

SI No. SWR/TIG/37

EAST COAST RAILWAY
SAMBALPUR DIVISION

STATION WORKING RULES OF TITLAGARH STATION (CODE:TIG)

BG/MG/NG: BroadGauge
Date of issue: 11. 04.2010.
Date brought into force: 19.04.2010.

NOTE: -

The Station Working Rule (SWR) must be read in conjunction with General and Subsidiary Rules and Block Working Manual. These rules do not in any way supersede any rule in the above books.

1. STATION WORKING RULE; -

1.1 **STATION WORKING RULE DIAGRAM NO.** S.I./WRD 22033.ALT-D

1.2 **SIGNAL INTERLOCKING PLAN NO.:** - S.I – 22033, ALT-“D”.

The Station Working Rule diagram and Signal Interlocking Plan shows the complete lay out of the yard, siding, normal position of points, the Signalling and Interlocking arrangements, Gradients and Level Crossings within the station limits. This must be referred to for giving details of the points number and signals when reporting accidents.

2. DESCRIPTION OF STATION: -

TITLAGARH is an eight-line junction station situated in Raipur –Vizianagaram section at KM 202.686 from Raipur. It has single line sections at Jharsuguda and Raipur end converged in to double line section at Vizianagaram end It is Standard –I (R) interlocked, Class ‘B’ station equipped with Central Panel of Route Relay Interlocking & Multi Aspect Colour Light Signals. The Central Panel is provided with Route Relay Interlocking installation of Siemens type based on two-button operation, one at entrance and other at exit.

2.1 GENERAL LOCATION:-

- 2.1.1 **NAME OF STATION** : TITLAGARH (TIG)
2.1.2 **CLASSIFICATION OF STATION** : ‘B’ class
2.1.3 **NAME OF THE SECTION** : Jharsuguda -Titlagarh, Single Line & Raipur Vizianagaram (R-TIG single line & TIG-VZM double line) Non-RE, BG section
2.1.4 **ROUTE** : ‘D’ Spl.
2.1.5 **LOCATION** : KM 202.686 from Raipur

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

- i) Sambalpur end - SIKIR (Code: SFK) inter distance 10.1 K.M.
ii) Raipurend - REHENBHATA (Code: RNBT) inter distance 7.7 K.M.
iii) Vizianagaram end- KESINGA (Code: KSNG) inter distance 12.978 KM
iv) Passenger Halt: - Nil

- v) Flag station: - Nil
- vi) Outlying siding: - Nil
- vii) D.K. station: - Nil.
- viii) IBH: - NIL
- ix) IBS: - NIL

2.3 **BLOCK SECTION LIMITS: -**

Between stations	The point from which 'Block section' commences.	The point at which 'Block section' ends.
Between TIG-RNBT	DN Advanced starter signal No.60 of TIG	UP Advance starter signal of RNBT Station
Between TIG- SFK	DN Advanced starter signal No.58 of TIG	UP Advanced Starter of Signal of SFK Station
Between TIG- KSNG DN Line	BSLB of TIG station on DN Line.	DN Advanced starter signal of KSNG Station.
Between TIG-KSNG UP Line	UP Advanced Starter Signal No 51 of TIG.	BSLB of KSNG station on UP Line .

2.3.1 **STATION SECTION:**

The portion between UP Advanced starter signal No 51 of UP Line & BSLB Board of DN line at KSNG end to DN Advanced starter signal No 60 at RNBT end & DN Advanced starter signal No 58 at SFK end is the station section of TIG station.

2.3.2 **STATION LIMIT:**

The portion between UP Distant signal at RNBT end & UP Distant signal at SFK end to DN Distant of DN line at KSNG end & UP Advanced starter signal 51 of UP line at KSNG end is the station limit of TIG station.

2.4: **GRADIENT: -**

(a) **FROM THE CENTER OF STATIONBUILDING TOWARDS KESINGA (UP LINE)**

CHAINAGE IN METER		INTER DISTANCE	GRADIENT
FROM	TO		
0 m	823.749m	823.749m	1 in 400 F
823.749m	1400.0m	576.251m	1 in 156 F
1400.0m	1662.50m	262.5m	1 in 100 F
1662.50m	1736.0m	73.5m	LEVEL
1736.0m	2200.0m	464m	1 in 153.4 R
2200.0m	2350.0m	150m	Level
2350.0m	2750m	400m	1 in 240 R
2750m	2900m	150m	1 in 612.20 F
2900m	3200 m	300m	1 in 250 F
3200m	Block section	---	1 in 400 F

(b) FROM THE CENTER OF STATIONBUILDING TOWARDS KESINGA (DN LINE)

