



EAST COAST RAILWAY

WALTAIR DIVISION

**STATION WORKING RULES
OF**

**BALUMASKA
STATION**

EAST COAST RAILYWAY

WALT AIR DIVISION

INDEX OF CORRECTION SLIPS

[illegible]

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EAST COAST RAILWAY WALTAIR DIVISION

STATION WORKING RULES OF BHALUMASKA STATION (B.G)

Date of Issue: _____

Date brought into Force: _____

NO:WTF/5/SWR/BLMK

NOTE: The Station Working Rules must be read in conjunction with General and subsidiary Rules, Operating Manual and Block Working Manual. These rules do not in any way supersede any rules in the above Rule Books.

(1) STATION WORKING RULE DIAGRAM

- i) Station working diagram No: SI/WRD/23111'E'
- ii) CSTE/E.Co.Rly/ DRG NO SI/WRD/23111'E'
- iii) Date up to which corrected:-

(2) DESCRIPTION OF THE STATION:

2.1 a) GENERAL (LOCATION):

i)	Name of the Station	BHALUMASKA (BLMK)
ii)	Class of Station	'B'
iii)	Section	KORAPUT – RAYAGDA
iv)	Double/Single line	Single Line
v)	Electrified/Non electrified	Electrified
vi)	Gauge BG/MG/NG	BG
vii)	Railway	East Coast Railway
viii)	Situated at KM	KM 128.925
ix)	From	Koraput.
x)	No. of Cabins	Centrally Operated Panel Board.

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2.2 BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLYING SIDINGS:

	Adjacent Block Station	Distance	Direction
A)	SKPI	15.533 KM	RGDA end
	LLGM	16.925 KM	KRPU end
B)	Provision of IBS	Nil	
C)	Automatic Signals	Nil	
D)	DK Station & Out Lying Siding	Nil	

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

Between station	The point from which Block section commences	The point at which Block section ends
BLMK-LLGM	UP advanced starter signal no.11 of BLMK	UP home signal of LLGM
BLMK-SKPI	DN advanced starter signal no.12 of BLMK	DN home signal of SKPI

2.4 GRADIENTS:

a) FROM THE CENTRE OF STATION BUILDING TOWARDS LLGM:

CHAINAGE IN MTRS FROM CSB		STRECH	GRADE
FROM	TO		
0.000	750M	750M	1 in 400 Raising
750M	2150M	1400M	1 in 100(C) raising
2150M	3459M	1309M	1 in 125 raising
3459M	Into section	---	1 in 100 (c) raising

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b) FROM THE CENTRE OF STATION BUILDING TOWARDS SKPI:

CHAINAGE IN MTRS FROM CSB		STRECH	GRADE
FROM	TO		
000.00	750M	750M	1 in 400 raising
750M	8914M	8164M	1 in 100 (c) Falling
8914M	Into section	-----	Level

2.5 LAYOUT:

(A) Running lines in the main yard

SL.No.	Name of the line	Electrified/Non Electrified.	Platforms /length
1	Line no. 1(Loop)	Electrified	Rail level(244x 6.4)
2	Line no.2(Main Line)	Electrified	-
3	Line no. 3(Loop)	Electrified	Rail level(244x 6.4)

(B) Sidings

SL. No.	Name of the line	Electrified/Non Electrified.	Platforms /length
1	Track machine sidng.	Electrified	200M
2	Tower wagon siding	Electrified	CSL 74M(SH-SB)
3	Line no. 3(Loop)	Electrified	53.2 (GJ-GJ)

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

This Station is provided with three running lines. Trains coming from LLGM and proceeding towards SKPI are DOWN trains, whereas trains coming from SKPI and proceeding towards LLGM are UP trains.

SL. NO.	Runnin g Lines	Name of the Line	CSL in Mts.	Electrified/No n Electrified.
1	Line No.1	1 st loop line	751(STR-STR)	Electrified.
2	Line No.2	Main Line	757(STR-STR)	Electrified
3	Line No.3	2 nd Loop line	747(STR-STR)	Electrified

2.5.2 NON-RUNNING LINES

SL. No.	Name	Holding capacity in CSL in mts.	Electrified/ Non electrified.
1	Track machine siding	200	Electrified/
2	Tower wagon sidng.	74.0 SH-SB)	Electrified/
3	Hot Axle siding	53.2(GJ-GJ)	Electrified/

2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT:

(A) Track Machine Siding

A track machine siding measuring 200M is an extension portion of HA siding towards SKPI end. The entrance points (L/1 to H.A siding) from UP direction and (L1 to track machine siding from DN direction) are released by key in succession through SMs control button no.27 on panel. The entrance point is operated locally by arc lever provided at the site through Key 'P' and DS point is operated through keys 'X' and Key 'Y' in succession from entrance point. When Key 'P' is 'IN' in RKT a green light is shown and when the key is 'OUT' a red light glows on panel board. Whenever the SM intends to operate the track machine siding he shall press the control no.27 to extract the key 'P' from RKT. The key will be taken by the TPM to

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the siding and insert in the HPL, unlock and operated the point. After the shunting operation is over, the siding point is made normal and locked the key 'P' is taken back to T.M siding location. As the key is inserted in the RKT and turned, SM will get a flashing indication and acknowledge. Then control is made normal. When the control no.27 is transmitted, reception and dispatch signals and shunt signals for Line No. 1 gets locked in their normal position.

(B) HOT AXLE SIDING

A hot axle siding measuring 53.2M (GJ-GJ) takes off from L/1 at SKPI end and is isolated by derauling switch at LLGM end. It is isolated by HPL at site and is controlled by 27 from panel. Hot axle siding is further extended towards SKPI end as track machine siding measuring 200M. [The key transaction and operations of points as described in Track Machine Siding is the same.](#)

(C) TOWER WAGON SIDING

The Tower Wagon Siding (TWS) takes off from Line No. 1 at KRPU end of the yard with single side entry. The Tower wagon Siding is isolated from line No. 1 by DS point No. 26. The SM on duty is to press the SH-9 GN button along with TWS-UN button simultaneously to receive the train on Tower wagon siding. Similarly to dispatch the train from Tower wagon siding, SH-13 GN button along with L1/1 UN button to be pressed simultaneously.

2.6. LEVEL CROSSINGS:

Detailed workings of level crossing gates are mentioned in Appendix-A

(3) SYSTEM AND MEANS OF WORKING:

System of working in force	Absolute block system
Double Line / Single Line	Single Line
Block instruments	FM DIADO type token less block instruments
Co-operative/non-cooperative	Co-operative
Block telephone	Attached with block instruments.
Telephone provided at IBS	-Nil-

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(4) SYSTEM OF SIGNALLING AND INTERLOCKING:**4.1**

1.	Standard of Interlocking	Standard II (R)
2.	Type of signalling	Multiple aspect colour light signals.(MACLS)
3.	Mode of the operating the signals	Penal Interlocking
4.	Provision of calling-on signals.	<p>Calling-on signals are provided below Home signal (i.e. in both UP & DN lines) as per GR.3.13 (1) (b), (2) (3) (4) & (6) (b).</p> <p>To take off Calling-on signal the train must come to 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 the train is intended to be received shall be set by selecting and setting desired route through Panel by SS/SM on duty. After a lapse of 60 seconds, the Calling-on signal clears i.e. white light glows at the concerned Calling-on signal on the Panel.</p> <p>NOTE: SS/SM on duty to ensure that no through signals are given while receiving a train on Calling-on.</p>
5.	Provision of shunt signals	Shunt back signal SH-3 is provided towards KRPU end and SH-4 is provided at RGDA end for shunting purpose. SH.13 is provided for Tower Wagon siding.
6.	Emergency cross over	NIL
7.	Track circuits	<p><u>TRACK CIRCUITS AND AXLE COUNTERS:</u></p> <p>Entire yard is track circuited from Home signal to Advanced starter on either direction. The following track circuits are provided in this yard. 1AT, 1T, 12AT, 21AT, 21BT, 23BT, L₁T₁, L₁T₂, L₁T₃, L₂T₁, L₂T₂, L₂T₃, L₃T₁, L₃T₂, L₃T₃, 22BT, 22AT, 11AT, 2T and 2AT. Indications for the above track circuits are available on</p>

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		Panel at SM's office. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel at SM's office. When a signal is cleared the route indication 'Yellow' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.
8.	Axle counters	
9.	Crank handle	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 padlocking all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The CH push button (Blue) and group button (White with Black dot) is provided at the top of the panel board. This button has two indications viz., WHITE and RED. The White 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 handle key is locked and not free for extraction from RKT. This is called 'Crank handle key locked' indication. For extracting CH key from RKT SM has to press relevant crank handle push button and group TRANS button simultaneously. The white light besides the CH button starts flashing. After extraction of CH key from RKT at location box flashing white light disappears. On extraction of CH key from RKT, the points in that particular group cannot be operated from the panel. After completion of point operation, the CH key will be retransmitted to the station electrically by inserting the CH key in RKT in location box and turned. The white flashing indication appears on the Panel board. The flashing will be stopped and steady indication appears on pressing

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		<p>concerned CH button and group release button (White with Black dot).</p> <p>Crank handle control for operation of points:-</p> <p>CH1 21A/B,23/B</p> <p>CH2 22A/B 24A/B & 26</p>
10	Emergency operation Point	<p>Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously. Then keeping 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. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose. Each emergency point operation is recorded in emergency point operation counter by registering the next higher number. SM on duty shall ensure sealing of emergency point operation button by S&T staff after completion of every such operation.</p>
11	Showing of veeder couter	<p><u>For section BLMK-LLGM :</u></p> <p>A pair of Digital axle counter is provided between BLMK-LLGM one at just beyond UP advanced starter signal No.11 of BLMK and another on 1T track circuit of LLGM for last vehicle verification.</p> <p><u>For section BLMK-SKPI :</u></p> <p>A pair of Digital axle counter is provided between BLMK-SKPI one at just beyond DN advance starter signal No. 12 of BLMK and another on 2T track circuit of</p>

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		<p>SKPI for last vehicle verification.</p> <p>The position of the Block section whether clear or occupied is reflected on the axle counter reset box provided in the SM'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 cannot be taken off for next train and the concerned instrument shall remain locked in last operated position.</p> <p>A resetting arrangement is provided in the SM office to reset the system to normal position in case of failure of axle counter. The resetting to be initiated by the SM at the receiving station only after physical verification of complete arrival of train by exchanging private number. The resetting can be accomplished only with the co-operation of SMs at either end of the block section.</p> <p><u>NOTE:</u></p> <p>Before taking off reception and dispatch signals for UP or down 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.</p>
12	Emergency route release indication	<p>This panel interlocking is based on the principle of 'DEAD APPROCH LOCKING'. As such, when a route is</p>

