonators, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night.
 - (iii) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - (iv) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - (v) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco Pilot of the approaching train.
 - (vi) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - (vii) Thereafter, he shall light up and fix the LED tri-color hand signal lamp to warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

(b) Other action to be taken by Gateman:

- (i) At night gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.
- (ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
- (iii) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

(A.SENAPATI)
DSTE/KUR

(SHYAMAL NATH)
SR.DEN(E)/KUR

(B.PANDA)
DOM/KUR

2.6 FAILURE OF TELEPHONIC COMMUNICATION

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- (i) If the telephone fails at the gate connected with the Station at the dispatching end, station master shall then issue a caution order to the Loco Pilot of the departing train.
- (ii) Station master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
- (iii) In case the gate signal is 'ON', he should stop short of gate signal and follow the procedure laid under GR 3.73.
- (iv) In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- (v) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station master will also advise the gateman through gang man/patrolman/Loco Pilot of the first train that the telephone has become defective.
- (vii) Station master should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- (viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/ fit memo for the same.

2.7 FAILURE OF LIFTING BARRIERS OR LEAF GATES:

- (i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure the lifting barriers or leaf gates do not foul the track.
- (ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- (iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- (iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the Loco Pilot of the approaching train.
- (v) Station Master on duty shall issue caution order to the Loco Pilot of departing trains.
- (vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vii) Station Master shall advise maintenance staff responsible for maintenance of lifting barriers/ leaf gates to repair the defect at the earliest.
- (viii) Normal working will resumed only after maintenance staff repair the lifting barrier/ leaf gates and issue reconnection/ fit memo for the same.

NOTE:

Authority to pass signals at "ON" position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

2.8 FAILURE OF GATE KEY WITH THE GATE IN CLOSED POSITION, WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE:

- (i) If the gate key cannot be extracted from the winch, the gate leaves or the key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates, should be adopted.

- (iii) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- (iv) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (v) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest.
- (vi) Normal working will be resumed only after S & T staff repairs the winch/gate leaves/key transmitter and issue reconnection/ fit memo for the same.

2.9 FAILURE OF GATE KEY WITH THE GATE IN OPEN CONDITION:

- (i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- (ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- (iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals
- (iv) Station Master on duty shall issue caution order to the Loco Pilot of a departing train.
- (v) He shall also advise the Station Master at the dispatching end, under exchange of private number to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- (vi) Station Master shall advise S & T staff responsible for maintenance of winch/gate leaves/key transmitter to rectify the defect at the earliest
- (vii) Normal working will resumed only after S & T staff repair the winch/gate leaves/key transmitter and issues reconnection/ fit memo for the same.

2.10 DEFECTIVE GATE SIGNALS:

- a. The gateman shall treat the gate signal as defective and must not lower them under following circumstances:
 - (i) If gate signals can be taken "OFF" without closing the gate,
OR
The key can be extracted from the operating winch when the gate is in open condition.
- b. The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- c. Thereafter, the gate must be treated as non interlocked and procedure for reception/ dispatch of trains as prescribed for non-interlocked gates should be adopted.
- d. He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- e. Station Master on duty will issue caution order to the Loco Pilot of a departing train.
- f. He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- g. Station Master shall advise S & T staff responsible for maintaining the gate signal to repair the same at the earliest
- h. Normal working will be resumed after S & T staff rectifies the defective gate signal and issue reconnection/ fit memo for the same.

2.11 OBSTRUCTION AT THE GATE:

- (i) If the gate is broken by a road vehicle which is fouling the track or if lifting barriers/ leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the

- gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.
- (ii) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defects / obstructions at the gate, under exchange of private number.
 - (iii) Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
 - (iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
 - (v) Gateman shall then rush with detonators, LED tri-color hand signal lamp and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect gate vide GR.16.07.
 - (vi) Thereafter he shall protect the gate from the other direction also.
 - (vii) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers/ leaf gates are not fouling the track.
 - (viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
 - (ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
 - (x) Station Master shall then issue a caution order to Loco Pilot of all trains to proceed cautiously, and pass the reception/departure signal at "ON" position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
 - (xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
 - (xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/leaf gate to repair the same at the earliest.
 - (xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers/ leaf gates and issue reconnection/ fit memo for the same.

2.12 **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No. 2.11 above. If the obstruction fouls the Level Crossing Gate, gate man must keep the gates closed against road traffic till the track is cleared of the obstruction.

APPENDIX ‘B’ TO STATION WORKING RULES OF BADABANDHA STATION**SYSTEM OF SIGNALLING, INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.**

This is a ‘B’ class station Standard–III Interlocking (with isolations and is provided with panel interlocking system). The points and Signals etc. are power operated from composite miniature central panel installed in the Station Master’s Office. The Station is equipped with Multiple Aspect Colour Light Signaling.

1.1 DESCRIPTION OF PANEL:

The yard layout is depicted on the panel and the panel is fixed parallel to the track so that when the Station Master faces the panel, the yard drawing of the panel corresponds to the actual layout.

1.2 POINT PUSH BUTTON:

Points are normally operated automatically along with route setting operation. However, required points can be operated individually also. For this point push buttons, BLACK in colour is fitted over the point layout on the panel board. The individual operation of the electric point machine is controlled by these point push buttons in conjunction with the point group button (black with red dot) (N) or (R) as per requirement, fitted on the top of panel board.

1.2.1 When a point is set and locked in Normal position, a ‘Yellow’ strip light on straight line indication appears suggesting that the point is in NORMAL position.

1.2.2 When a point is set and locked in REVERSE position, a ‘Yellow’ strip light in reverse indication appears suggesting that the point is in REVERSE position.

1.2.3 When the points of any route have been correctly set and relevant signal is taken ‘OFF’, ‘RED’ indication appears near the points indicating that the concerned points are locked either in NORMAL or REVERSE.

1.2.4. When the points are neither set nor locked either in NORMAL or in REVERSE correctly, the normal and reverse indication will not be there but the indication will start flashing till such time the point is housed and locked properly in one of the positions. In such case points are to be set both ways by crank handle and clamped and padlocked. This indication will flash during point operation also.