CHAINAGE IN METER		INTER DISTANCE	GRADIENT
FROM	TO		
0 m	823.749m	823.749m	1 in 400 F
823.749m	1400.0m	576.251m	1 in 156 F
1400.0m	1731.650m	331.650m	1 in 150 F
1731.650m	1800m	68.35m	LEVEL
1800m	2200.0m	400m	1 in 150 R
2200.0m	2350.0m	150m	Level
2350.0m	2750m	400m	1 in 226 F
2750m	2900m	150m	1 in 652 R
2900m	3200 m	300m	1 in 250 R
3200m	Block section	---	1 in 398 R

(c) FROM THE CENTER OF STATIONBUILDING TOWARDS REHENBHATA

CHAINAGE IN METER		INTER DISTANCE	GRADIENT
FROM	TO		
0 M	1100 m	1100 m	LEVEL
1100 m	1250m	150m	1 in 393.862 F
1250m	1564.2m	314.2m	1 in 200 F
1564.2m	1650m	85.8m	Level
1650m	1800m	150m	1 in 750 R
1800m	2356	556m	1 in 714.653 F
2356m	2894.0m	538m	1 in 150 R
2894.0m	3158m	264m	LEVEL
3158m	4092m	934m	1 in 150 R
4092m	Block section	---	LEVEL

(d) FROM THE CENTER OF STATIONBUILDING TOWARDS SIKIR

CHAINAGE IN METER		INTER DISTANCE	GRADIENT
FROM	TO		
0 M	1100 m	1100 m	LEVEL
1100 m	1250m	150m	1 in 393.862 F
1250m	1564.2m	314.2m	1 in 200 F
1564.2m	2004m	439.8m	Level
2004m	3542m	1538m	1 in 150 F
3542m	3872m	330m	LEVEL
3872m	Block section	---	1 in 150 F

2.5 LAY OUT: -

- i) No. of running lines :- 8 (Eight)
- ii) No. of sidings :- 9 (Nine)

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- ii) No. of Passenger platform :- 03, (One Highlevel Passenger Platform beside Line No.-1 (540 m X 8.15m) and another Highlevel Island Passenger Platform between line No 2 & 3 (593m long).
- iii) No. of goods shed platform :- One, beside ARME Siding (54mX15.29m)
- iv) FOB :- Two, One at CH 55.0M and new FOB at CH 138.00M from CSB.

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

DESCRIPTION	CSL	ISOLATION PROVIDED	
		TOWARDS SFK & RNBT end	TOWARDS KSNB end
Line No.1 (Common Loop)	806.8mtrs. (Str. To Str)	ORL	DS-104N and points 116N, 118N 108N & 150N
Line No.2 (Main line)	703mtrs. (Str. To BJ)	Derailing Switch	Derailing Switch
Line No.3 (Main line)	759mtrs. (Str. To BJ)	Derailing Switch	Derailing Switch
Line No.4 (Common Loop)	717mtrs. (Str. To BJ)	Derailing Switch	Derailing Switch
Line No.5 (Goods line)	718mtrs. (Str. To BJ)	Derailing Switch	Derailing Switch
Line No.6 (Goods line)	728.50mtrs. (Str. To BJ)	Derailing Switch	Derailing Switch
Line No.7 (Goods line)	713mtrs. (Str. To Str)	Derailing Switch	ORL
Line No.8 (Goods line)	685mtrs. (Str. To Str)	Derailing Switch	ORL

(II) **DIRECTION OF MOVEMENTS:** -

- a. Trains arriving from SIKIR & REHENBHATA end are UP trains.
- b. Trains arriving from KESINGA end are DN trains.

2.5.2 NON-RUNNING LINES AND CSL: -

(A)

Sl. No.	DESCRIPTION	CAL / CSL	TAKES OFF LINE NO.	EXIT	OPERATION
1	ART Siding	139mtrs. (Str to SH)	Line No.1	Both Way	Operated from Panel.
2	ARME Siding	112.2mtrs. (Str to SH)	ART siding Line	Both Way	Operated from Panel.
3	IOCL Siding	78.1M (DE to DS)	LINE No-1	One way	Operated from Panel
4	Saloon Siding	43 M	LINE No-2	One way	Operated from Panel
5	Sorting Line-2	138 M (SH to SB)	Line No-8	One way	Operated from Panel
6	Sorting Line-1	138 M (SH to SB)	Shorting Line-2	One way	Operated from Panel

7	Sick line-1	52.5 M (SH to SB)	Shorting Line-2	One way	Operated from Panel
8	Sick line-2	52.5 M (SH to SB)	Sick line-1	One way	Operated from Panel
9	Shunting neck	179.8 M (SH to DE)	Line No-4	One way	Operated from Panel