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		<p>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 vide SR 3.36.02 (a), the concerned signal must be put back to danger by pressing the Signal cancellation button and the concerned signal button. Then the emergency route release button (white with red dot) positioned in the top of panel is to be pressed by breaking the seal and subsequently the concerned signal button pertaining to the route is to be pressed. A white light will flash (Up or Down) 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. In case the route illumination (a white strip of lights) does not disappear, it suggests that the route is not released/cancelled. In such case the emergency cancellation of route has to be resorted to. The concerned S&T staff should be advised immediately to get the emergency route release button resealed 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.</p>
13	Emergency crank handle release	

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

As per JPO/02/2012 of 29.08.2012, the following procedure shall be adopted for opening of Relay Room :-

The Relay room of the station shall have double locking system of operating and S&T Locks. One Godrej lock shall be provided on the door of the relay room by

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the Station master. This lock is named as operating lock. The key shall be kept in the safe custody in the key –box with SM on duty. Like wise, one [Godrej](#) lock shall be provided on the door of Relay room by the Signal maintainer/Signal Supervisor of the Station/Section. Names of the S&T staff authorized for opening of Relay room is to be entered in the first page of Relay Room key Register and jointly certified by SSE/Signal in-Charge and DTI In-Charge of the section. In emergency, if any S&T staff other than authorized wants to open the Relay room, he must inform DSTE through Signal fault control. Signal fault control shall convey the permission of DSTE to SS/SM by giving Signal fault control order number. Whenever relay room is to be opened either for scheduled maintenance or during failures or for other maintenance activities /construction works. The concerned maintainer / Signal Supervisor will inform SM on duty for opening of Relay room with reason. SM on duty will verify his identity from the list of authorized S&T staff recorded in first page of Relay room key Register or as advised by Signal fault control in emergency. SM shall give the key of operating lock to S&T staff, after the entries made in the Relay room and also with red ink in TSR. Relay Room key shall not be handed over by SM on duty to any Group “D” staff of S&T department. On completion of work, the concerned Signal Maintainer/Signal Supervisor shall properly close Relay room and lock it with both the locks and then return the key of operating lock to the SM on duty making the entry in the Relay room register. When the key of operating lock is returned by S&T staff to SM on duty, he shall first verify the relay room for proper locking and then keep the key in safe custody and acknowledge it on the relay room key register. If the Relay room key handed over to the signal staff regarding the interference in safety gears the train shall be piloted in and out. For attending failures of S&T gears within the Relay rooms, the following steps shall be taken;

Entry to be made in S&T failure Register by SM on duty and failure memo has to be issued to S&T staff. S&T staff shall not take the Relay room key for attending failures and open the relay room unless the failure is recorded in signal failure Register. If disconnection is required, disconnection memo has to be given by S&T staff to SM on duty. Failure memo should be acknowledged and entry in the relay room register to be made by S&T staff before obtaining Station Master’s key. Relay room key for scheduled maintenance shall be taken once in a calendar month during monthly inspection by Sectional Supervisor. Relay Room can be opened by following above procedure for special maintenance activities like cable insulation testing, block/disconnection memos, selection/locking table testing, maintenance work in side relay room by Electrical and Engineering staff, during failures, data loggers resetting and inspection by divisional and head quarter officials, track circuit adjustments and voltage monitoring during monsoon and whenever required during rains. Works required by S&T construction and open line staff for preparatory works and during commissioning. In each such case, the construction staff follow the detailed guide lines issued regarding working on Signalling gears under the charge of pen line. In the case of emergencies such as fire, flood, earth quake etc. open line Section Engineer (Signal)/Signal maintainer and SS/SM shall jointly decided the need for opening the Relay room. Section Engineer (Signal) HQ at

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divisional control office and section controller shall be advised respectively. In case of communication failure during such emergencies, open line Signal maintainer/Supervisor and SS/SM on duty shall jointly decide the need for opening the Relay Room and communicate later on to respective controls. In case, the key is lost/misplaced, it shall be reported to S&T control as well as section control for either lock. In normal cause the spare key with respective custodians shall be used. In emergency situation, lock may be broken under advice to section control as well as S&T control. New lock shall be procured and provided.

In case SS/SM on duty comes to know of Relay room opening by unauthorized person or by any Group “D” staff, the Signalling system shall be suspended by him and matter immediately reported to section controller for necessary action. Senior Section Engineer/Signal and TI of the respective section will check the station records of relay room opening during their inspection and cross check it with data logger/ counter reading if provided. Discrepancy, in any , shall be immediately required into and advised to Sr. DSTE and Sr. DOM by numbered control message from the Station immediately for further action.

4.3 POWER SUPPLY:

- i) **Auto change over** CLS power panel with rotary change over switch is provided in the SM's office with the three power supplies viz AT, local power supply and DG for changing the switch to the required supply position. Luminous indicator's are provided above the circuit breaker for each supply to indicate the availability of the supplies.
- ii) Normally the rotary switch will be kept towards AT position. Whenever the power block is to be given on the line, the on duty SM must ascertain that other two sources i.e local power supply and DG must be available i.e local must be available and DG must be in working condition.
- iii) During the non-availability of AT supply SM on duty shall keep the rotary change over switch towards the local supply to feed available local supply to the Installation.
- iv) In case of failure of AT supply without any power block, 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 DN). In case of failure of AT supply, the local supply/DG supply shall be utilized by operating the switch. If the circuit breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and a message shall be given to the AEEE/GEN and CTFO/PSI/TRD/GEN for prompt rectification.

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- v) For IPS system, the section output from Auto change over CLS panel is taken.
- vi) There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

[B] REMOTE MONITORING ASM BOX:

Remote monitoring ASM box gives alarm to the ASM for the following fault conditions:-

- a) 50% DOD (Depth of Discharge) of Battery. In this condition Audio/Visual alarm comes which can be acknowledged with audio cut off.
- b) 60% DOD (Depth of Discharge), which warns for emergency. The Alarm for this condition is same as for condition 1.
- c) 70% DOD (Depth of Discharge), which signals system, shut down. In this condition Signal feed cut off and all DC-DC converters continue working. Audio alarm will continue till power supply restored.
- d) Any of the Module fails, which calls for “Call S&T”.
- e) Whenever there is a failure of power supply of 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 AT and make an entry in station diary duly initiating action for rectification of failure, if any.

(5) TELECOMMUNICATIONS:

- 1) Telephone attached to Single Line Token Less Block instruments connected to adjacent block stations.
- 2). Magneto phone is provided to adjacent block stations on either side.
- 3). Telephone connected to Goomties at either end of the yard.
- 4). The station is connected to KRPU-RGDA control circuit.
- 5). 25 Watts VHF Set.
- 6) Telephone is provided with the Hot axle siding.
- 7) Telephone communication is provided to H.A.Siding location.

8) Telephone communication to LC gate No. KR-15 at KM 128/6-7.

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(6) SYSTEM OF TRAIN WORKING:

6.1 DUTIES OF TRAIN WORKING STAFF:

The duties of train working operating staff are detailed in the Appendix D of this SWR.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:

Following is the complement of operating staff at BLMK

Staff in Each Shift	
SS/SM	1
PM 'A'/PM 'B'	1

Note: Staff deployed at the station shall follow the rosters issued by DPO/WAT from time to time.

6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF THE LINE AND ZONES OF RESPONSIBILITY:

Station Master is solely responsible to ascertain clearance of line from Home upto Adv. Starter on concerned lines by indication on panel.

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

6.1.3 ASSURANCE OF STAFF IN 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 safety of the public unless the station in-charge 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 conversant with the Station Working Rules 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 Group 'D' staff, their signature/thumb impression must be obtained after explaining fully about their duties and responsibilities.

The station superintendent is responsible personally for maintaining the Assurance Register and for obtaining declaration of the staff working under him. The declaration shall be renewed in the following cases: -

- (i) Whenever there is a change in the Station Working Rules.

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- (ii) For any staff who have not worked at the station or were away from the station for a period of 15 days or more.

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

(A)

i. For UP Trains:-

- a) The line shall not be considered clear and line clear shall not be granted to an UP train unless.
- b) The whole of the last preceding UP train has arrived complete.
- c) Home signal 1A/B/C is put back to ON.
- d) The line is clear up to DN Adv. Starter No. 12.

ii. For DN Trains:-

- a) The line shall not be considered clear and line clear shall not be granted to a DN train unless.
- b) The whole of the last preceding DN train has arrived complete Home signal 2A/B/C is put back to on.
- c) The line is clear upto UP adv starter NO. 11.
- d) The Station Master on duty is responsible to nominate clear a line that is clear of all obstructions from the Home signal to the starter signal inclusive of adequate distance beyond it for admission of trains vide GR 3.40(1)(b) and 3.40(3)(b).

(B) Adequate distances for reception of trains at BLMK.

CLEARING OF ADEQUATE DISTANCE				
LINE NO.	UP TRANS		DOWN TRAINS	
	FROM	TO	FROM	TO
LINE NO. 1 (1 st Loop)	Starter No. 9.	Advanced starter Signal No. 11	Starter Signal No. 6	End of Over run line or Advanced starter Signal No. 12
LINE NO. 2 (Main Line)	Starter Signal No.	Advanced starter Signal	Starter Signal No. 8.	Advanced starter Signal

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	7.	No. 11		No. 12
LINE NO. 3 (2 nd Loop)	Starter No. 5.	End of Sand hump or Advanced starter Signal No. 11	Starter Signal No. 10.	End of Sand hump or Advanced starter Signal No. 12

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

--NIL--

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 at the station etc., the points in rear should be immediately set against the blocked line except when shunting or any other movement is required to be done immediately in that direction on that line vide GR 3.38(2). Lever/block collars placed on the concerned lever/button of the blocked line vide SR 5.04.01 and SR 3.51.06 shall be followed.