1.2.5 All points over running lines are operated by electric point machines.

1.2.6(i) The cause for non setting of the point in the desired position shall be checked up by the Station Master on duty according to GR and SR 3.68.01(c). If there is a defect other than an obstruction, this point shall be considered defective and action shall be taken for clamping and padlocking of these points in the desired position by the Station Master on duty himself for all trains according to SR 3.69.03(c). In such case both ends of the point shall be clamped and padlocked.

a. UP and DN Home Signals are interlocked with DLBI respectively in such a way that unless the relevant Home Signal is put back to ‘ON’ position after the preceding train has arrived inside all the facing and trailing points at that end, the Block Instrument cannot be normalized.

b. All UP and DN Advanced Starters are Interlocked with DLBI respectively in such a way that unless respective “Block Proving Axle Counter section is clear and “Line Clear” is received for a train on the respective Block instrument, the concerned Advanced Starter Signal cannot be taken ‘OFF’.

- c. 'ON' aspect of First Stop Signal and Last Stop Signals in UP and DN directions are proved in the interlocking of respective Block Instruments in such a way that it is not possible to close the line and grant or receive 'Line Clear' unless these signals assume 'ON' aspect and relevant Block proving Axle Counter section is clear.

1.2.7 **DESCRIPTION OF POINT PUSH BUTTON:**

a) **RHMA END POINTS:**

Sl. No.	Button No.	Colour	Description
1.	19 A/B WN	BLACK	Crossover point between UP and DN main lines.
2.	25A/B WN	BLACK	Crossover point between DN Loop and DN Main Lines.
3.	23A/ B WN	BLACK	Crossover point between Common Loop and UP Main Lines.

b) **PRDP END POINTS**

Sl. No.	Button No.	Colour	Description
1.	22 A/B WN	BLACK	Crossover point between UP and DN Main Lines
2.	20 A/B WN	BLACK	Crossover point between DN Main and DN Loop Lines.
3.	26 A/B WN	BLACK	Crossover point between Common Loop and UP Main Lines
4.	CONTROL 29	BLACK	Control of Hot Axle siding cum machine stabling siding.

1.2.8 **DESCRIPTION OF POINT GROUP BUTTON:**

These are two buttons at the top of panel one for Normal and one for Reverse. These are coloured Black with red dot. The button is operated in conjunction with point button to operate the concerned point to the required setting.

1.3 **SIGNAL PUSH BUTTON:**

These are RED coloured push button on the panel near the stop signals on the panel. These are operated in conjunction with Route button (white coloured) to take 'OFF' the signals.

DESCRIPTION OF SIGNAL BUTTONS:

Sl. No.	Button No.	Colour	Description
1.	C1 A/B	RED with WHITE Dot	UP Calling-on signal for UP Main & Common loop lines.
2.	1 A/B	RED	UP Home signal for UP Main & Common loop lines.
3.	C2 A/B/C	RED with White dot.	DN Calling-on signal for DN Main, DN loop line and Common Loop Lines.
4.	2 A/B/C	RED	DN Home signal for Down Main, DN loop line and Common Loop Lines.
5.	S-3	RED	Common Loop Line starter
6.	S-4	RED	Common Loop Line starter
7.	S-5	RED	UP Main Line starter
8.	S-6	RED	DN Loop Line Starter.
9.	S-8	RED	DN Main Line Starter.
10.	SH9	YELLOW	Shunt signal for DN Loop, DN Main, UP Main and Common loop lines.
11.	SH10	YELLOW	Shunt signal for UP Main and Common loop lines.

12.	S-11	RED	UP Advanced Starter.
13.	S-12	RED	DN Advanced Starter.

1.3.2 **SIGNAL INDICATIONS:**

The aspects of the signals as obtained at any time are shown on the panel on the signal indication along side of the track.

1.4 **ROUTE BUTTONS:**

1.4.1 Route buttons are provided separately on each running line on the panel for initiation of route. Common route buttons are also provided for taking off starters. An individual route button is provided for taking off Advanced Starter for clearing the signals, it is necessary to operate the signal buttons and the concerned route button simultaneously for taking "OFF" concerned signal.

1.4.2 **DESCRIPTION OF ROUTE BUTTONS:**

Sl. No.	Button No.	Colour	Description
1.	UM-UN	WHITE	Route button for UP Home/Calling-on/Shunt Signal No.9/Shunt signal No.10 for UP main Line.
2.	CL-UN	WHITE	Route button for UP Home/DN Home (overlap set to Main Line) /Calling-on for Common loop line no.1.
3.	CL-UN1	WHITE with BLACK DOT	Route button for UP Home/DN Home (overlap set to sand hump/ORL)/Calling-on/Shunt Signal No.9/Shunt signal No.10 for Common loop line no.1.
4.	DM-UN	WHITE	Route button for DN Home/Calling-on/ shunt signal No.9/ for DN main line.
5.	DL-UN	WHITE	Route button for DN-Home for DN Loop line, overlap set to Main Line.
6.	DL-UN1	WHITE with BLACK DOT	Route button for DN-Home (overlap set to sand hump)/ shunt signal No.9/ Calling-on for DN Loop line
7.	11AT-UN	WHITE	Common route button for Up Main Starter Signal No.5, common loop starter signal No.3.
8.	11 UN	WHITE	Route button for UP Advanced Starter Signal No.11.
9.	12AT-UN	WHITE	Common route button for DN Main Starter Signal No.8, DN Loop starter signal No.6 and common loop Starter Signal No.4
10.	12 UN	WHITE	Route button for DN Advanced Starter Signal No.12.

CRANK HANDLE PUSH BUTTON:

1.	CH-1	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 20 & 25 along with "TRANS" Push Button
2.	CH-2	BLUE	To be pressed to extract Crank Handle Key for operation of Point No. 22 along with "TRANS" Push Button.
3.	CH-3	BLUE	To be pressed to extract crank handle key for operation of point No. 19 along with "TRANS" push button.
4.	CH-4	BLUE	To be pressed to extract crank handle key for operation of point No.23 & 26 along with "TRANS" push button.