(B) DESCRIPTION OF NON RUNNING LINES-

- (i) **ART Siding:** - ART Siding of CSL 139mtrs (Str to SH) takes off from line no. 1 at VZM end and it has entry and exit at both ends. The siding is isolated by DS point no. 122 at VZM end and 150A at Raipur end. Both the points are operated from the operating panel. Dependent shunt signal No. 41 at VZM end and independent shunt signal No. 18 at Raipur end are provided for shunting movement from the siding. ART can be directly despatched from the siding by taking off the signal No-S-41, C-41, SH-41 A/B, SH-18. Signals SH-8F and SH-10B at VZM end and SH-37B at Raipur end have been provided for reception of train into the ART siding.
- (ii) **ARME Siding:** - ARME siding with CSL 112.2 (Str to SH) mtrs takes off from ART siding, has both side entry and exit. The siding is isolated by DS point no. 120 B at VZM end. The DS point and point No. 148 & 150A at Raipur end are operated from control panel. Shunt signal No.S-39,C-39,SH-20, SH-39A/B, SH-37, SH-10C and SH-8G are provided for to and from movements. ARME can be despatched to KSNG direction by taking off the signal No. 39,C-39 and Signals SH-20 & No. S-42 on line No. 1 to RNBT/SFK direction.
- (iii) **IOCL Siding:** - IOCL siding of CSL 78.1mtrs (DS to DS), takes off from the extended portion of line no. 1 and is isolated by DS point no. 104. This DS point is operated from the operating panel. Shunt signal No. SH-10 (A-C), SH-21, SH-39, and SH-40A are provided for to and from movements in the siding.
- (iv) **Saloon Siding:** - Saloon siding (CSL 43 mtrs) with one side entry and exit takes off from line no. 2 at Raipur end and isolated by DS point no. 135B. The entrance point 135 is operated from the operating panel. Shunt signal no. SH-40 is provided on the saloon siding for movements from the saloon siding. Shunts signal no. SH-15C and SH-5C are for movements into the siding.
- (v) **Sorting Line No. 1:** - Sorting line no. 1 of CSL 138mtrs (SH-28 to SB) with single side entry and exit, takes off from sorting line no. 2 which in turn takes off from line no. 8 at Raipur end of the yard. Entrance point to this siding point no. 151 is operated from the control panel. Shunt signal no. SH-28 is provided in the siding for movement from the siding. Shunt signal SH-7E is provided for movements into the siding.
- (vi) **Sorting Line No. 2:** - Sorting line no. 1 of CSL 138mtrs (SH-26 to SB) with single side entry and exit takes off from line no. 8 at Raipur end of the yard. Entrance point to this siding point no. 149 is operated from the control panel. Shunt signal no. SH-26 is provided on this siding for movement from the siding. Shunt signal SH-7F is provided for movements into the siding.
- (vii) **Sick Line No.1:** - Sick line no.1 of CSL 52.5mtrs (SH-24 to SB) with single side entry and exit takes off from Sorting line no. 2 at Raipur end of the yard. Both Sick line no. 1 & 2 are isolated by DS point no. 147B. The entrance point 147 is operated by the operating panel. Shunt signal no. SH-24 is provided on the siding for movements from the siding and SH-7G for movements into the siding.
- (viii) **Sick Line No. 2:** - Sick line no.1 of CSL 52.5 mtrs (SH-22 to SB) with single side entry and exit takes off from Sick line no. 1 at Raipur end of the yard. The entrance point 153 is operated by

the operating panel. Shunt signal No. SH-22 is provided on the siding for movement from the siding and SH-7H for movement into the siding.

- (ix) **Shunting Neck:** - Shunting neck of CSL 179.8mtrs (SH-12 to DE) takes off from line No.4 with single side entry and exit at VZM end of the yard. The siding is isolated by DS point No. 124 which is operated from the control panel. Shunt signal SH-12 is provided for shunt movements from the shunting neck to line No.s 4, 5, 6, 7, & 8. Shunt signals SH-23, 25, 27, 29 & 31 are provided in the yard for shunt movements into the shunting neck from line no. 4, 5, 6, 7 & 8 respectively.

2.5.3 **ANY SPECIAL FEATURES IN THE LAYOUT:** - There is falling gradient of 1 in 156 towards KSNG end of TIG Yard.