SAFETY POINT ALARM UNIT (SPAU)

A safety point alarm is provided on the panel board with different indications:-

1. On complete arrival of a train at the station, the SM has to set the points immediately against the occupied line.
2. In case of SM forgets to alter the points, after a time lag of 02 minutes, an audible buzzer will be heard from this instrument along with the 'RED' indication of the line on which the train has arrived.
3. The SM shall then press 'ACK' button to mute the buzzer, and immediately set the required points against the line on which the train has arrived.
4. On setting the points against the occupied line, the RED indication will disappear.
5. In case SM fails to set the required points against the occupied line a fault message will be triggered SMS will be sent to concerned station mobile and all concerned staff to take necessary action.

If all the lines of 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 stabled load or a goods train in that order so that, in case of mishap, the chance of casualties are minimized [Refer SR.3.51.06 (b)]. In case of all the lines are occupied by Coaching train, points should be set for a loop line to negotiate with the speed of incoming train would be reduced which in turn, would minimize the consequences/causalities.

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6.2.1.2 **RECEPTION OF TRAIN ON BLOCKED LINE:-**

Whenever trains are to be admitted on blocked line it is necessary that the train is Piloted in by a written authority T/509 given by SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train. Calling-On signal may be taken off. (Refer GR 5.09 & SRs there to.)

6.2.1.3 **RECEPTION OF TRAIN ON NON-SIGNALLED LINE:-** -Nil-

6.2.1.4 **DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:** -Nil-

6.2.1.5 **DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STATER SIGNAL:-** -Nil-

6.2.1.6 **ANY OTHER SPECIAL CONDITIONS SHOULD BE MENTIONED GIVING REFERENCE TO THE G&SR:-** **SPECIAL RESTRICTIONS:**

- (a) Motor trollies shall not be allowed on “Following line clear”.
- (b) Material trollies shall not be allowed in pushing into either end of the block section.
- (c) During crossing of trains, first UP&DN trains should not be received on Main Line and first UP train shall not be received on Line no.1. Mentioned in CRS sanction 1629 27/02/14 of TM siding.
- (d) Engine should attached towards SKPI end while shunting beyond station section as 1 in 100 falling gradient towards block section and while shunting towards LLGM end engine to be attached towards station as falling gradient is 1 in 100 from block section to station section.

(Both c & d to be clarified)

SPECIAL INSTRUCTIONS: Nil.

6.3 **CONDITIONS FOR TAKING ‘OFF’ APPROACH SIGNALS:**

Conditions: Conditions for taking ‘OFF’ approach signals are governed by GR.3.40(1)(b), 3.40(2)(b), 3.40(3)(b) and relevant SR’s there to.

- a) **Reception of trains:** Reception of trains is governed by the relevant rules laid down in GR.3.36, 3.38, 3.40, 3.49, 3.43, & 4.17 and SR thereto and other relevant provisions of G&SR, BWM, OM and SWR shall be followed.

6.3.1 **RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO ‘ON’:**

- i.) Station Master should ensure that the signal is put back to ‘ON’ after passage of train as per GR 3.36(2)(b).

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ii.) If the departure signal once taken “off” for a train has to be put back to ‘ON’ on single line section before changing the route or allowing any other movements the “Authority to Proceed” if any, handed over to the Loco Pilot must be withdrawn as per SR 3.36.02(b)(i) before changing the point or advised of the change in writing and his acknowledge obtained. There after the Loco Pilot and staff deputed shall immediately exhibit stop hand signal to the Station Master as per SR3.36.02(b)(ii).

6.4 **SIMULTANEOUS RECEPTION/DESPATCH, CROSSING AND PRECEDENCE OF TRAINS:**

A. According to the existing inter locking at this station the simultaneous reception and dispatch of trains are permitted as stipulated below.

a) Reception of an UP train on line No. 1 (1 st loop) setting line to over run line	AND	a) Dispatch of another UP train from Line No. 2 or 3. Or b) Reception of DN train on line No. 3 setting line to sand hump
b) Reception of an UP train on line No. 3 (2nd loop) setting line to sand hump	AND	a) Dispatch of another UP train from Line No. 1 or 2. b) Reception of DN train on Line no. 1 setting line to ORL
c) Reception of a DN train on line No. 1 (1 st loop) setting line to over run line	AND	a) Dispatch of another DN train from Line No. 2 or 3. Or b) Reception of UP train on line No. 3 setting line to sand hump
d) Reception of a DN train on line No. 3 (2nd loop) setting line to sand hump		a) Dispatch of another DN train from Line No. 1 or 2. Or b) Reception of DN train on Line no. 1 setting line to ORL

6.5 **COMPLETE ARRIVAL OF TRAINS:**

FOR STOPPING TRAINS:

Entire Block Section between BLMK-LLGM and BLMK-SKPI are provided with Electronic Axle counters. (Please confirm whether it is Electronic/Digital)

For section: BLMK-SKPI

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A pair of digital axle counter is provided between BLMK-SKPI one just beyond DN advanced starter signal no. 12 of BLMK and another beyond DN Home signal of SKPI for last vehicle verification.

For section BLMK-LLGM:

A pair of digital axle counter is provided between BLMK-LLGM one just beyond UP advanced starter signal no. 11 of BLMK and another beyond UP Home signal of LLGM for last vehicle verification.

The position of the block section whether 'clear' or 'occupied' is reflected on the axle counter reset box provided in the Station Master's office which shows 'GREEN' when the block section is clear and 'RED' when block section is occupied. Whenever a train enters into 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 disappears and 'GREEN' indication appears. If after complete arrival of the train '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 cannot be taken off for next train and the concerned instrument shall remain locked in last operated position.

A resetting arrangement is provided in the SM office to reset the system to normal position in case of failure of axle counter. The resetting is to be initiated by the SM at the receiving station only after physical verification of complete arrival of train by exchanging private number. The resetting can be accomplished only with the co-operation of SMs at either end of the block section.

If a train passes through the station without confirming the last vehicle indicator, the Station Master on duty shall advise the station in advance to stop the train for last vehicle verification and he need not to withhold closing of block section in rear. He shall obtain confirmation under exchange of private number about the complete arrival of the train with its last vehicle from the station in advance and subsequent trains may be dispatched.

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 GR 4.17 (1) that the train had arrived completely. In case a train passes incomplete, action shall be taken as per SR.4.17.02, the "Train out of Block Section" report shall be withheld to the station in rear until complete

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arrival Certificate is received from the station in advance supported by a private number.

Train passing on adjacent line shall be stopped and Guard & Loco pilot shall be issued with caution order to proceed cautiously and stop sort of any obstruction as per SR.4.17.03. 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 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).

NOTE:

Before taking off reception and dispatch signals for UP or DN directions the SM on duty shall ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication.

FOR THROUGH TRAINS:

The procedure detailed in Para 6.6 above and GR 4.17, 4.42 and Subsidiary Rules 3.36.04(b)(i) 3.42.02(a)(iv), shall be observed. When trains are to run through over the loop line the advanced starter & starter signal shall be taken off when the train actually enters the loop lines.

The SM is responsible to observe/watch the condition of the vehicles on a train and shall wave green hand signal horizontally as per Subsidiary Rule 4.42.02.(b) until anything wrong is noticed on train. For this purpose the SS/SM on duty shall stand in such a position that he sees a clear view of the passing train and that the Driver and Guard of the train can clearly see his hand signals. He shall depute his points man with hand signal to the other side of the passing train who shall exhibit hand danger signal to draw the attention of the guard/driver of the train in case of observing any unsafe condition/abnormalities of the train. He shall also report to the SM on duty for taking further suitable action in terms of SR 4.42.02(d). 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 Rules 4.17 and Subsidiary Rules 4.17.02.

6.6 DISPATCH OF TRAINS:

- a) Dispatch of trains is governed by the provisions of GR. 3.42 and SRs 3.36 .04(b), 3.42.04; 3.42.01(a) and BWM 2.07(5)(a)(e)(f) & (g) and other relevant provisions of G & SR, BWM and SWR.
- b) **OBTAINING LINE CLEAR SETTING AND LOCKING ROUTE AND TAKING OFF DEPARTURE SIGNALS:**

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The SM on duty after obtaining line clear for the INTENDED train, shall first suspend all non-isolated shunting and shall withdraw the shunting authority issued earlier and shall keep in his possession SM shall ensure setting and locking of the line and shall then take off the departure signals.

c) **TRAIN ENTERING BLOCK SECTION:**

The SM on duty after verifying that the train has passed past the advanced starter signals shall send the Train Entering Block Section Signals vide BWM 2.07.5(a).

d) **ISSUE OF CAUTION ORDERS:**

Whenever in consequence of the line being under repairs or for any other reasons special precautions are necessary a Caution Order detailing the Kilometres and Speed at which train should run with reasons for taking such precautions shall be handed over to the Guard and Driver in terms of GR 4.09 and SR thereto.

6.7 **TRAINS RUNNING THROUGH:**

- a) In addition to procedure detailed in paras 'Reception and Dispatch' of trains, Rules laid down in GR 4.17, 4.42, 3.36, 3.42 with relevant SRs shall be followed.
- b) Reception and Dispatch signals shall be taken "OFF" as per the sequence given vide SR 3.42.02(a)(iv), SR 3.42.03 and SR 3.42.04.
- c) In every case in which trains are permitted to run through on a non-isolated line all shunting shall be stopped and no vehicle-unattached to an engine or not properly secured in accordance with GR5.83 may be kept standing on a connected line which is not isolated from the through line vide GR 4.11(2).
- d) SS/SM on duty shall see the last vehicle of every train passing through at Station with a board or lamp or such other device vide GR 4.16 SR 4.17.01(a).

6.8 **WORKING IN CASE OF FAILURE:** **DEFECTIVE TRACK CIRCUITS**

Track Circuits	In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.
Axle Counters	If the axle counter fails between the block sections, resetting procedure should be adopted as per Para 6.1 of SWR (APP-B). If the axle counter indication does not appear 'GREEN' & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal

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	Maintainer /JE/SE (signal) for their rectification.
Block Instruments	In the event of failure of block instrument, the concerned block instrument shall be suspended till its rectification and trains shall work as per GR (Refer SR 6.02.04 & 6.02.06).
Reception of a train on obstructed line	Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2)(a) or if calling signal cannot be taken off, trains are to be piloted as per GR 5.09(2)(C)(3)(4) (5) and SR 5.09.01.
Reception of a train on non-signalled line	NIL
Defective Signals	<p>Whenever signals become defective, the procedure laid down in GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c) shall be followed.</p> <p>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 laid down in GR and the relevant SRs (Refer 3.57, 3.69, 3.49 (4), 3.68 to 3.77).</p>
Defective Interlocking	When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping, padlocking of points for admission of train. [Refer SR 3.69.03 © & 3.69.01].
Defective/Damaged Points	The procedure detailed in Para No.4.1 (4) of Appendix-B shall be followed.
Defective IBS signal	NIL
DEFECTIVE POINTS	Procedure prescribed in SR 3.68.01(e) and relevant SRs shall be followed.
Defective Axle Counters	Detailed procedure laid down in GR 3.68.01 (e) shall be followed.
Failure of Signals and Interlocking	SS/SM on duty shall be responsible and personally supervise the setting, clamping and pad locking of all required facing and trailing points for admission or dispatch of trains and procedure laid in GR 3.68 to 3.71 and SRs there to shall be followed.