MISCELLANEOUS PUSH BUTTONS:

1.	SM'S PANEL KEY.		To lock the control panel to prevent unauthorized operation.
2.	SM'S EMERGENCY POINT / KEY		This Key is to be inserted and operated in the event of Emergency Point operation.
3.	GROUP TRANS BUTTON	WHITE WITH BLACK DOT.	To be pressed to initiate Slot of Crank Handle along with concerned slot/Crank Handle
4.	GROUP RELEASE PUSH BUTTON	WHITE WITH BLACK DOT.	To be pressed to withdraw / Normalise the control of slot / Crank Handle along with concerned Slot/ Crank Handle/L.C Gate push Button.
5.	POINT GROUP NORMAL PUSH BUTTON	BLACK WITH RED DOT.	To be pressed to initiate "NORMAL" setting of point along with concerned point push button.
6.	POINT GROUP REVERSE PUSH BUTTON	BLACK WITH RED DOT.	To be pressed to initiate "REVERSE" setting of point along with concerned point push button.
7.	EMERGENCY ROUTE RELEASE PUSH BUTTON	WHITE WITH RED DOT.	To be pressed for emergency Route Release.
8.	SIGNAL CANCELLATION PUSH BUTTON	RED	To be pressed for canceling a signal which is already taken "OFF" or to release a Rout after passage of train.
9.	SIGNALLAMP FAILURE / POINT FAILURE ACKNOWLEDGEMENT	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp failure/ point failure Buzzer.
10.	EMERGENCY POINT OPERATION	BLACK WITH RED DOT	To be pressed to operate the point when concerned point zone axle counters or track circuit failed.
11.	BUTTON HELD ACKNOWLEDGEMENT PUSH BUTTON	WHITE WITH RED DOT.	To be pressed for silencing button Held Buzzer in case of any push button remains pressed after the button is released.
12.	RESET PUSH BUTTON FOR PERMISSION GRANTING TO UP LV AT PRDP END	RED	To be pressed for granting permission to PRDP for reset axle counter for section BDBA-PRDP Up line.
13.	PERMISSION RECEIVED RESET KEY AT PRDP END		Reset key to be inserted on the panel for resetting the Axle counter for section PRDP - BDBA Dn line.

14	RESET PUSH BUTTON FOR PERMISSION GRANTING TO DN LV AT RHMA END	RED	To be pressed for granting permission to RHMA for reset axle counter for section BDBA-RHMA Dn line.
15	PERMISSION RECEIVED RESET KEY AT RHMA END		Reset key to be inserted on the panel for resetting the Axle counter for section RHMA - BDBA Up line.
16	UP BLOCK RELEASE PUSH BUTTON	CHOCOLATE WITH WHITE	To be pressed for normalizing the Block Instrument for section RHMA-BDBA.
17	DN BLOCK RELEASE PUSH BUTTON	CHOCOLATE WITH WHITE	To be pressed for normalizing the Block Instrument for section PRDP-BDBA.
18	POWER ACKNOWLEDGE MENT PUSH BUTTON	RED	To be pressed for acknowledging the Power Failure Buzzer.

1.5 **POINT FAILURE INDICATION (RED) /POINT FAILURE BUZZER/POINT FAILURE MUTING BUTTON (RED WITH WHITE DOT):**

Whenever there is failure of point due to non-setting, point failure indication flashing light appears near the point failure-muting button besides audible Buzzer. The buzzer stops when the point failure-muting button is pressed, but the flashing light above the muting button shall continue to glow. The flashing light at the concerned point zone can identify the defective point. After the failure is rectified, the flashing light above the muting button will disappear.

1.6 **EMERGENCY ROUTE RELEASE COUNTER:**

This counter is provided to register the number of operations made for emergency cancellation of route. The Station Master must record the last number registered on the counter while taking over/handing over duty.

1.7 **EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):**

The panel interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally the route is released by the passage of the train over the route. When it becomes necessary to alter the route after the signal has been taken 'OFF' the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and the concerned signal button. After this first the emergency route release button (white with red dot) positioned in the top of panel to be pressed and subsequently the concerned signal button is to be pressed releasing the emergency route release button. A white light will lit indicating that the timer is working. After 120 seconds, the white light along with the white strip of light will disappear suggesting the route has been released. [Refer SR 3.36.02(a)]

In case the route illumination (white strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be

advised immediately to get the emergency route release button sealed after rectification of fault if any.

Each operation of emergency cancellation of route is recorded in the emergency route release counter by registering the next higher number. All such operations and the new number should be recorded in the station diary and in the train signal register.

1.8 **EMERGENCY POINT OPERATION (BLACK WITH RED DOT):**

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. If such operation is necessary, the SM on duty, after ensuring that no vehicle is standing on the concerned point track circuit shall press the emergency point operation button along with relevant point button simultaneously. Then retaining point button pressed emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL' or 'REVERSE'. All such operations will be registered in the emergency point operation counter. Each operation of emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

1.9 **BUTTON HELD ACKNOWLEDGE (WHITE WITH RED DOT):**

All push button are self-restoring type. A button held acknowledgement push button along with a white light is positioned at the top of the panel. When any button gets stuck in pressed condition, a buzzer will sound along with flashing white light indication. The Station master shall stop the buzzer by pressing the button held acknowledgement button (white with Red dot). The buzzer will stop but the flashing white light will continue to glow until the pressed button is normalized. SM on duty shall try to find out the pressed button for normalization or otherwise inform the maintenance staff to rectify.

1.10 **OVERLAP TIME RELEASE (WHITE LIGHT):**

Separate indications (White Light) for each overlap is provided near the starter signal to indicate the free or locked condition of overlap. This indication light will glow when overlap is locked by any Home Signal route and there will be no light when overlap is free. The locked indication starts flashing when the approaching train clears the rear end point zone track and occupies the berthing track. After a time release of 120 seconds the white flashing light will disappear indicating concerned overlap is free.

1.11 **TRACK CIRCUITS:**

UP & DN main lines are track circuited. In addition there are short length track circuits in advance of advanced starter Signals and Home signal in both the directions are also provided. For Calling-on signal, 93 M track circuits in rear of the DN Home signals and 95 M in the rear of the UP Home signal are provided.. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited (i.e. 11AT and 12AT in UP and DN directions respectively). Indications for the above track circuits are available on panel at SM's office. No Yellow light over track on the panel when route is set for any signal indicates track clear and Red light indicates track occupied condition.

1.12 **AXLE COUNTER:**

- (i) The entire Block Section on both UP and DN Lines between the stations PRDP-BDBA & BDBA-RHMA are monitored by Analog Axle counter system. These Axle Counters are provided for Last Vehicle check on either Block Sections as well as for dispatching a train in block section from either end of the section.

- (ii) These Analog Axle counter system counts the Axles 'IN' and counting axles 'OUT' in the respective block sections which indicate whether the concerned sections monitored by digital axle counters is clear or occupied.
- (iii) Fiberglass trolley wheels are to be provided for push trolleys in lieu of trolley suppression track circuits.

A pair of electronic axle counter is provided between PRDP-BDBA on UP line one just beyond UP Advanced Starter BDBA and another 1T2 beyond UP Home signal of PRDP. Similarly a pair of electronic axle counter is provided between BDBA - PRDP on DN line one just beyond DN Advanced Starter of PRDP and another in 2T1 track circuit beyond DN Home signal of BDBA.