2.6.1 **LEVEL CROSSINGS: (STATION SECTION)-**

Sl. No	Location	K.M. & No.	Normal Position	Class	Type	Operation	Communication
1	Between UP starter signals & UP Adv. starter	203/3 RV-160	Open to Road Traffic	'B-2'	Interlocked	Winch Operated Lifting Barrier	Telephone connection with SM/TIG RRI Cabin
2	Between UP routing Home & DN Advanced starter signals	201/12 RV-159	Open to Road Traffic	'SPL'	Interlocked	Winch Operated Lifting Barrier	Telephone connection with SM/ TIG RRI Cabin

2.6.2 **LEVEL CROSSINGS: (IN BLOCK SECTION) :**

Sl. No	Location	K.M. & No.	Normal Position	Class	Type	Operation	Communication
1	Between SFK-TIG	740/2-3 JT-127	Open to Road Traffic	'C'	Non-Interlocked	Winch Operated Lifting Barrier	Telephone connection with SM/ TIG RRI Cabin
2.	Between SFK-TIG	739/3-4 JT-126	Open to Road Traffic	'C'	Non-Interlocked	Winch Operated Lifting Barrier	Telephone connection with SM/ SFK.
3.	Between TIG-KSNG	206/10-11 RV-164	Closed to Road Traffic	'C'	Non-Interlocked	Winch Operated Lifting Barrier	Telephone connection with SM/ TIG RRI Cabin

Train Actuated Warning Device is not provided at above Level Crossing Gates.
(Working of Level Crossing Gate is detailed in appendix 'A')

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

Trains are worked under Absolute Block System in accordance with the provisions of GR 1.02(7), 1.02(3), 1.02(32), 3.11.3.75,8.01(1)(a)(b) & (c), 8.01(2)(b), 8.03(1)(a), (b), (c) (ii) and (2)(a)(b)(c)(ii), 8.05(2)&(3), 8.06,8.14 and 14.01 to 14.14, and Block Working Manual Chapter-IV & V and Operating Manual.

Diado type Tokenless Block Instrument (co-operative type) is provided for working of trains between TIG-SFK and TIG-RNBT Sections and SGE Double Line Block Instrument (Non-co-operative type) is provided for working of trains between TIG-KSNG. The block instrument shall be operated by the SS/SM on duty of RRI Cabin as per the provision of GR Chapter-XIV, Block Working Manual Chapter –IV, Part-II & Chapter-V. Line Clear is Granted/obtained through

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block Phone attached with the Block Instrument. Taking 'OFF' the Last Stop Signal is the authority for the Driver to proceed into the concerned Block Section Vide GR 14.08(a)(b)(IV).

Lock UP key is provided for locking the Instruments to prevent unauthorised manipulation of the Instruments. The key of the Block Instruments must be in the personal custody of the on duty Station Master of the RRI Cabin.

- (i) **SEALING OF EMERGENCY OPERATION BUTTONS/KEYS:** - All "emergency operation buttons" on the Station Master's control panel of RRI Cabin shall be kept sealed in normal condition by S&T staff. Whenever any emergency operation is initiated. SM on duty shall break open the seal of the concerned button to make the button operative. Immediately after completion of emergency operation SS/SM on duty shall inform concerned S&T staff for resealing of the concerned button.

4. **SYSTEM OF SIGNALLING AND INTERLOCKING:** -
Manually operated Multi Aspect Colour Light Signalling in accordance with General Rules No.3.07 (4)(5)(6) and (7), 3.08(4)(b) & (c) 3.09, 3.10, 3.11, 3.17, 3.19, 3.20, 3.24(4) 3.27(a) 3.32(l) and (2) are provided to govern the movement of trains into and out of the yard. "Calling on" Signals are provided below the Home and Starter Signal in terms of 3.13 (6(b)). Shunt Signals are provided for controlling Shunting movement in Titlagarh Station yard in accordance with GR 3.14.

- 4.1 **TRACK CIRCUITS :**
All lines of Titlagarh yard are track circuited. Only when any running line is clear, miniature "WHITE" strip of lights illuminate on indication panel through out the line so initiated. However when a running line is occupied by any vehicle/train, a 'RED' strip of light illuminates through out the berthing line till such time it is cleared.

- 4.2 **FAILURE OF TRACK CIRCUITS :**
In the event of failure of track circuits, before permitting any movement on such track circuited portion, SS/SM operating the SM's panel shall confirm the clearance of the said portion of track from SS/SM on platform duty at center, under exchange of private number. The SS on platform duty shall physically check and ensure the clearance of nominated line. He shall confirm the same to panel SS/SM on duty in RRI cabin, under exchange of private number. SS/SM on duty in RRI cabin shall then permit any movement over the route either for reception or despatch of train or for any shunting operations. However, the SS/SM on Line clear duty at RRI cabin shall assist the SS/SM on platform duty at center for physical verification of the line.

- 4.3 **AXLE COUNTER :**
The entire Block Sections between TIG-SFK, TIG-RNBT including both UP and Down Line of TIG - KSNG are monitored by Digital axle counter system. These pair of axle counters will monitor track and count the axles "IN" and axles "OUT" to indicate whether the respective sections are clear of trains or not.

The position of the Block section whether 'clear' or 'occupied' are reflected in the axle counter reset box panel provided in the Station Master office at RRI Cabin. It shows "GREEN" when block section is clear and "RED" when block section is occupied.