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6.9 **PROVISIONS FOR WORKING OF MOTOR TROLRIES / MATERIAL TROLRIES:**

Motor trolleys shall be worked as per GR 15.25 and SR thereto, BWM 5.11(1)(2), 5.12, 5.13, 5.14(2)(a) and circulars and orders issued from time to time. Material lorries shall be worked as per GR 15.27 and SRs thereto and in accordance with the provisions of Block Working Manual.

Note: Trolleys, which are to be run on track circuited area shall be insulated as per SR 15.20.02.

(7) **BLOCKING OF LINE:**

- a) A clear remark in RED ink shall be made immediately in the train signal register indicating time and number of running line on which vehicles are stabled. A record thereof shall be made in the station diary also vide SR 5.23.01(a). The same shall be acknowledged by the reliever.

b) **USE OF REMINDER COLLARS:**

SM on duty whenever a running line is blocked for any reason, shall place REMINDER COLLARS on the concerned Home signal and point button.

c) **SECURING OF VEHICLES:**

The rules laid down in GR 5.23, SRs 5.23.01 and 3.01.06 shall be followed.

d) **DETACHING OF VEHICLES ON RUNNING LINE:**

Detaching of vehicles on running lines is normally prohibited. "However any vehicle is detached on running lines under unavoidable circumstances such rolling stock shall be placed opposite to the Station Master's Office as far as possible and shall be properly secured vide GR 5.23 and SR 5.23.01(d).

(8) **SHUNTING:**

8.1 **GENERAL PRECAUTIONS :**

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The rules laid down in GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16 to 5.23, 8.05, 8.06, 8.14 and 8.15 with relevant SRs and OM 7.01,7.07,7.08, 5.15(1)(B) and 5.1(2)(B) shall be followed.

All shunt movements shall be supervised by Guard/SM on duty or by a competent Railway servant deputed by SM on duty as the case may be. The authority for shunting shall be taken off of shunt Signal or on form T/806. The limit up to which shunting is permitted and the line involved must write on the shunting authority

8.2 SHUNTING IN THE FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approaching train is strictly prohibited.

8.3 PROHIBITION OF SHUNTING - SPECIAL FEATURES:

- a) Hand shunting is prohibited at both ends of the yard.
- b) Fly shunting is prohibited at both ends of the yard.

8.4 SHUNTING ON SINGLE LINE:

- i) Within Station section: Governed by GR 8.10.
- ii) Within last stop signal and opposite first stop signal: Governed by GR 8.12.
- iii) Beyond opposite first stop signal: unless the line is blocked back, the line outside the first stop signal shall not be obstructed vide GR 8.13.
- iv) During failure of block instrument: Block track messages shall be exchanged between station master at either end of such section which is intended to obstruct supported by private number. Both the station masters shall fix line block labels on block instruments and shall continue shunting.

8.5 SHUNTING ON DOUBL LINE: Not Applicable

8.6 SHUNTING IN THE SIDING TAKING OFF FROM STATION YARD / GOODS SIDING:

- a. While performing shunting in the track machine and hot axle siding proper written shunting authority on form No.T/806 shall be given to the train staff. The relevant provisions of GR 5.14 and SRs thereto shall be meticulously followed.
- b. While performing shunting in the Tower Wagon Siding, it should be authorised by Shunt signal/issuing shunting authority on form T/806 clearly

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mentioning the limits up to which shunting is permitted as also the lines occupied in shunting.

- c. All signal movements in the yard either of train or an engine with or without vehicles shall be, from one stop signal to the next stop signal and no half way movements are permitted and when such movements are unavoidable, it should be taken as non signalled move and precautionary measures should be taken such as clamping and padlocking of points on the route both interlocked and non-interlocked points including derailing switches whether directly or locally operated with or without locks according to GR 5.05 and 5.14.03.

(9) ABNORMAL CONDITIONS:

(Procedure to be followed for working trains during abnormal working).

a) RULES TO BE OBSERVED IN THE EVENT OF FOLLOWING ABNORMAL CONDITIONS.

- i) During partial interruption/failure of electrical communication instruments SR 6.02.06 shall be followed.
- ii) The authority to proceed in the occupied block section in case of obstruction of line or accident etc is T/A-602 and SR 6.02.05 shall be followed.
- iii) Trains delayed in the block section: GR 6.04 and relevant SRs shall be followed.
- iv) Failure/ passing of IBS signed in ON position: Not applicable.
- v) Failure of Axle Counter Block/BPAC : Not applicable.
- vi) Failure of MTRC: Not applicable.

(b) PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE.

- i) Procedure for operation of points by means of crank handle: In the event of failure of operation of points through panel, it is inevitable to operate manually by means of crank handle as per the procedure mentioned in Appendix – B.
- ii) Procedure for operation of point in the event of failure of point zone track circuit: The procedure of operation as mentioned in Appendix – B is to be followed.

(c) CERTIFICATIONS OF CLEARANCE OF TRACK BEFORE CALLING ON SIGNAL OPERATION IS INITIATED.

In the event of failure of track circuits of berthing portion of the line and before calling on signals is initiated, it is essential that the station master on duty is to verify the entire berthing portion for clearance of line.

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(d) REPORTING FAILURE OF POINTS, TRACK CIRCUITS/AXLE COUNTERS AND INTERLOCKING.

- i) Whenever a failure of track circuits/Axle counter is occurred, SM on duty is to advise the signal maintainer immediately through a memo under clear acknowledgment and after rectification, the memo to this affect to be obtained from signal maintainer.
- ii) Such failures are to be recorded in the signal failure register, SM's diary, TSR and urgent order book.

9.1 TOTAL FAILURE OF COMMUNICATIONS:

In the event of total failure of communications trains shall work as per SR 6.02.04.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

Not Applicable

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

To assist the crippled train locomotion may be sent on the authority of T/A – 602 as per provision in SR 6.02.05.

(10) VISIBILITY TEST OBJECT:

The lights of signal No.9 for UP direction and signal No. 6 for DN direction of Line No. 1 during day and night are the visibility Test objects vide GR.3.61(2)(b)(iii).

(11) ESSENTIAL EQUIPMENT AT THE STATION:

The detailed list of essential equipments is to be maintained at the station in good working order as given in Appendix-E of the SWR.

(12) FOG SIGNAL MEN TO BE CALLED IN CASE OF FOG:

In Foggy or tempestuous weather train shall be worked as per the rules laid down in GR 3.61 and 3.64 with relevant SRs.

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(13) APPENDICES:

APPENDIX 'A'	Working of level Crossing gates.
APPENDIX 'B'	System of signalling and interlocking and Telecommunications
APPENDIX 'C'	Anti Collision Device (Raksha Kavach).
APPENDIX 'D'	Duties of Train Passing Staff and Staff in each shift.
APPENDIX 'E'	List of Essential equipment provided at the Station.
APPENDIX 'F'	Working of DK stations, halts, IBH, IBS and outlying sidings.
APPENDIX 'G'	Rules for working of trains in electrified section.

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EAST COAST RAILWAY
WALTAIR DIVISION

APPENDIX 'A'
WORKING OF LEVEL CROSSING GATES
BHALUMASKA STATION

GATE WORKING RULES:

Working rule for 'C' Class manned level crossing gate situated at KM **128/7-8** towards KRPU end.

1. GENERAL**1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

Following details shall be mentioned at all manned level crossing gates:

1	Number of Level Crossing Gate	:	KR-15	
2	Engineering or Traffic Gate	:	ENGINEERING.	
3	Under control of Station Master/Senior Section Engineer	:	SSE/P.way/TIKIRI	
4	Location at KM	:	128/7-8 128.300	
5	At Station:			
6	In between stations	:	BLMK- SKPI	
7	BG/MG/NG	:	BG	
8	Single line/Double line/Multiple line	:	SINGLE LINE	
9	Normal Position:	:	Open to Road Traffic	
10	Interlocked/non-interlocked	:	Non-Interlocked	
11	Means of Interlocking	:		
12	Provisions of Gate signal at Kms.	:		
	(i) Up Line	:	NIL	
	(ii) DN Line	:	NIL	
13	Signalling arrangements	:	NIL	
14	Means of Communication – Telephone/Bell etc	:	TELEPHONE with SM/BLMK	
15	Width of level crossing gate	:	7.5 METERS	
16	Type of Road (NH/SH/Others)	:	PWD	
17	Name of Road	:	Village Road	
18	Metalled/non-metalled	:	NON-METALLED	
19	Approach road	:	Kutchra	
20	Width of the road	:	5.5 METERS	
21	Angle of road crossing (In case of skew gates)	:	90 DEGREES	
22	Road gradient (if any)	:		
	(i) North/East side	:	1 in 30	
	(ii) South/West side	:	1 in 30	

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23	Road alignment (straight/curve)	:		
	(i) North/East side	:	CURVE	
	(ii) South/West side	:	CURVE	
24	Provision of height gauges	:	PROVIDED.	
25	Type of Barriers	:	Lifting barriers	
26	Length of Check Rails	:	9.5 Meters	
27	Road Surface in between L – Xing gates	:	CC Blocks	
28	Length of Rumble strip/speed breakers	:	7.5 Meters	
29	Road signs	:	PROVIDED	
30	Speed breaker indication board	:	PROVIDED	
31	TVU	:	4376 05/10/2018	
32	Census next due on	:		
33	Demarcation for placement of Detonators	:	PROVIDED	
34	No. of Gatemen working	:	2	
35	Nearest Railway Medical Assistance	:	Health Unit Rayagada	
36	Nearest Private Medical Assistance available (if any)	:	Singapura Road	
37	List of equipment available Yes/No	:	Yes	

1.2 EQUIPMENT:

SL	ITEMS		QUANTITY / NUMBERS
1.	LED based flashing tri color hand signal lamps	:	3 (5 on Quadruple / Line or twin single line)
2.	Hand Signal Flag Green	:	1 Mounted on stick
3.	Hand Signal Flag Red	:	3 (6 on Quadruple / line or Twin single line & 7 in case Hexaple Section mounted on sticks)
4.	Banner Flag Red	:	3 (5 on Quadruple / Line or twin single line)
5.	Posts for exhibiting red banner flag	:	2 (4 on Q / Twin single line and 5 on Hexaple section)
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 / Powrah	:	1
12.	Rammer	:	1 (In case of asphalted road this may not be provided)

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13.	Pick Axe	:	1 (In case of asphalted road this may not be provided)
14.	Tin case for flags	:	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.	A small chain in case of failure of gate boom	:	2

1.3 **RECORDS TO BE KEPT AT GATE LODGE:**

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.