Another pair of electronic axle counter is provided between BDBA-RHMA on UP line one just beyond UP Advanced Starter RHMA and another 1T1 track circuit beyond UP Home signal of BDBA. Similarly, a pair of electronic axle counter is provided between RHMA - BDBA on DN line one just beyond DN Advanced Starter of BDBA and another 2T2 track circuit beyond DN Home signal of RHMA.

The position of the Block section whether cleared or occupied are reflected in the panel diagram provided in the Station Master's office which shows 'GREEN' when the Block Section is clear and 'RED' when occupied. Whenever a train enters in to the Block Section, "Block Section Clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of the train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and necessary action as per GR 14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, Advanced Starter signal shall not come to OFF and the concerned instrument shall remain locked in last operated position.

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the Train has arrived complete with its Last Vehicle at the receiving station, by exchanging Private Number then resetting to be complied with.

(Details of resetting procedure given in Appendix-'B')

- (iv) In case of failure of Axle Counter the re-setting of axle counter must be done as per the procedure given in Appendix-"B". In the event of failure of Axle Counter/ Track circuit the clearance of loop lines and main lines will be ensured by physical check by the SM on duty and train shall be admitted as per GR 3.69 and SR thereto.

NOTE:

Before taking off reception and dispatch signals for UP and DN directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The indication of track Axle counter will exhibit Red Light when track is occupied and white light when track is clear with route is set and signal cleared.

2.0 STATION MASTER'S PANEL CONTROL KEY:

The panel is fitted with Station Master's lock up key to prevent any simultaneous operation of the panel. The Station master on duty is the only authorized person to operate the panel and the panel key must always remain in his personal custody vide SR 3.36.03 and GR 5.08. The key locks the panel board and no operations are possible. In case of emergency, signals can be put back to danger by operating concerned signal button and signal cancel button without releasing the panel locks also. However, the provisions of SR.3.36.02 shall be followed while replacing the signals to 'ON'.

2.1 CRANK HANDLES:

When any point fails to operate normally by the route setting operation or through the concerned point button through panel, it is inevitable to operate the points with crank handle. Station Master on duty shall personally ensure clamping and pad locking of all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. Normally the crank handle is locked in the RKT instrument in the Station Master's room and in the location boxes provided of either end of the yard. These crank handles are for all motor operated points of the station. The CH push button Nos. CH1/CH2/CH3/CH4 and group button (White with Black Dot) are provided at the top of the panel board.

Each button has three indications, viz. WHITE, GREEN and RED. The Green indication suggests that the crank handle key is in its interlocked position of the panel. This is called Crank handle Key 'IN' indication'. The Red indication suggests that the crank handles key is locked and not free for extraction from RKT. This is called 'Crank Handle Key Locked Indication'. The White indication suggests that the 'CRANK HANDLE' key is extracted from RKT. This is called 'KEY OUT' indication. The key out White indication of the crank handle locks all reception and departure signals in their normal position. The crank handles are attached to the key in RKT at the Station Master's room and in the end locations and can be released from either of the RKT. The Station Master has to press CH1/CH2/CH3/CH4 buttons and Trans button. This will enable Station Master to extract key from RKT, which in turn can be transmitted from the adjacent RKT to end location for release from RKT and crank handle there. After completion of point work, the crank handle to be inserted in the end location RKT and transmitted to station. Station Master on getting information will press economizer button and will extract key from RKT and insert in original RKT and turn to lock in and key IN indication will appear on panel on pressing release button in the group. The TPM after extracting the crank handle (attached to the RKT key) will operate the required points to the desired position. After the work is over, the TPM shall transmit the key back to Station Master on duty through RKT. The Station Master on duty shall take back the key and put it in original RKT and turn to key 'IN' position. On pressing the release button on the group along with CH1/CH2/CH3/CH4, Green light glows indicating key 'IN'. The cases of failure of motor operated points should be promptly reported to the concerned Signal Maintainer/Signal Inspector for immediate rectification. Station Master as per Operating Manual 20.06 (d) shall maintain an Emergency Crank Handle Register. The procedure for use of crank handle for motor operated points shall be followed in terms of Operating Manual 20.06.

After any non-signalled movement has taken place over a point/points operated by an electric point machine, whether in the facing or trailing direction, the SM on duty shall operate point/points to "NORMAL" or "REVERSE" settings for the purpose of testing the points and after ensuring correct indications of "NORMAL" or "REVERSE" setting of points, further movement shall be permitted over the points.

2.2. SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS:

For setting a route all the concerned points must be set by operation of relevant point button and group button one at a time in the desired position or by operating signal button and route Button. As soon as the required points are set to the required position, the concerned signal for the route will clear and a white strip of light will appear on the entire route confirming that the Route is set and locked. The signal 'off' indication will appear on the panel.

2.3. SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS:

For setting a particular route for departure of a train, all the concerned points must be set by operation of point button and group button one at a time in the desired position or by operating signal button and route button.

To take off advanced starter, line clear must be obtained from the concerned block station in advance. Then the concerned advance starter signal button shall be pressed along with the advanced starter route button for two to three seconds and released. This will clear the advance starter signal and a white strip of light will appear on the panel.

To take off the starter signal the concerned signal button to be pressed and at the same time common Route button to be pressed for two to three seconds and released. This will clear starter signal and a white strip of light will appear on the route from the concerned starter to the advanced starter.

2.4. TAKING OFF CALLING-ON SIGNAL:

Miniature colour light Calling-on signal is provided below the Home signals in terms of GR 3.13 (6) (b). A Calling-on signal shows no light in the 'ON' position. A Calling-on signal is taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line.

To take off Calling-on signal the train must come to a stop at the foot of the home signal, occupying the track circuit (1AT, 2AT as the case may be) in rear of the Home signal. When a train occupies the track circuit, a RED light strip will appear on the panel. The Particular route on which train is intended to be received shall be set by operating the point push button and group button individually or by signal and route button pressing or by crank handling in the event of failure of operation of points through panel. After the route is set, the Calling-on signal button 'C1'/'C2' (Red with white dot) (as the case may be), shall be pressed simultaneously along with the concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the Calling-on signal clears i.e. a Yellow light glows at the concerned Calling-on signal on the panel.

Note:

No trains can Pass Through while receiving on Calling-on signal.

2.5 RELEASE/CANCELLATION OF ROUTE:

Normally when a train is received on any route and dispatched, the route illumination will disappear automatically after passage of the train suggesting that the route is released.

NOTE:

UP and DN Calling-on signals and UP and DN Advanced starters are to be manually cancelled after the passage of the train to cancel the route.