Normally when there is no train in the block section the axle counter shows "GREEN". Whenever a train enters into Block section, Block section clear indication "GREEN" for the particular section disappears and "RED" indication appears. After the complete arrival of the train, if 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 taken. The axle counters are interlocked with the respective Block Instruments for that section. The Block instruments are interlocked with respective Block section axle counters. Unless Block

section clear indications appears on the panel, it will not be possible to grant “line clear” or normalise the Block Instruments.

4.4 **CRANK HANDLE :**

Crank Handles are provided in location huts located at either end of the yard nearer to the point zone for manually setting of the electric motor operated points in the event of failure/defects of the points. The crank Handle at the location huts are released by the operation of control push button by the Dy.SS/SM on duty of the RRI Cabin.

CRANK HANDLE	CRANK POINTS
CH-1	102,106
CH-2	110,112
CH-3	108,114,116
CH-4	104,118,120,122
CH-5	148,150
CH-6	124,126,130,132,134,136,138
CH-7	140
CH-8	133,135,137
CH-9	139,141
CH-10	123,125,129
CH-11	107,111,119,127
CH-12	109,121
CH-13	143,145,147,149,151,153

These crank handles are interlocked with the signaling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handle Locations. Crank handle keys can be taken out only when all signals are in normal Position and the route is not locked for whatever reasons. Crank Handle can be released by operating common ‘trans’ push button (GSB) and concerned Crank Handle control push button simultaneously. When the keys are taken out no signal can be taken “OFF” over the particular route on the points nominated by that Crank Handle. This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points.

The failure of motor operated points must be ensured by physical checking at site that there is no obstruction. SM on duty at RRI Cabin shall personally ensure the clamping and padlocking of all facing & trailing points. An emergency Crank handle register shall be maintained by the SM on duty at the RRI Cabin as per Para 20.06(d) of the Operating Manual. Correct setting clamping and padlocking of the points is the responsibility of SM on duty. (Details of use of Crank Handle as per Appendix-‘B’).

4.5 **TAKING ‘OFF’ CALLING ON SIGNAL :**

- (a) Miniature colour light calling on signal is provided below the Home and starter Signals in terms of GR 3.13 (6)(b). A calling on signal shows no light in the ‘ON’ position. A calling on signal is taken ‘OFF’ for reception/dispatch of a train when the Home/Starter signal above it cannot be taken ‘OFF’ due to failure of that signal or any track circuit failure in the route or any other reason or for a train to be admitted on blocked line.

To take ‘OFF’ calling on signal, the train must come to a stop at the foot of the Home Signal occupying the Calling-on-Signal track circuit in the rear of the signal. When a train occupies the track circuit, a ‘RED’ light strip will appear on the panel. The particular route on which the train is intended to be received shall be set by operating individually by the panel push button and group button or by signal and route button pressing or by crank Handling in the event of failure of operation of point through panel. After the route is set, the calling on signal button shall be

pressed simultaneously along with the concerned route button for 2-3 seconds and released. After a lapse of 120 seconds, the calling on signal clears i.e. Yellow light glows at the concerned calling on signal on the panel.

- (b) Calling on signals is also provided below all Up and Dn. starter signals. When starter signal cannot be taken off due to failure of track circuit, failure of Block Instrument or failure of Up Advanced starter, the calling on signal can be taken off for despatch of train.

To take off calling on signal provided below Up and Dn. starter signal, the route must be correctly set and Dy.SS on duty of RRI cabin must satisfy about the clearance of the route including fouling.

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

Route Relay interlocking installation is manned by S&T maintenance staff round the clock. Hence the relay room should be kept locked with two separate locks, the arrangement should be such that one key is kept with the on duty Dy SS/SM in his custody and the other key with the signal maintainer. Whenever required, the Station Master shall hand over the key to the maintainer with proper acknowledgement in the Relay room key register. The maintainer on receipt of the key from the stationmaster may use the same and the key in his custody to open the relay room by inserting the keys one after another separately into the earmarked locks.

After completion of work, the relay room is to be locked using both the keys separately and designated key should be handed over to the SS/SM on duty. The details of the transaction should be properly recorded in the relevant register at the Station duly signed by SS/SM on duty and the signal staff concerned as per Operating Manual 1.14 and G & SR 3.51.05. If the relay room key is handed over to the Signal staff regarding the interference in safety gears the train shall be piloted in and piloted out.

4.7 **POWER SUPPLY :**

Power signaling and interlocking installations and the ancillary field units are fed from the following sources of power supply.

- i) Normal supply from OSEB supply, three Phase 440V- 50HZ.
- ii) Stand by supply – two Diesel Generator power supply – three phase, 440V-50HZ.

The availability of the normal power supply is indicated by a stencil indicator “ M1” on the Operating panel. M2 is spare; M3 is for DG set supply.