1.4 **COMPETENCY MODE OF OPERATION**

Gateman working at this gate should have competency certificate applicable to perform duty at this gate issued by the sectional JE/SE (P.Way).

1.5 **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:

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- i) Gateman will stand alternatively 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, 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, and 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 prepared to repeat any signal which guard may give to drive on walkie-talkie or in any other way.
- vii. If lifting barriers 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.

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- viii. 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.
- 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 L.C. gate.
- xvii. Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:

In case gateman observes any thing 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 LP / guard by whistling continuously, shouting, gesticulating, or by any other means.
- iii) If loco pilot / guard fails to take notice, gateman shall immediately inform the, 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.

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- v) He shall endeavour 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 [show stop hand signal and do his best to stop approaching train.](#)
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty, if connected by telephone, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master shall show stop hand signal and do his best to stop approaching trains.

ON SINGLE LINE SECTION:

- i) 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 direction from 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 towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators, and red flag by day and red hand signal lamp by night on the same line on either side of the level crossing.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night to a point 600 meters on BG and place one 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.

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- v) Thereafter, he shall proceed towards the other direction, 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 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.
- viii) Thereafter, he shall warn the Loco Pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

c) **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 paras (a) and (b) 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 through means available.

1.6 **ENGINEERING ITEMS:**

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

1.7 **Detailed mode of the operation:**

1.8. **EXCHANGE OF PRIVATE NUMBER**

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- (i) The normal position of the level crossing gate being “closed to road traffic” it should be always be in closed condition against road traffic, except when, it is opened for passage of road traffic over the level crossing, subject to conditions prescribed below.
- (ii) The Station Master/Cabin master before permitting each train to enter into the block section shall ask gateman on the telephone by giving a private number whether, the 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/cabin 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 off 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 :
 - 1. He has not exchange any private number as per item (ii) above or
 - 2. If he has exchanged private number with Station master the whole of the train with last vehicle indicator has passed over the level crossing gate and the Station master has not exchange the private number with him for any other movement immediately in rear of the train or on the adjacent line(s).

Before opening the gate for road traffic he shall display banner flag/danger signal at either side of the track at distance of 5m away from the gate. Then he shall open the gate for passing the road traffic keeping red flag/red hand signal lamp ready in his hand to stop approaching train if any.
- (v) In case the gateman is not responding on the telephone or in case the telephone becomes defective or private number is received from the gateman, the Station master shall adhere to the procedure prescribed in SR 16.03.02 below.
- (vi) In the event of failure of telephone if the gate is required to be opened for the passage of the 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, 5m away from the gate on the track on either side. He will thereafter open the gate for passing the road traffic keeping the red flag/red hand signal lamp ready in his hand to stop approaching train if any.

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1.09. 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) Station Master at the dispatching end shall issue a caution order to the driver of the departing train.
- ii) The caution order shall advise the Loco Pilot to whistle continuously and approach the gate cautiously.
- ii) The Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and depute his Assistant Loco Pilot to see the condition of the gate. If the gate is closed, the Assistant Loco Pilot will give the 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 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 driver before dispatching a train in the block section from his end.
- vi) Station Master shall also advise the gateman through gangman / patrolman or 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.
- vii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

1.10. FAILURE OF LIFTING BARRIERS :

- i) When the gate cannot be closed due to failure of lifting barriers 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.

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- iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, he shall show green hand signal flag by day and green light by night to the driver of the approaching train.
- v) Station Master on duty shall issue caution order to the Loco Pilot of a 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 driver before dispatching a train in the block section from his end.
- vii) He should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff rectify the lifting barriers and issue reconnection / fit memo for the same.

1.11. OBSTRUCTION AT THE GATE:

- i. 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 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 defects / obstruction 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.

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- v. He shall then rush with detonators, and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(5).
- 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 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 gate 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 of the gate is not obstructed.
- xii. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection / fit memo for the same.

1.12. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING:

If there is a rail fracture or obstruction on the track due to falling of 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.5 above. If the obstruction fouls the Level Crossing Gate he must keep the gates closed against road traffic till the track is cleared of the obstruction.

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EAST COAST RAILWAY
WALTAIR DIVISION**APPENDIX 'B'****DETAILS OF SIGNALLING AND INTERLOCKING INSTALLATION AND COMMUNICATION ARRANGEMENTS AT THE BLMK STATION****1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALLATION:**

This is a 'B' Class Station with Standard-II® interlocking with route setting type panel. The points and signals etc are power operated from a 'DOMINO TYPE' central panel installed in the station Master's office. This Station is equipped with multi aspect colour light signalling. The Handle type Token less Single Line block instruments are provided in the SM panel room for section BLMK-LLGM & BLMK-SKPI.

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 on the panel corresponds to the actual field lay out.

1.2 POINT PUSH BUTTONS:

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 are fitted over the point layout on the panel board. The individual operation of electric point machine is controlled by these point push buttons in conjunction with the point group button (Black with Red dot) (Normal) or (Reverse) as per requirement, fitted on the top of the panel board.

- 1.2.1 When a point is set and locked correctly in NORMAL position, a 'white' steady strip light indication on straight line appears suggesting that the point is in NORMAL position.
- 1.2.2 When a point is set and locked in REVERSE position, a yellow steady strip light indication in reverse 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

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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 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.

1.3 DESCRIPTION OF POINT PUSH BUTTONS:

SL. NO	POINT BUTTON NO.	COLOUR	DESCRIPTION
1	21 A/B	Black	Cross over point between Main line and line no.1 at RGDA end.
2	22 A/B	Black	Cross over point between Main line and line no.3 at KRPU end.
3	23 A/B	Black	Cross over point between Main Line and line no.3 at RGDA end.
4	24A/B	Black	Cross-over Point between Main line and line no.1 at KRPU end.
5	26	Black	DS point leading to Tower wagon Siding.
6	Point Group button (Normal)	Black with Red dot	Common button for normal operation of points
7	Point Group button (Reverse)	Black with Red dot	Common button for reverse operation of points

1.4 DESCRIPTION OF POINT GROUP BUTTON:

There are two point group buttons (Black with red dot) at the top of panel one for Normal and one for Reverse operation of points. The button is operated in conjunction with point button to operate the concerned point to the required setting.

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1.5 **SIGNAL PUSH BUTTON:**

These are Red coloured push buttons on the panel near that stop signals on the panel. These are operated in conjunction with Route button (White coloured) to take 'OFF' the signals.

1.5.1 **DESCRIPTION OF SIGNAL BUTTONS:**

SL NO	BUTTON NO.	COLOUR	DESCRIPTION
1	C-1	Red with white dot	Button for UP calling 'ON' signal for Line No.1 to 3.
2	S-1	Red	Button for UP Home signal for Line No.1 to 3.
3	C-2	Red with white dot	Button for DN calling 'ON' signal for Line No.1to 3.
4	S-2	Red	Button for DN Home signal for Line No.1to 3
5	SH-3	Yellow	Button for Shunt Signal for line no.1to 3.
6	SH-4	Yellow	Button for Shunt Signal for Line No.1 to 3.
7	S-5	Red	Button for UP L-3 starter.
8	S-6	Red	Button for DN L-1 starter.
9	S-7	Red	Button for UP L-2 (Main Line) starter.
10	S-8	Red	Button for DN L-2 (Main Line) starter.
11	S-9	Red	Button for UP L-1 starter.
12	SH-9	Yellow	Button Leading to Tower wagon Siding.
13	S-10	Red	Button for DN L-3 starter.
14	S-11	Red	Button for UP Advanced starter.
15	S-12	Red	Button for DN Advanced starter.
16	SH-13	Yellow	Button leading to L1 from Tower wagon siding.

1.5.2 **SIGNAL INDICATION:**

The aspects of the signals as obtained at any time are shown on the panel on the signal indication along side of the track. The ON aspect indications of stop signals are RED and OFF aspect indications GREEN on panel. The ON aspect of distant signal is yellow and OFF aspect is Green on the panel.

1.5.3 **ROUTE BUTTONS:**

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 signal. It is necessary to operate the signal button and the concerned route button simultaneously for taking OFF concerned signal.