2.6. REPLACEMENT OF SIGNALS TO 'ON':

Signals are replaced to 'ON' automatically by the passage of a train pass the signal. It will not be possible to re-clear the signal again unless the due process for clearing the signal is repeated again. For replacement of any signal to 'ON' position manually, the respective signal button and the signal cancellation button (RED) to be pressed simultaneously.

2.7. INTERLOCKING OF SIGNALS/POINTS:

All running line points are fitted with facing point locks in the point machine and are electrically detected by the relevant Home signals and starters.

2.7.1. Advanced starter is interlocked with respective Block Instrument in Line Clear Position.

2.8. The Block Instrument cannot be made normal unless the respective Home signal is put back to 'ON' aspect and the respective block section monitored by axle counter is clear of trains..

2.9. Signals once taken 'OFF' can be put back to danger in case of emergency by pressing concerned signal button and signal cancellation button even when the panel is locked up with Station Master's key.

2.10. PILOTING OF TRAINS IN TO STATION YARD.

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. When both Home and Calling-on signal failed, trains can be piloted 'IN' in terms of SR 3.69.03 (a) & (c). The SM on duty shall nominate a clear line and shall set the nominated route correctly from the panel or shall advise the TPM on duty to set the nominated route correctly with the help of crank handle during failure of points. He shall clamp and padlock both facing and trailing end points in both cases under the supervision of SM on duty at station.

Then the SM on duty shall then hand over the written authority i.e. T/369(3b) to the TPM for "piloting IN" the train. While going to the Home signal the TPM will satisfy him self that the points have been correctly set, clamped and padlocked. After the train has brought to a dead stop at the Home signal the TPM shall hand over the pilot memo to the Loco Pilot, board the engine and display proceed hand signal to pass the defective Home signal.

NOTE:

(1) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of both ends for admission of the train.

(2) The keys of padlocks used for on the points shall be kept in the personally custody of the SM on duty till such movement is either completed or alternatively cancelled.

PILOTING OF TRAINS - OUT OF STATION YARD:

When the starter signal has become defective, the Station Master shall set the points correctly from the panel or advise the TPM to set the concerned points correctly for the outgoing train with help of crank handle. The TPM on duty shall clamp and padlock both the facing and trailing end points under the supervision of SM on duty in both cases. The SM on duty shall then authorize the TPM on duty to hand over the pilot memo T/369(3b) along with other authorities if any to the Loco Pilot of the Train. There after he shall display proceed hand signal at the foot of the starter signal vide SR 3.70.01.

In case of Advance starter signal becomes defective such signal shall be passed on the written authority on the form T/369(3b). Proceed hand signal shall not be displayed vide SR 3.70.02. The TPM shall hand over the pilot memo in form T/369(3b) to the train.

NOTE

1. The SM on duty shall personally supervise the correct setting clamping and padlocking of the facing points and ensure the clearance of any obstruction including level crossing gates on the concerned route for dispatch of a train.
2. The keys of the padlock used for clamps on the points shall be kept in the personally custody of the SM on duty till such movement is either completed or alternatively cancelled.

2.11 SHUNTING:

1. For shunting, caution aspect of starter signals shall be used.
2. For back shunting individual shunt signal No.10 and 9 are provided at East and West side of the yard respectively for shunting back to the station yard in desired direction. The particular route on which it is intended to do shunting is to be set by operating the desired points individual from the point or by pressing the shunt signal button and the required route button simultaneously for 2-3 seconds. When the route is set and locked correctly 'Yellow' strip of lights will appear on the route and the concerned shunt signal shall display 'OFF' aspect.

3.0 HOT AXLE SIDING CUM MACHINE STABLING SIDING:

The Hot Axle Siding Cum Machine Stabling Siding of the yard with both side entries is taking off from Common loop. The entrance point and corresponding out point are coupled and operated by an arc lever at site. Both the entrances are fitted with hand plunger locks. These hand plunger locks are unlocked by the siding key 'Q' released by pressing the button No.29 provided on Panel at SM's office. Reception & Despatch signals, shunt signal No. 1A,C1A,2A,C2A and SH9A & SH10A for line No.1 are electrically interlocked in such a way that these signal cannot be taken 'OFF' if the siding key 'Q' are taken 'OUT' from the RKT provided in the Machine Stabling Siding location at site.

3.1 LEVEL CROSSINGS:

- (a) There is a 'C' class manned traffic Interlocked L.C. Gate No. CP-42 situated at Km. 469/19-21 (UP) & 469/22-20 (DN) at BDBA end of the yard. Telephone communications is provided between Gate lodge and SM/RHMA.
- (b) There is a 'C' class mid-section manned non-interlocked L.C. Gate No. CP-43 situated at Km. 472/27-29 (UP) & 472/30-28 (DN) at BDBA-RHMA station. Telephone communications is provided between Gate lodge and SM/BDBA.
- (c) There is a 'A' class manned Interlocked L.C. Gate No. CP-48 situated at Km.479/5-7 (UP), 479/8-6 (DN) between BDBA-RHMA. Telephone communication is provided between the gate lodge and SM/BDBA.
- (d) There is a 'C' Class manned traffic interlocked level crossing gate No. CP-54 situated at Km. 490/3-5 (UP) & 490/6-4 (DN) towards BDBA end of the yard. Telephone communication is provided between the gate lodge and SM/RRI/PRDP.
- (e) There is an 'A' Class manned traffic interlocked level crossing gate No. CP-55 situated at Km. 491/17-19 (UP) & 491/20-18 (DN) towards BDBA end of coaching yard. Telephone communication is provided between the gate lodge and SM/RRI/PRDP.

4.0. VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN INTO STATION YARD:

In the Station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be clear of any obstruction for the passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the Station master on duty personally

through Luminous indications of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the points etc.,

4.1. **CRANK HANDLING EMERGENCY OPERATION OF POINTS:**

Crank handles are interlocked with the Signalling and Interlocking System at this station. Crank handles which are normally locked inside the RKT instrument at the station, can be taken out only when all the signals are in the 'NORMAL' position and the route is not locked for whatever reasons. Crank handles can be released by operating common 'TRANS' push button and control push button No. CH1/CH2/CH3/CH4 simultaneously. When the key is taken out, no Signal can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard

- 4.2. On account of the doubtful operation of any track circuit by a light vehicle including self-propelled vehicle such as motor trolley or shunting engine or tower wagon, indicating the occupancy of track, it is necessary that the Station Master on duty satisfies himself that the said vehicle has cleared the point zone track circuits by observing the track indications of the track on either side of the crossovers by positively checking the 'entrance' and 'exit' track circuits are showing occupancy and clearance in accordance with the train movement.