In the event of failure of power supply, a power supply failure buzzer/indication appears on the SM panel. The Station Master on duty shall acknowledge and advise his staff to start the D/Generator provided in the D/Generator Room in the RRI compound. After the D/Generator is started, the Station Master on duty should put "ON" the Main Switch provided in the Panel Room. Then the D/Generator supply will be extended to panel. The indication “M3” glows on the panel. When the normal power supply is restored, the same will be switched over automatically. Whenever power is switched to normal supply a buzzer/indication appears. This should be acknowledged by the panel operator by pressing the Acknowledgement button and then put off the main switch and stop the D/Generator.

4.8 **POSITION AND OPERATION OF POINTS: -**

The positions of all points are shown in station Working Rule Diagram and also on operating panel. All points are power operated through Station Master's control panel apparatus. All cross over points on running line are independently worked by electric point machine and have built in locking and detection arrangement.

- 4.9 **ELECTRICAL KEY TRANSMITTER (EKT):** -
EKTs with crank handle keys are provided at both end locations for the operation of points in case of failure of point motors. The keys for the crank handles are transmitted electrically to the crank handle locations for operating the points by crank handles. EKT are provided at L.C. gate lodge at kilometer 201/12 & 203/3 for opening and closing of gate.
- 4.10 **IBS:** NIL
- 4.11. **POINTS AND TRAP INDICATOR:** NIL
- 4.12 **REPEATER (BANNER TYPE):** NIL
- 4.13 **SHUNT SIGNALS:** -
Both dependant & independent shunt signals are provided for shunting movement.
- 4.14 **ANTI COLLOSION DEVICE:** - NIL
- 4.15 **EMERGENCY CROSSOVER:-**NIL
- 4.16 **LC GATE OPERATION:-**Given in Appendix 'A'
- 5.0 **TELECOMMUNICATION FACILITIES:** -
1. Telephone attached to Block Instruments for either side Block Sections.
 2. Station to Station fixed telephone (hot line) is provided
 3. Station is provided with Auto telephone connected with Railway Exchange
 4. BSNL telephone is provided.
 5. The station is connected to BLGR-JSG; BLGR-SPRD & TIG-RAIPUR control circuits by control telephones.
 6. Station to station 25 Watt VHF communication is provided.
 7. Telephone is provided between Station and both end crank handle locations.
 8. Telephone connection is provided between station and LC gates at Km 203/3, KM 201/12, KM740/3 & 206/10-11.

NOTE: -

1. For obtaining Line Clear, VHF should be used as a last alternative and not as a sole means of communication.
2. VHF and Walkie-Talkie sets should not be used for unnecessary discussions with Drivers, Guards or any other staff.
3. The on duty SM shall use the above electrical communication instruments stated in Para-5.0 from item No. (1) to (6) strictly in order of preference for obtaining/granting line clear vide SR 14.01.01. In case of failure of any of the above means of communication the SM on duty shall work vide SR 6.02.06

6.0 **SYSTEM OF TRAIN WORKING**

The movement of train is controlled by the section controller on duty, whose orders must not be violated unless the said orders do not contravene any General Rules, Subsidiary Rules, Station Working Rules and Safe Working Principles of the Station. In the event of suspension of Control Phone, the Dy. Station Superintendent will work independently through direct communication available with the Station Master of the adjoining Block Stations and ensure that

the preference is given to more important trains, also no avoidable detention occurs to goods trains. The working of trains will be governed by the provision of General Rules, 3.08, 3.11, 3.14, 3.16, 3.17, 3.20, 3.30, 3.39, 3.40, 3.46, 3.17, 3.61, 4.16, 8.01, 8.03, 8.05, 8.06, 8.15, 14.01, 14.02, 14.04, 14.05, 14.06, 14.07, 14.13, 14.14, 16.03 and Subsidiary Rules thereto, together with Chapter-IV & Chapter-V of Block Working Manual.

6.1.1 DUTIES OF TRAIN WORKING STAFF IN EACH SHIFT :

The following are the complement of the train working staff at the station in each shift.

(i)	Station Manager-I (Supervision)	01
(ii)	Station Superintendent (On platform duty)	01
(iii)	SS / SM (in RRI Cabin)	02
(iv)	Traffic Points Man (in RRI Cabin)	01
(v)	Traffic Points Man (at center)	02
(vi)	Traffic Gate man	02

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

The complete yard is track circuited and depicted in RRI indication panel board. Dy.SS/SM on duty in RRI Cabin is responsible for ascertaining clearance of Line by observing indication on the RRI panel.

6.1.3 ASSURANCE OF STAFF IN THE ASSURANCE REGISTER:

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

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

The Station Manager is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Group-‘C’ staff and other for Group-‘D’ staff & duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the Station Manager.