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DESCRIPTION OF ROUTE BUTTONS:

SL. NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	L1/1- UN	White with black dot	Common route button for DN Home signal, calling on signal and shunt signal of line No.1 (1 st loop). setting overlap to over run line.
2	L1/2 -UN	White	Common route button for UP and DN Home signals of line No. 1 setting overlap on main line.
3	L-2-UN	White	Common route button for UP and DN Home signals, UP & DN Calling-On signals and UP & DN shunt signals of line No. 2
4	L3/1- UN	White with black dot	Common route button for DN Home signal, calling on signal and shunt signal of line No.3. setting overlap to sand hump.
5	L3/2- UN	White with black dot	Common route button for UP & DN Home signal for line No.3. setting overlap on Main line
6	11A-UN	White	Common route button for UP starter signals
7	12A-UN	White	Common route button for DN starter signals
8	11UN	White	Route button for UP advanced starter
9	12UN	White	Route button for DN advanced starter
10	TWS UN	White	Route Button for Tower wagon Siding.
11	SDG CNL no,27	Black	For releasing of HA & TM siding key from RKT location towards RGDA end.
	GROUP TRANS PUSH BUTTON	WHITE WITH BLACK DOT	Common Trans button for crank handle and siding control
12	Signal 1 Point	RED WITH WHITE	

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	failure Ack.		
13	Button held Ack.	WHITE WITH RED	
14	Crank handle CH- 1, CH-2	BLACK	
15	Emergency point operation	BLACK WITH RED	
16	Emergency route release	WHITE WITH RED	
17	Signal Cancellatio n	RED	
	GROUP RESTORE PUSH BUTTON	WHITE WITH BLACK DOT	Common Restore button for crank handle and siding control

1.6 CRANK HANDLE PUSH BUTTONS:

Sl no	CRANK HANDLE	CONTROL POINTS
1	CH-1	21 A/B, 23A/B
2	CH-2	22 A/B, 24A/B & 26

1.7 Power failure indication /Buzzer and power acknowledgement:-

- vii) Auto change over CLS power panel with rotary change over switch is provided in the SM's office with the three power supplies viz AT, local power supply and DG for changing the switch to the required supply position. Luminous indicators are provided above the circuit breaker for each supply to indicate the availability of the supplies.
- viii) Normally the rotary switch will be kept towards AT position. Whenever the power block is to be given on the line, the on duty SM must ascertain that other two sources i.e local power supply and DG must be available i.e local must be available and DG must be in working condition.
- ix) During the non-availability of AT supply SM on duty shall keep the rotary change over switch towards the local supply to feed available local supply to the Installation.

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- x) In case of failure of AT supply without any power block, 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 DN). In case of failure of AT supply, the local supply/DG supply shall be utilized by operating the switch. If the circuit breaker is tripping, even after resetting, no attempts shall be made to hold it by any other means and a message shall be given to the AEEE/GEN and CTFO/PSI/TRD/GEN for prompt rectification.
- xi) For IPS system that provides to PI, auto-change over has been provided.
- xii) There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

[B] REMOTE MONITORING ASM BOX:

Remote monitoring ASM box gives alarm to the ASM for the following fault conditions:-

- f) 50% DOD (Depth of Discharge) of Battery. In this condition Audio/Visual alarm comes which can be acknowledged with audio cut off.
- g) 60% DOD (Depth of Discharge), which warns for emergency. The Alarm for this condition is same as for condition 1.
- h) 70% DOD (Depth of Discharge), which signals system, shut down. In this condition Signal feed cut off and all DC-DC converters continue working. Audio alarm will continue till power supply restored.
- i) Any of the Module fails, which calls for “Call S&T”.
- j) Whenever there is a failure of power supply of 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 AT and make an entry in station diary duly initiating action for rectification of failure, if any.

1.7.1 LED SIGNAL FAILURE INDICATION (RED SIGNAL LAMP MUTING BUTTON: RED WITH WHITE DOT):-

Whenever LED signal becomes blank, a miniature flashing red light indication appears along with an audio buzzer indicates signal lamp failure. The SM on duty shall press the signal lamp/point failure Ack. Button, there by the buzzer stops but the red indication lamp becomes steady which continues till either LED signal is replaced /rectified or signal assumes other aspect.

1.8 POINT FAILURE INDICATION (RED)/POINT FAILURE BUZZER/POINTS FAILURE MUTING BUTTON (RED WITH WHITE DOT):-

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Whenever there is failure of point due to non-setting point failure indication flashing appears near the point button along with the point failure buzzer. The buzzer stops when the point failure acknowledgement button is pressed, but the flashing light above the ACK 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 ACK button will disappear.

1.9 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.

2.0 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' vide SR 3.36.02(a), the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and concerned signal button. After this, first the emergency route release button (White with Red Dot) positioned on the top of the panel to be pressed after breaking seal and subsequently the concerned signal button is to be pressed. A white light will be lit indicating that the timer is working. After a lapse of 120 seconds the white light along with the white strip of light will disappear suggesting that the route has been released. 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 release by rectifying the fault. It is to be ensured that after every emergency route release operation S&T staff shall seal the emergency route release button. Each operation of emergency cancellation of route should be recorded in the emergency route release counter register by registering the next higher number. All such operations and the new number should be recorded in the station diary counter register and in the train signal register.

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3. 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. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously. Then keeping 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. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose. Each emergency point operation is recorded in emergency point operation counter by registering the next higher number. SM on duty shall ensure sealing of emergency point operation button by S&T staff after completion of every such operation.

4.0 BUTTON HELD ACKNOWLEDGEMENT (WHITE WITH RED DOT):

All push buttons 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 point, route or signal button gets stuck up 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 indication of each point; route or signal 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.

5.0 OVER LAP 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 the overlap. This indication light will glow when overlap is locked by any Home signal route and there will be no light when the 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 lapse of 120 sec the white flashing light will disappear indicating concerned over lap is free.

6.0 TRACK CIRCUIT:

Entire yard is track circuited from Home signal to Advanced starter on either direction. The following track circuits are provided in this yard.

1AT, 1T, 12AT, 21AT, 21BT, 23BT, L₁T₁, L₁T₂, L₁T₃, L₂T₁, L₂T₂, L₂T₃, L₃T₁, L₃T₂, L₃T₃, 22BT, 22AT, 24/26T, 11AT, 2T and 2AT. Indications for the above track circuits are available on Panel at SM's office. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel at SM's office. When a signal is cleared the route

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indication 'Yellow' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.

7. **AXLE COUNTER:**

Entire Block Section between BLMK-LLGM and BLMK-SKPI are provided with **digital** Axle counters.

For section BLMK-SKPI

A pair of digital axle counter is provided between BLMK-SKPI one just beyond DN advanced starter signal no. 12 of BLMK and another beyond DN Home signal of SKPI for last vehicle verification.

For section BLMK-LLGM:

A pair of digital axle counter is provided between BLMK-LLGM one just beyond UP advanced starter signal no. 11 of BLMK and another beyond UP Home signal of LLGM for last vehicle verification.

The position of the block section whether 'clear' or 'occupied' is reflected on the axle counter reset box provided in the Station Master's office which shows 'GREEN' when the block section is clear and 'RED' when block section is occupied. Whenever a train enters into 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 disappears and 'GREEN' indication appears. If after complete arrival of the train '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 cannot be taken off for next train and the concerned instrument shall remain locked in last operated position.

A resetting arrangement is provided in the SM office to reset the system to normal position in case of failure of axle counter. The resetting is to be initiated by the SM at the receiving station only after physical verification of complete arrival of train by exchanging private number. The resetting can be accomplished only with the co-operation of SMs at either end of the block section.

NOTE:

Before taking off reception and dispatch signals for UP or DN directions the SM on duty shall ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication.

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8. **STATION MASTER'S PANEL CONTROL KEY:**

The panel is fitted with Station Master's lock up key to prevent any unauthorized 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 custody vide SR 3.36.02 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 cancellation button without ASM's key also. However the provisions of SR 3.36.02 shall be followed while replacing signals also.

9. **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 padlocking all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The CH push button (Blue) and group button (White with Black dot) is provided at the top of the panel board. This button has two indications viz., WHITE and RED. The White 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 handle key is locked and not free for extraction from RKT. This is called 'Crank handle key locked' indication. For extracting CH key from RKT SM has to press relevant crank handle push button and group TRANS button simultaneously. The light white light besides the CH button starts flashing. After extraction of CH key from RKT at location box flashing white light disappears. On extraction of CH key from RKT, the points in that particular group cannot be operated from the panel. After completion of point operation, the CH key will be retransmitted to the station electrically by inserting the CH key in RKT in location box and turned. The white flashing indication appears on the Panel board. The flashing will be stopped and steady indication appears on pressing concerned CH button and group release button (White with Black dot).

Crank handle control for operation of points:

SL No	CRANK HANDLE	CONTROL POINTS
1	CH-1	21 A/B, 23 A/B
2	CH-2	22 A/B, 24 A/B & 26

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9.1 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 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 Yellow strip of light will appear on the route confirming that the route is set and locked. The signal 'OFF' indication will appear on the panel.

9.2 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 relevant point button and group button one at a time in the desired position or by operating signal and route button.

To take 'OFF' UP advanced starter signal no.11, UP LV section between BLMK-LLGM should be clear and Line clear must be obtained from the concerned Block section in advance. Then the concerned advanced starter signal button shall be pressed along with the concerned route button for two or three seconds and released. This will clear the Up advanced starter signal and a white strip of light will appear on the panel.

To take 'OFF' DN advanced starter signal no.12, DN LV section between BLMK-SKPI should be clear and Line clear must be obtained from the concerned Block section in rear. Then the concerned advanced starter signal button shall be pressed along with the concerned route button for two or three seconds and released. This will clear the DN advanced starter signal and a white strip of light will appear on the panel.

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

9.3 TAKING OFF CALLING ON SIGNAL:

Miniature color 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 Miniature 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.

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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 buttons 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 ‘C-1(A-C)/ C-2(A-C) (Red with White dot) shall be pressed (as the case may be) simultaneously along with the concerned route button for 2 to 3 seconds and then 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.

10. RELEASE/ CANCELLATION OF ROUTE:

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

NOTE:-

UP and DN calling on signals, UP and DN advanced starters are to be manually cancelled after the passage of the train to cancel the route.

11. REPLACEMENT OF SIGNALS TO ON:

Signals are replaced to ‘ON’ automatically by the occupation of the first track in advance of 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 signal cancellation button (RED) is to be pressed simultaneously.

12. NTERLOCKING OF SIGNALS/POINTS :

All running line points are fitted with point machines which have in built locking and are electrically detected by the relevant Home signals and starters.

- 12.1 Advanced starter signals are interlocked with respective Block instrument in LINE CLEAR position.
- 12.2 The Block instruments cannot be made to normal unless the respective Home is put back to ‘ON’ aspect and the respective block section monitored by axle counter is clear of trains.
- 12.3 Signals once taken OFF can be put back to ON in case of emergency by pressing the concerned signal button in conjunction with signal cancellation button even when the panel is locked up with Station Master’s key.

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13. PILOTING OF TRAINS IN TO THE STATION YARD:

Whenever Home signal becomes defective, trains can be admitted by taking off calling-on signal. When both home and calling-on failed, then the trains will be piloted 'IN' in terms of SR 3.69.3(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 at station to set the nominate route with the help of crank handle during failure of points. The TPM shall set the facing and trailing points and clamp and padlock the same under the super vision of SM on duty at station in both the cases.