4.3. **INSTRUCTIONS REGARDING STABLING OF TRAINS ON RUNNING LINES:**

When a train is stabled on a running line for a duration exceeding ten hours, the use of the said running line for passing the trains 'IN' 'THROUGH' or 'OUT' at the station shall be done with a lot of care and diligence. Station Master on duty shall meticulously observe the proper functioning of the relevant track circuits (occupancy/clearance) while admitting a train. Such observance should continue for a minimum of four to five trains thereafter. If the Station Master on duty is not satisfied with the proper functioning of the track circuits on which the train was earlier stabled, the signals leading on the line shall be suspended and the S & T maintenance staff is informed for attending to this.

5.0. **EMERGENCY OPERATIONS:**

The following are the instructions for emergency operations.

5.1. **CANCELLATION BUTTON AND VEEDER COUNTER:**

For the purpose of emergency operations there is an emergency 'Route cancellation'. There is a 'Veeder counter' for counting emergency operations involving operation of the emergency route cancellation button (provided at the top of the panel). The Station Master on duty must press the emergency route cancellation button and the signal button in accordance with 1.8 confirming to the section for which emergency route release is desired.

An indication will appear indicating that the timer has started operating and after a lapse of 120 seconds, the desired route will be release, provided all other conditions are favorable for route release.

- 5.2. The veeder counter registers the number of such emergency cancellation operations. Station Master on duty should specify the cause for its usage giving the particulars of causes and the time of operation as related to a particular train etc., in the train signal register as well as in a separate register meant for this purpose. The detailed operational instructions are as follows:

5.3. **EMERGENCY OPERATIONS – CANCELLATION OF THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHATEVER REASON:**

If the locking of the route does not get released for one reason or the other after passage of the train, it is necessary to take recourse to the following emergency operations.

- a) Firstly, it must be ensured that the signal is in the normal position.
- b) Operation as detailed in Para 1.8 to be followed.

6.0 **LOCKING OF RELAY ROOM:**

The relay room should be kept locked with a double lock, which can be opened only after both the keys are used. One key of the lock shall be kept with the Station Master on duty in his custody and the other with maintainer. Whenever required, the key in the custody of Station Master shall be given to the maintainer, after completion of work; the maintainer will return the key to Station Master. The details of the transaction should be properly recorded in the relevant register at the Station duly signed by Station Master on duty and the maintainer concerned.

7.0 **MAINTENANCE OF S & T INSTALLATION and ADHERENCE TO MAINTENANCE SCHEDULES:**

- 7.1. Regular maintenance of the S&T installations, adherence to schedules of maintenance testing of points, track circuits, level crossing gates, associated interlocking apparatus cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.
- 7.2. The tests, checks and replacements etc. shall confirm to the schedules of maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject.

8.0 **PROCEDURE TO BE FOLLOWED INCASE OF FAILURE OF AN INTERLOCKING GEAR:**

- 8.1. In case of failure of any interlocking gear at the station, the failure report should be communicated by the Station Master to the sectional Maintainer, the signal inspector of the section and others through a memo as per GR and SR 3.51.04 and 3.68.04 and document all such transactions.

8.2. **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**

Before declaring a signal as defective, the setting of the point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the buttons.

8.3. **RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:**

After receipt of this information, the sectional Maintainer shall attend to the failure after giving a Disconnection Memo. After rectification of the fault, the Sectional Maintainer shall give Reconnection Memo detailing the rectification. Thereafter the Station Master on duty shall personally check this defective apparatus. After satisfying himself that the gear is in good and proper working order, he shall resume the normal working of the said defective apparatus in terms of SR 3.68.04 (c) and (d).

9.0. **PROCEDURE FOR CARRYING OUT PLANNED MAINTENANCE WORK:**

Whenever any normal maintenance or special works for major renewals etc., are involved, the Signal and Telecom should preplan these works. Field staff and the

Inspector of the section should give to the Station master in writing 'Advance Intimation' about this work in terms of G and SR 15.08.01.

10.0 **EMERGENCIES:**

Notwithstanding, anything contained in the aforesaid paras when equipment is found defective and unsafe for passage of trains, the Signal and Telecom staff must at once suspend the working of the equipment and associated installations and issue 'Suspension Memo' explaining the seriousness of the defect or damage to the interlocking installation to the Station master and take the Station Master's acknowledgement. After this, the usual practice of exchange of disconnection memo and reconnection memo can follow. The Station Master must act promptly on such messages and take adequate precaution treating the S&T installation as defective and pass trains over the affected interlocking equipment's according to extant instructions as contained in GR and SR 3.77.

11.1 **PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNALS AND POINTS AND USE OF CRANK HANDLE:**

11.2 When the crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody rests with the Station Master on duty, till it is replaced back in RKT.

11.3 The cases of failure of motor operated points should be promptly reported to the concerned Signal maintainer/Signal Inspector for rectification.

11.4 Whenever an Emergency Crank Handle is required to be used by a signal official for maintenance work or attending to failure, the signal official will give a disconnection memo to the Station master on duty and after making necessary entries in the Emergency Crank Handle Register. The Station master on duty will obtain the acknowledgement of the signal official in the Emergency Crank Handle Register and then hand over to him the Emergency Crank Handle. The points will be treated as defective until the Emergency Crank Handle is returned back to the Station Master on duty.

11.5 Before parting with the Emergency Crank Handle either for attending failures or for maintenance work by Signal maintenance officials, the Station Master on duty will ensure that the reception and departure signals are put back to 'ON' position. The points for the affected lines should be treated as non-interlocked. The Station Master on duty is responsible for introduction of non-interlocked working and the trains will be piloted 'IN and 'OUT' duly clamping and padlocking both facing and tailing points over which the train is to pass, as per GR 3.69 and 3.70 with relevant SRs. The Station Master on duty will be personally responsible for setting and locking of points for reception and dispatch of all trains.

11.6 The Emergency Crank Handle Register is to be maintained vide OM 20.06 note (d) by the Station Master on duty wherein the particulars of the usage of the Emergency Crank Handle must be recorded.

12.0 **SUSPENSION OF LAST STOP SIGNALS:**

When the Block Instrument is suspended with its handle in 'TRAIN GOING TO' position for whatever reason, the concerned last stop signal controlled by the Block Instruments must be treated as suspended and trains shall be piloted 'OUT'.