The declarations are to be renewed in the following cases:

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

6.1.4 USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:

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

6.2 CONDITION FOR GRANTING LINE CLEAR :

[A]For double line Section-(TIG-KSNG)

Before granting line clear for a train, the SM on duty shall ensure that-

- i) The whole of the last preceding train has arrived complete.
- ii) All necessary signals have been put back to ‘ON’ behind the said train.

- iii) The line is clear up to the BSLB for DN trains.

[B]For Single Line Section-(TIG-RNBT & TIG-SFK)

- (i) The whole of the last preceding train has arrived complete.
(ii) All the necessary signals are put back to 'ON' behind the said train.
(iii) Block section is clear of trains running in the direction towards the block station for which such line clear is being given.
(iv) The line is clear up to the advanced starter signal of station nearest to expected train.

NOTE-If the light of the reception signal is found not burning, line clear shall not be granted for train till such time it is ensured that concerned driver is notified of the fact in writing by the SM of the station to which such line clear is to be granted.[Ref GR:3.49(4) ,8.01(1)(a),(b)(c), 8.01(2)(b),8.03(2),(a),(b),C(ii),8.03(1))(a),(b)(c)(ii)

6.2.1 **OUTLYING SIDING:-NIL**

6.2.2 **ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN –**

As the CSL of Line No. 8 is non-standard the SM on duty should not admit any full-length train on line 8 for crossing or precedence.

6.2.3 **SPECIAL RESTRICTIONS**

- 1) Shunting in the face of an approaching train is prohibited.
- 2) Hand shunting, fly shunting is prohibited at both ends of the yard.
- 3) The over run line must not be used for stabling of vehicles or harboring an Engine with or without vehicles.
- 4) Shunting shall not be permitted at either end of the yard unless the engine is leading towards the falling gradient.
- 5) SR 4.48.01, 5.20.01 (b) shall also apply to this station.
- 6) As the CSL of Line No. 8 is non-standard, the SM on duty should not admit any full-length train on line 8 for crossing or precedence.

6.2.4 **SETTING OF POINTS AGAINST BLOCK LINE**

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train, the points at either end should be set against the blocked line except when shunting or any other movement is required to be done on-that line. [Refer SR 3.51.06(a)]. If all the lines at a station happen to be blocked, when line clear has been granted to a train, the point should be set for the line occupied by a stabled load or a Goods train [Refer SR. 3.51.06 (b)].

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

The SS/SM on Platform duty shall secure the wagon, vehicle or the train stabled through station TPM/TP and inform to SS/SM on duty at RRI cabin supported by PN. He shall also record all particulars in the Stabled load register maintained at the station.

After getting the PN from SS/SM on Platform duty that stabled load wagon, vehicle / train has been properly secured, the SS/SM on Line clear duty shall immediately make a clear remark in 'RED' ink in the train signal register indicating time and Number of running line blocked. [Refer SR 5.23.01(a)].

Reminder collars shall be placed on the concerned 'Route Buttons by the SS/SM on panel duty.

6.2.5 RECEPTION OF A TRAIN ON BLOCKED LINE

Whenever trains are to be admitted on an obstructed line it is necessary that the train are received by Calling –On Signals provided below the Home Signal OR piloted IN on a written authority given by the SM on duty and delivered by a competent Railway servant to the Driver of the train. [Refer GR 5.09 & SRs there to].

6.2.6 RECEPTION OF TRAIN ON NON-SIGNALLED LINE

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

- a. The train is brought to a stand at the first stop signal.
- b. The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- c. All points over which the train has to pass are correctly set and the facing & trailing points are Clamped and padlocked.
- d. The Driver is authorized to pass the approach stop signals at 'ON' through a written authority. [Refer GR 5.10].

6.2.7 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE.

Whenever a train is to be dispatched from a non-signalled line, a starting order on form T-511 shall be given to the Driver to start from the non-signalled line. [Refer SR.5.11.1]

6.2.8 DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL.

Whenever a train to be dispatched from a line provided with common starter signal the Driver should move according to the route indicator provided in the concerned starter signal.

6.3 CONDITIONS FOR TAKING 'OFF' APPROACH SIGNALS :

Reception of train is governed by rules laid down in GR 3.36, 3.38, 3.40, 3.46 and 4.17 with relevant SRs. 3.36.01, 3.36.04(a) 3.40.01 to 3.40.03, 3.42.02(a)(iv), 4.42.03 and other relevant provisions General and Subsidiary Rules, Block Working Manual, Operating Manual & Station Working Rules.