Then the SM on duty shall then hand over the written authority (T/369(3b) to the TPM for "piloting IN" the train. While going towards home signal, the TPM shall check that the points have been correctly set, clamped and padlocked. After the train has been brought to a dead stop at the foot of 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 end points for admission of a train.
- 2) The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled.
- 3) The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

13.1 PILOTING OF TRAINS OUT OF STATION YARD:

When starter signal has become defective, the SM on duty shall set the points correctly from the panel or advise the TPM to set the concerned points correctly for the outgoing train with the help of crank handle. The TPM on duty shall clamp and padlock both the facing and trailing end points under supervision of SM on duty in both the cases. He shall also advise the gateman to close the level crossing gate/gates on the route for dispatch of a train.

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. Thereafter, he shall display proceed hand signal at the foot of the starter signal vide subsidiary rule 3.70.01.

In case advanced starter signal becomes defective BWM 3.33 will be followed.

NOTE:

- (1) The station master on duty shall personally supervise the correct setting, clamping and padlocking of both end points for dispatching of a train.

Station Working Rules of BHALUMASKA (BLMK)

- (2) The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled.
- (3) The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

14. SHUNTING:

For shunting SH3, SH-4 & SH-13 are provided in the yard for shunting in desired direction. The particular route on which it is intended to do shunting is to be set by operating the desired points individually from the panel or by pressing the shunt signal button and required route button simultaneously for 2-3 seconds. When the route is set and locked correctly white strip of lights will appear on the route and concerned shunt signal shall display 'OFF' aspect.

15. VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAINS INTO THE 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 passage 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 the track before any movement of trains are permitted on the concerned route subjected to the other conditions such as locking of points etc.

16. CRANK HANDLING EMERGENCY OPERATION OF POINTS:

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'TRANS' push button and concerned Crank handle control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard. On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor trolley or light Diesel/electrical engine or tower wagon, indicating the occupancy of the track. It is necessary to satisfy SM on duty that the said vehicle has cleared point zone track circuits by observing the track indications on either side of the cross over.

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17. EMERGENCY OPERATIONS:

The following are the instructions for emergency operations.

17.1 CANCELLATION BUTTON AND COUNTERS:

- 17.1.1 For the purpose of the emergency operations there is an emergency Route cancellation button (provided at the top of the panel) and also there is a counter for counting emergency operations involving the concurrent operation of the emergency route cancellation button. The Station Master on duty must press the emergency route button along with concerned signal button for which emergency route releases is desired. A yellow indication will appear below the signal indicating that the timer has started operating and after lapse of 120 seconds the desired route will be released provided all other conditions are favorable for the route release.
- 17.1.2 The counter registers the number of such emergency operations performed for such emergency cancellation and the Station Master on duty shall specify the cause for such usage giving the particulars of cause and the time of operation as related to a particular train etc. in the train signal register. The detailed operation instructions are as follows:

18.0 LOCKING OF RELAY ROOM:

The relay room shall be locked with a double lock which can be opened only after both the keys are inserted and turned. One key of the lock shall be kept with the Station Master on duty in his custody and other with Maintainer. Whenever required for maintenance, the key in the custody of Station Master shall be given to the Maintainer. After completion of the work the Maintainer be properly recorded in relay room register maintained at the station and duly signed by the Station Master and the Maintainer concerned as per OM 1.14. In addition, the Station Master shall also observe SR 3.51.05.

19.0 MAINTANANCE OF S&T INSTALLATION AND ADHERENCE TO MAINTENANCE SCHEDULES:

- 19.1 Regular maintenance of S&T installations and adherence to the schedules of maintenance is also the mandatory schedules of testing of points, track circuits, point machines, level crossing gates, the associated interlocking apparatus i.e., cables and finally the interlocking functional tests is a must for the safe and satisfactory working of those installations at this Station.
- 19.2 The tests, checks and replacements etc. including overhauling shall confirm to the schedule of maintenance as indicated in the signal engineering manual as also in the current and extant instruction / circulars on the subject.

Station Working Rules of BHALUMASKA (BLMK)

20. **PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF A SIGNAL AND INTERLOCKING INSTALLATIONS:**

In case of failure of any interlocking gear at the station, the failure report should be communicated by the Station Master on duty through a memo to the Sectional Maintainer and the Signal Engineer of the Section and others as per G& SR 3.51.04 and 3.68.04 and document all such transactions.

20.1 **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**

Before declaring a **point** as defective the setting of point on the route to which it applies shall be inspected by the Station Master on duty irrespective of the position of the Buttons the Panel in term of SR 3.68.04(c).

20.2 **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 a reconnection memo detailing rectification. Thereafter the Station Master on duty shall personally check the 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 gear in terms of SR 3.64.04 (c) and (d).

21. **PROCEDURE FOR CARRYING OUT PLANNED MAINTANANCE WORK:**

Whenever any normal maintenance or special works for heavy renewals etc., are involved, these works should be pre-planned by the signal & Telecommunication field staff and the Inspector of the section should give to the Station Master in writing “Advance Intimation” about this planned work in terms of GR 15.08.01.

22. **EMERGENCIES:**

anything contained in the aforesaid Paras, when equipment is found to be defective and unsafe for passage of trains, the Signal and Telecom. Staff shall at once suspend the working of such equipment and the associated installation and issue a “Suspension Memo” explaining the seriousness of the defect or damage to the interlocking installation to the Station Master and obtain SM’s acknowledgement. After this, the usual practice of issuing disconnection memo and reconnection memo can follow and the Station Master must promptly act on such messages and take adequate precautions treating the S&T installations as defective and pass trains over the affected interlocking gears according to extant instructions as contain in GR & SR 3.77.

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

- 23.1 When 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 to RKT.
- 23.2 The cases of failure of Motor Operated Points should be promptly reported to the Concerned Signal maintainer /Signal Inspector for immediate rectification.
- 23.3 Whenever an emergency Crank handle is required to be used by a Signal Official for maintenance of work 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 acknowledgement of the Signal Official in the emergency Crank Handle Register and then handover to him the emergency Crank Handle for the Points concerned. All the concerned Points will be treated as defective till the Emergency Crank Handle is returned back to the Station Master on duty.
- 23.4 Before parting with the emergency crank handle either for attending failure 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 shall be treated as Non-interlocked. The Station Master on duty is responsible for introduction of Non-interlocked working and the trains will piloted IN and OUT duly clamping and Padlocking the Points, both in facing and trailing directions over which the train is to pass, as per GR 3.69 and 3.70 with relevant SR's. The Station Master on duty will be personally responsible for setting and locking of Points, for reception and dispatch of all trains.
- 23.5 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 usage of the Emergency Crank Handle must be recorded.

24.0 SUSPENSION OF LAST STOP SIGNALS:

- 24.1 When the Block Instrument is suspended with its handle in 'TRAIN GOING TO' position for whatever reason, the concerned Last Stop Signals controlled by the Block Instrument must be treated as suspended and trains shall be worked on PLCT.

24.2 ON Aspect of UP & DN Home signals and Advance starters are interlocked with respective Block Instruments. Block Instruments can not be made normal unless the respective home signals are in normal position.

25. NORMALISATION OF THE BLOCK SECTION AXLE COUNTER AND BLOCK WORKING BY RESETTNG FEATURE:

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- 25.1 **Digital** Axle counters are provided on **both sides** between BLMK-LLGM and BLMK- SKPI Single line section for Block proving.
- 25.2 The occupation and clearance of the axle counter section are indicated on panel and reset by 'Red' and 'Green' lights.
- 25.3 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 **restored** to in either section.
- 25.4 Even after completion of reset operation, LVCD Axle counter will show clear only if next train is piloted out.
- 25.4.1 No train should be allowed on signal to leave a station in any particular direction unless:-
- section** clear indication is available for the relevant axle counter track circuited portion and Last stop signal is taken 'OFF'.
- 25.5 **Resetting procedure to be given.**
- 25.6 Reset arrangements are provided in the Reset Box in the SM's office for Sections. BLMK-LLGM and BLMK- SKPI The key for the Reset Box should normally be kept with SM. And for every such operation of the resetting the Axle Counter, the SM on duty shall record giving details of the date of use, train number, time, and number registered on the counter and reasons for resetting and initial each such entry.

26.0 RESETTING OF LVV DIGITAL AXLE COUNTER:

- i) Whenever after complete arrival of train, the LVV axle counter continue to show 'RED' on the panel board, the on duty SS/SM at both ends of the section shall resort to reset the axle counter. For this purpose SS/SM at receiving end shall first verify that Block section is clear of trains. If the failure has occurred after arrival of train, SS/SM shall obtain signature from the guard of stopping train on the train intact register (vide GR &SR 4.17, 4.17.01) or by exchanging signal with the guard of through train, so that he can ensure that the train has arrived completely before resorting the LVV axle counter. SS/SM of receiving end shall inform the failure of axle counter to on duty SS/SM of dispatching end for UP/DN section.

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- ii) SS/SM at receiving end then sends an operating person to verify that the last vehicle is clear of Block section. After verifying the clearance of last vehicle of concerned block section, the operating person exchanges private number and press the button in the LVV box.
- iii) On exchanging private number the SS/SM at both ends will insert the reset key for corresponding section and shall press the nominated reset button. By this operation LVV axle counter will reset and associated counter will change to next higher number at both ends.
- iv) SS/SM at both ends shall record the counter number so changed due to reset of axle counter in the reset register and also in the Train signal register mentioning the purpose of reset. After the reset operation is completed preparatory reset indication will appear on reset box at both ends which suggests that the reset operation is successfully completed and the first train has to be piloted out. On arrival of the piloted train the axle counter track cct zone of the section shows clear and normal working shall be resumed. Even after arrival of piloted train, LVV axle counter zone does not show clear indication, S&T staff to be informed for getting rectified the failure of axle counter.
- v) It is mandatory that every reset operation of LVV axle counter first train after reset process shall have to be piloted out.

27. SIGNAL LIGHTS:

The station Master on duty at 00.00 hrs (2nd shift) must also ensure from panel board that all the signal lights are glowing properly and brightly. This fact must be recorded in the Diary under a separate entry and confirm to the section controller on duty.

28. 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 Hrs every day according to GR and SR 4.01.01 and 4.01.02.

29. TELECOMMUNICATIONS:

As per Para No.5 of general portion of this SWR.

30. LAST VEHICLE CHECKING DEVICE:

Axle counters are provided between BLMK-SKPI and BLMK-LLGM Double line section for block proving of Last Vehicle Checking device.