12.1 The Station Master on duty shall not grant 'LINE Clear' unless he has ensured that the lamps of fixed signals which apply to the train are burning. If the signal lights can not be kept burning, the Station Master on duty before giving 'LINE CLEAR' shall initiate action in accordance with the procedure prescribed in GR 3.61 to 3.72 and relevant SRs vide GR 3.49(4).

13. **NORMALISATION OF THE BLOCK AXLE COUNTER AND OF BLOCK WORKING BY RESETTING FEATURE:**

- 13.1 Axle Counters are provided on both UP and DN line Block Sections between BDBA-PRDP and BDBA-RHMA section for functioning as LVCD.
- 13.2 The occupation and clearance of the axle counter section are indicated on the panel by 'RED' and 'GREEN' light respectively.
- 13.3 If any Block proving Axle Counter section fails, the Last Stop Signal at the rear station cannot be taken 'OFF' and Block instrument at Advance Station cannot be turned to 'Line Closed' position after arrival of a train and in such case, resetting of last vehicle Checking Device is to be resorted to either Section.
- 13.4 Even after completion of reset operation, LVCD Axle Counter will show clear only if next train is passed. The next train is to be piloted.
- 13.5. No train should be allowed on signal to leave a station in any particular direction unless:- Track clear indication is available for the relevant Axle Counter track circuited portion and Last Stop Signal is taken OFF.
- 13.6. A resetting arrangement for the resumption of the track circuit by means of Axle counter under failure condition through co-operative feature of both the SMs on duty at either end Station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the receiving station and is certified in this respect by the SM at the receiving station through exchange of Private Number
- 13.7. Reset arrangements are provided in the operation cum indication panel in the SM's office for sections BDBA-PRDP and BDBA-RHMA with DLBI. The UP & DN resetting key along with reset push button for either sections are provided on the resetting Panel for resetting the axle counter in case of its failure. Every such operation of the resetting and shall be recorded giving details of date of use, train number, time, number registered on the counter and reasons for resetting and initial each such entry.
- 13.8 The procedure for resetting of the equipment should be as follows:-

Action to be taken by the SM on Duty at despatching Station

01.

On advice from receiving station for resetting, the sending station will then unseal the " Permission Granted " push Button and press keeping for some time. An indication lamp provided on the panel for Granting Permission will lit up. Simultaneously the Veeder counter will also record the next higher number.

02.

Action to be taken by the SM on duty at the receiving Station

Shall call the attention of the Station in rear through magneto-phone provided with the operating panel for resetting and shall establish communication with the said station if resetting of equipment is considered necessary giving details of last train that left his station into the Section.

The receiving station shall inform the sending station as to whether the last train that entered in to the section has arrived or not. And, if arrived fully shall so intimate verified by exchanging Private Number with the sending station and ask for granting permission for resetting the Axle Counter.

An Indication lamp in the panel for permission to receive shall lit up shall unseal reset key and turn the same and keep it for some time simultaneously with the pressing of the permission button by the receiving/sending station.

03. Release the permission-granting button. Release and normalise the reset key. veeder counter also will record the next higher number.
04. He will make entries in the Resetting Register as detailed in Para GR 14.13.
05. The next train to be piloted 'OUT'. Even after completion of reset operation, LVCD Axle counter will show clear only after next train is passed.
06. The "Line Clear" on the Lock & Block Instrument for the next train to be given after resetting axle counter.
07. The SM shall record in the Train Register the resetting operation giving details of train number, time, Private Number exchanged with the receiving station for the operation, counter number on the veeder counter and reasons for use of axle counter.
08. The SM shall record in his Train Register the resetting operation giving details of train number, time, Private Number exchanged with ASM in rear, number on the counter recorded giving reasons for the resetting operation.
09. If the axle counters functioning properly now, then Block Section cleared indication 'G' will exhibit on the panel and the concerned Block Section is to be normalised.
10. If the axle counter section does not appear 'Green' indication and continues to show 'RED' indication, the concerned Block section shall be suspended and failure intimation to be given to sectional signal Maintainer/JE/SE (Signal) for early rectification.
- 14.0 **SIGNAL LIGHTS:**
The Station Master on duty at 00.00 hours (2nd night shift) must also ensure from panel board that all the signal lights are burning properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the Section Controller on duty.
- 15.0 **CORRECTING TIME IN STATION CLOCK:**
The Station Master shall set the time in his clock according to the time signal given by the Section Controller on duty at 16.00 hours every day according to G & SR 4.01.01 and 4.01.02.
- 16.0 **TELECOMMUNICATIONS:**
- a) Telephone attached to SGE type Lock and Block Instruments for sections BDBA-PRDP and BDBA-RHMA.
 - b) Railway Auto telephone is provided in this station.
 - c) The Station is connected to CTC-PRDP, BRAG-KIS (VIA-NQR), BRAG-KIS (VIA-CTC) Control Circuit.

- d) VHF set is provided at this station.
- e) Telephone attached to L.C. Gates at Km. 479/5-7 (UP), 479/8-6 (DN), 472/27-29 (UP) and 472/30-28 (DN).
- f) BSNL phone is provided at the station.
- g) Telephonic communication is provided between Station Master on duty and both end location boxes.

NOTE

- a. For obtaining line clear VHF should be used as a last alternative and not as a sole means of communication.
- b. VHF & Walkie-Talkie sets should not be used for unnecessary discussion with Loco Pilot/Guards and any other staff.

APPENDIX 'C' TO STATION WORKING RULES OF BADABANDHA STATION

ANTI COLISION DIVICE (RAKSHA KAVACH)

=== NIL ===

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

1. STATION SUPERINTENDENT:

He is in-charge of the Station. He performed day shift duty for train passing duties in turn with his assistants. He is responsible for the efficient discharge of duties devolving upon all the staff employed at the station according to rules, Station Working Rules & Safe Working Instruction issued from time to time. He shall see that all signals, points, and whole machinery at the station are in proper working order. He shall report all defects to the concerned officials. He shall satisfy himself that the staff employed under him at this station are thoroughly conversant with Station Working Rules and perform their duties correctly. It is his personal responsibility to maintain the station working rules, other rule books and the Assurance Registers up to date. He shall see that all records of the station are properly maintained and due statements returns and other corresponding documents are up-to-date. He shall see that the staff are civil courteous and help full to all users of railway. He shall see that all station premises are kept neat and clean. He is responsible for booking off all Group-'C' and Group-'D' staff for PME and refresher course/safety camp in their due time.

His special attention is drawn to Chapter-II of GR and SR and GR 5.01 to 5.08 with relevant SRs, Chapter-XXII of Operating Manual. He shall follow the instructions laid down in SR 3.68.01(c) & (d) and SR 14.07.01 Para 2.09(e) of Block Working Manual. He shall supervise the works of staff and conduct night inspections. Safety meetings and fire drills and report lapses of staff working under him. He shall also ensure that the safety equipments in the station as mentioned in the station working rules are supplied in full and they are good working order with necessary relief stock.

He shall satisfy himself that the staff employed under him at this station are well conversant with SWRs and perform their duties correctly. He is responsible for maintaining SWR and other Rule books.

The SS's special attention is drawn to the GR 5.01 to 5.23 where details are indicated.

1.1 ASSURANCE REGISTER:

All staff before taking up independent charge of their duties at this station shall make a written declaration in the Assurance Register that they have read and thoroughly understood the system in force and must sign such declaration.

No Railway servant shall be entrusted with any duty involving the safety of the public unless the SS. is satisfied that the concerned staff is competent for the post. No Railway servant unless duly examined and certified shall be allowed to work the points and signals. The SS. is responsible to see that all the staff are well conversant with the Station Working Rules of the Station and their signature obtained in the Assurance Register after he is satisfied that they have thoroughly understood the working Rules of the Station. In case of Class-IV staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibility.

The SS is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Class-III staff and other for Class-IV staff. A duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SS.

(B.PANDA)
DOM/KUR

The declaration is to be renewed in the following cases:

- (i) Whenever there is a change in the Station Working Rules,
- (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days and over

1.2 **USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:**

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SS under lock and key by maintaining one register for this purpose.

1.3 **ACCIDENTS:**

Accidents shall be reported and immediate action shall be taken by the SS in accordance with the instructions laid down in the Accident Manual. Whenever the SS receives report of an accident, he shall take all necessary precautionary measures to protect the traffic and shall arrange earliest possible assistance as required at the site of accident. He shall frame the accident message and reports and follow up all safety principles without delay.

- 1.4 The SS shall test the working of the reception signal and emergency crossovers daily during the day when there is no train due to arrive/leave the station and record the results in the SM's diary.

2. **STATION MASTER/ ASSISTANT STATION MASTER:**

He shall work in train passing duties and booking of traffic, coaching returns and other statements shall be prepared and submitted by him in time. The Station Master on duty shall record in the diary the condition of all the running lines, siding, and the caution orders in force at the time of handing over charge. These entries shall be countersigned by the Station Master coming on duty and taking over charge. The SM on duty shall ensure the clearance of the line of the yard by physical verification while taking/handing over charge. The Station Master on duty who makes an entry in the train signal register shall continue till all the entries pertaining to the trains are completed vide SR 14.07.01. He shall promptly bring to the notice of SS all irregularities and accidents in course of his shift duties. During the absence of SS, the duty of SS will devolve on him. His special attention is drawn to Chapter-II of G & SR 1976 (Revised-2012) and GR 5.01 to 5.08 with relevant SRs as an assistant to SS given to him by the SS.

3. **TRAFFIC POINTSMAN:**

He shall work under the instructions of SM on duty and follow the GR 02.05 to 2.11 and other relevant rules laid down in GR and SR.

He shall remain responsible for:

- (a) Correct setting and locking and crank handling of points for reception/dispatch and shunting operation.
- (b) Coupling and un-coupling of vehicles.
- (c) Protection of line in an emergency
- (d) Piloting and hand signaling of trains of trains when necessary and handing over caution orders/or any other line clear authorities to the Loco Pilot and guards of the trains.
- (e) Attending off side to observe safe running of run through trains at stations and correct display of hand signals and ringing the station bell.
- (f) Securing of vehicles, as directed, protection of vehicles of a train.

- (g) Being conversant with the layout of the yard and compliance of rules relating to shunting operation.
- (h) Observing General Rules 5.13 to 5.21 and relevant Subsidiary Rules during shunting.
- (i) Lighting of hand signal lamps if required and oiling of clamps and padlocks if necessary.
- (j) Loading and un-loading of parcels and luggage's, packages goods and guards boxes to and from the trains and watching the packages and other materials by properly stocking in the station premises.
- (k) Cleaning and Dusting of SM's office room furniture and equipments Office.
- (l) Working as fog signal man as and when required.
- (m) Filling up the fire buckets with sand.
- (n) Getting train intact arrival register (T/1410) signed by the Guard as and when required.
- (o) Any other duties entrusted to him by the SM on duty from time to time.
- (p) Ringing the station bell as and when required.

GENERAL

1. A set of flags and LED tri-colour hand signal lamp will be part of the essential equipment of the staff while on duty. He shall not leave the station except when required by the SM on duty or with his permission and shall comply with Subsidiary Rules 4.42.02 (b) (i) and (d).
2. Staff working at the station must be able to distinguish UP and DN line clear tickets and educated in distinguishing other operational forms and documents, delivered to Loco Pilots and Guards and must also know how and when to ring the station bell.

APPENDIX-'E' TO STATION WORKING RULES OF BADABANDHA STATION

A list of Essential Safety Equipment's which should be kept readily available in good working order with necessary relief stock.

Sl. No.	Description	Station
1.	Detonator Signals	20
2.	LED tri-color hand signal lamps	4
3.	Hand signal Flags	4 set (4 Red & 4 Green)
4.	Safety chain with Padlocks.	6 Nos. + 6 Nos.
5.	Clamps with padlocks	8 Nos. (2 at Station & 3 at each Goomty).
6.	Skids - 1) Iron 2) Wooden	4 4
7.	Fire and Sand Buckets.	5
8.	Reminder Collar	10
9.	Motor Trolley on line lable.	2
10.	Fire extinguisher	2 (DCPT).
11.	First Aid Box	1
12.	Stretcher	1
13.	Block Suspension Board	2
14.	Power Block Collar	2

(A.SENAPATI)
DSTE/KUR

(B.PANDA)
DOM/KUR

APPENDIX-‘F’ TO STATION WORKING RULES OF BADABANDHA STATION

RULES FOR WORKING OF DK STATIONS HALTS, IBH, IBS AND OUTLYING SIDINGS

- 1.1 **MID-SECTION OUTLAYING SIDING:**
There is no mid-section siding on either end of block section.
- 1.2. **IBH, IBS/DK STATION:**
There is no IBH or IBS or DK station on either end of block section.
- 1.3. **HALT STATION:**
Bagadia P.H. is situated at Km. 488.3 from HWH between BDBA & PRDP.