The occupation and clearance of the axle counter section are indicated on panel by 'Red' and 'Green' lights.

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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 in both the station's.

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.

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 not taken 'OFF'.

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 at the receiving station through exchange of Private Number.

Reset arrangements are provided in the SM's room for sections BLMK-SKPI and BLMK-LLGM the key for the Reset Box should normally be kept with SM and for every such operation of the resetting the Axle Counter, the SM on duty shall record giving details of the date of use, train number, time, number registered on the counter and reasons for resetting and initial each such entry.

31. RESETTING OF LVV DIGITAL AXLE COUNTER

After complete arrival of train, if the Last vehicle axle counter of the section does not clear or Last vehicle axle counter section free indication (Green) does not appear in the panel, the receiving station SM shall apprise the sending station SM through telephone for resetting giving details of last train that has arrived complete at his station and the block section is clear.

The receiving station shall inform the sending station as to whether the last train that entered into the section has arrived or not and, if arrived fully shall so intimate authenticated by exchanging Private Number with the sending station.

The status of the section LVCD i.e. Clear (GREEN), occupied (RED), preparatory reset (GREEN) and power on indications (WHITE) are provided in the reset box.

The procedure to be followed for re-setting by both of sending end and receiving end individually is as follows:-

- A) On being advised by SM-BLMK, SM-SKPI/LLGM inserts the key in the Reset Box, turns right and presses both the key and the Push Button (Red) simultaneously with the SM-BLMK. The Counter on the Reset Box at BLMK and SKPI/LLGM registers the next higher number and after five seconds

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miniature green Preparatory Reset indication appears on the Reset Box both at BLMK and SKPI/LLGM. The step by step procedure shall be followed as given in “B” to “I”.

- B) SM/BLMK and SKPI/LLGM shall then insert SM's LV reset key, and turn right.
- C) Press LV reset button provided on the panel.
- D) Release SM's LV reset key and reset button.
- E) Turn left the SM's LV reset key and remove it.
- F) The system obtains preparatory reset state and preparatory reset indication (Green) glows on the panel. The counter reading increases by one count after a gap of 5 seconds approximately
- G) .The counter reading should be recorded
- H) One train is to the pilot in the section to make the system normal.
- I) The SM on duty shall record it in the Train Signal Register indicating the resetting operations in detail i.e. train number, time, Private Number exchanged with SM of sending station and giving reasons for the resetting operation.
- J) If the axle counters functioning properly now, then Block Section cleared indication 'G' will appear on the panel and the concerned Block working will be normalized.
- K) If the LV axle counter section indication does not appear 'Green' 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.

32. [Fire Alarm-Rly Auto phone](#)

33. **CONTROL NO. 27**

A hot axle siding measuring 53.2M (GJ-GJ) takes off from L/1 at SKPI end and is isolated by derailing switch at LLGM end. It is isolated by HPL at site and is controlled by 27 from panel. Hot axle siding is further extended towards SKPI end as track machine siding measuring 200M. The entrance points (L/1 to H.A siding) from UP direction and (L1 to track machine siding from DN direction) are released by key in succession through SMs control button no.27 on panel. The entrance point is operated locally by arc lever provided at the site through Key 'P' and DS point is operated through keys 'X' and Key 'Y' in

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succession from entrance point When Key 'P' is 'IN' in RKT a green light is shown and when the key is 'OUT' a red light glows on panel board. Whenever the SM intends to operated the track machine siding he shall press the control no.27 to extract the key 'P' from RKT. The key will be taken by the TPM to the siding and insert in the HPL, unlock and operated the point. After the shunting operation is over, the siding point is made normal and locked the key 'P' is taken back to T.M siding location. As the key is inserted in the RKT and turned, SM will get a flashing indication and acknowledge. Then control is made normal. When the control no.27 is transmitted, reception and dispatch signals and shunt signals for Line No. 1 gets locked in their normal position.

34. **TOWER WAGON SIDING**

The Tower Wagon Siding (TWS) takes off from Line No. 1 at KRPU end of the yard with single side entry. The Tower wagon Siding is isolated from line No. 1 by DS point No. 26. The SM on duty is to press the SH-9 GN button along with TWS-UN button simultaneously to receive the train on Tower wagon siding. Similarly to dispatch the train from Tower wagon siding, SH-13 GN button along with L1/1 UN button to be pressed simultaneously to receive the train on Loop line No-1.

35. **Interlocking of signals with Block instruments interlocking with Home Signal.**

On Aspect of UP & DN HOME and UP & DN Advance starters signals are proved in respective block circuits.

EAST COAST RAILWAY **WALTAIR DIVISION**

APPENDIX 'C'

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ANTI COLLISION DEVICE (RAKSHA KAVACH)

-NIL-

EAST COAST RAILWAY
WALTAIR DIVISION

APPENDIX 'D'
DUTIES OF OPERATING STAFF IN EACH SHIFT.
BHALUMASKA STATION

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The following staffs are concerned with the movement of trains whose duties are given below.

1. **STATION SUPERINTENDENT:**

- i) Station incharge is responsible for the efficient discharge of duties by different members of staff at his station. (General Rules 5.01) and OM Para No. 2.02.
- ii. Ensuring that the general working of the Station is being carried out in strict accordance with the current rules, procedures and instructions.
- iii. Providing prompt and courteous service with utmost safety and security of passengers and employees.
- iv. Availability, helpfulness and good conduct of station porters.
- v. He shall be responsible for general up-keep of the station.
- vi. He shall be responsible for keeping the safety and operating literature including circulars, pamphlets, gazette etc. up to date and these must be explained to the staff working under him and got noted by them.
- vii. He shall maintain complete and up to date record of Engg/S&T/TRD restrictions. He shall be responsible for bringing forward the caution order register every Monday.
- viii. He shall be responsible for maintaining Accident Register and Accident Charts and keeping these up to date.
- ix. He shall maintain figures in respect of the stock and get them relayed to the control in time.
- x. He shall investigate all public complaints and send the extracts of the complaint with Explanation of the staff and his own remarks to Divisional Office in time. In case of complaints concerning the other department, intimation may be given to the subordinate In-Charge of that department immediately so that action may be taken to avoid recurrence.

2. **SM**

- i) He shall come on duty after taking complete rest and shall not perform his duty under the influence of drugs or intoxicants.
- ii) When on duty or when called upon to do so, in case of emergency, he shall be responsible for obtaining and granting line clear to trains as per SWR & OM Para No. 2.02 (e).
- iii) He shall handle the control panel himself when on duty and shall not permit any unauthorized person to manipulate panel.

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- iv) He shall keep the SM's control keys of control panel in his personal custody whenever, he is required to leave his office even for a short duration.
- v) While coming on duty, he shall ensure that all points and signals are in good working order and all the registers, records, pertaining to train passage are completed in all respect before taking over the charge.
- vi) He shall personally ensure that conditions for taking 'off' the reception signals are fulfilled and the clearance of line is verified as per SWR before actually pressing the relevant button for taking off the signals.
- vii) He shall ensure from indications available in the panel that the signals are burning brightly and are giving correct indications.
- viii) He shall ensure that proper indications of points, signals, track circuits, crank handle, level crossing gate etc., are displayed at their proper places.
- ix) He shall ensure that all Shunting operations are carried out as per extant orders and GR 5.19 and SRs thereof.
- x) He shall inform the Technician/JE/SE(sig) in writing or through a written message, any failure of track/signals/points/keys or panels etc. and shall invariably enter these failures in Signals Failure Register.

3. TRAFFIC POINTSMAN:

- i) He shall obey all lawful orders of the SS/SM on duty or official in-charge supervising the shunting during the course of shunting operations including coupling or uncoupling of vehicles, wagons, fixing rubber washers, closing wagon doors, displaying hand signals etc.
- ii) He shall exhibit danger signal to the official supervising the shunting if vehicles are fouled during the shunting operation.
- iii) He shall pilot the trains in case of abnormal working and when ordered by the SS on duty.
- iv) He shall be in proper neat and clean uniform while on duty.
- v) He shall come on duty after taking complete rest and shall not perform duty under the influence of liquor, drugs, or intoxicants.
- vi) Neither shall he absent himself from duty nor shall he exchange his duty without prior permission of his superiors.
 - vii) He shall not leave his duty unless properly relieved or authorized by his superiors.
- viii. He shall set the points properly in non-interlocked yard and man them for all shunting movements and shall not interfere with the points while the vehicles are standing and or passing over them.
- ix) He shall be responsible to see that fouling marks are kept clear after completion of shunting.
- x) He shall always commence his duty equipped with hand signal lamps during night and flags during day.

Station Working Rules of BHALUMASKA (BLMK)

- xi) He shall verify the correct setting of route before delivering required papers to the Loco Pilot either through taking 'OFF' the relevant shunt signal or by personal observation.

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NOTE: All staff should be in uniform while on duty and follow the rosters issued by Sr.DPO/WAT from time to time.

EAST COAST RAILWAY
WALTAIR DIVISION

APPENDIX 'E'

BHALUMASKA STATION

A.K.BEHERA
(Dy.CSTE-2 / RE / BBS)

S. PRABHU
(DSTE / WAT)

G.SUNEEL KUMAR
(Sr.DOM (M) / WAT)

Station Working Rules of BHALUMASKA (BLMK)

ESSENTIAL EQUIPMENT

List of essential equipment is given below vide OM 20.04(ii) which shall be maintained in good working order.

Sl. No.	Description	Quantity
i.	Detonators	20
ii.	LED based tri colour flashing torch	3 (1 Spare)
iii.	Hand Signal flags	3 (1 Spare) Sets
iv.	Clamps with pad locks	6
v.	Clamps and padlocks	8
vi,	Skids	4
vii.	Wedges	2
viii.	First and sand buckets	6
ix.	Fire extinguishers	2
x.	Line blocking collors	4
xi	Motor trolly online board	2
xii	Block suspension board	2

Station Working Rules of BHALUMASKA (BLMK)

EAST COAST RAILWAY
WALTAIR DIVISION

APPENDIX 'F'

BHALUMASKA STATION

**WORKING OF D.K. STATIONS, HALTS, IBH, IBS AND OUTLAYING
SIDINGS:**

N I L

A.K.BEHERA
(Dy.CSTE-2 / RE / BBS)

S. PRABHU
(DSTE / WAT)

G.SUNEEL KUMAR
(Sr.DOM (M) / WAT)