- (i) All the points on the route are correctly set and locked and interlocked level crossing gate is closed.
- (ii) All non-isolated shunting operations on adjoining lines are suspended & shunting authorities have been withdrawn.
- (iii) The adequate distance to be kept clear for taking 'OFF' Home Signals vide GR 3.40 has been reduced and reckoned from Starter Signals.
- (iv) SS/SM on duty operating the Panel is responsible for operation of panel for reception /dispatch of trains.
- (v) SS/SM on duty at RRI Panel shall consult with SS/SM on platform duty for nomination of the platform line for admission of a coaching train. But in the event of failure of Track circuit, SS/SM on platform duty shall be advised to physically check the line. SS/SM on platform duty shall check the clearance of nominated platform line and inform to the SM at RRI cabin, under exchange of private number. Then the panel SS/SM shall take off signals or pilot the train.
- (v) For receiving other trains, the Panel SM of RRI cabin shall nominate a clear line in consultation with the SS/DySS/SM on duty (LineClear) in RRI cabin. He shall personally satisfy himself that the nominated line is clear and free from all obstructions by verifying the WHITE light track indications in the panel. He shall set the points of the nominated route by means of push button switches provided in the control panel. He shall then verify from the visual indication available in the panel that points are set to the desired route

Unless the track circuit for the concerned line is clear even with the other conditions satisfied, the operation of panel button by the SS/SM on duty will not permit the concerned Home Signal to be taken 'OFF'. After correct setting of points, the SS/SM on duty shall operate the concerned push button on the panel for taking 'OFF' the reception signal. He shall then verify on the panel that the correct reception signal is taken 'OFF'. Alternatively point operation

and signal taking 'OFF' can be done by one operation by pressing signal button and route button.

If, for any reason, after taking 'OFF' signal it is required to put back the signal and alter the route, a time delay of two minutes shall be observed before the points can be altered as per SR 3.36.02.

6.3.1 **CROSSING OF TRAIN :**

In addition to the procedure mentioned under para "Reception of trains", rules Laid down in SR 3.47.01 and SR 3.51.06 shall be followed.

The SM on duty shall be very careful to see that unless the first incoming train has come to a stop by clearing fouling mark of the route on which the train is admitted shall not be interfered for admission of a second train in the adjacent line from the opposite direction.

6.3.2 **RESPONSIBILITY OF Dy SS/SM FOR RESTORATION OF SIGNALS TO 'ON':**

If a signal once taken 'OFF' for reception/despatch of a train has to be put back to 'ON' in an emergency, the procedure laid down in GR 3.36.02 shall be followed. In case of reception of a train the point shall not be altered until the train has come to a stand outside Home Signal. In case of departure signal, before charging the route, the acknowledgement of the Driver shall be obtained in a memo.

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

(I)	Reception of a DN train on Line No.1	Reception of an UP train on L2/L3/L4/L5/L6/L7/L8 OR Dispatch of DN train from L2/L3/L4/L5/L6/L7/L8
(II)	Reception of a DN train on Line No.2	Reception of an UP train on L1/L3/L4/L5/L6/L7/L8 OR Dispatch of DN train from L1/L3/L4/L5/L6/L7/L8
(III)	Reception of a DN train on Line No.3	Reception of an UP train on L1/L2/L4/L5/L6/L7/L8 OR Dispatch of DN train from L1/L2/L4/L5/L6/L7/L8
(IV)	Reception of a DN train on Line No.4	Reception of an UP train on L1/L2/L3/L5/L6/L7/L8 OR Dispatch of DN train from L1/L2/L3/L5/L6/L7/L8
(V)	Reception of a DN train on Line No.5	Reception of an UP train on L1/L2/L3/L4/L6/L7/L8 OR Dispatch of DN train from L1/L2/L3/L4/L6/L7/L8
(VI)	Reception of a DN train on Line No6	Reception of an UP train on L1/L2/L3/L4/L5/L7/L8 OR Dispatch of DN train from L1/L2/L3/L4/L5/L7/L8
(VII)	Reception of a DN train on Line No 7	Reception of an UP train on L1/L2/L3/L4/L5/L6 OR Dispatch of DN train from L1/L2/L3/L4/L5/L6

(VIII)	Reception of a DN train on Line No 8	Reception of an UP train on L1/L2/L3/L4/L5/L6 OR Dispatch of DN train from L1/L2/L3/L4/L5/L6
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6.4.1 ADEQUATE DISTANCE (SIGNAL OVERLAP):

To take 'OFF' the Home Signals for admission of a train, the adequate distance as mentioned below shall be kept clear in terms of GR 3.40 and SRs thereto.(CRS's dispensation vide letter No.-1308 of date 01.02.2010 is obtained.)

6.4.2 CLEARANCE OF ADEQUATE DISTANCE (SIGNAL OVERLAP):

LINE NO.	FOR UP TRAINS		FOR DOWN TRAINS	
	FROM	TO	FROM	TO
Line No.1	UP Starter No.21	End of D.S.Point No.104 OR upto UP Adv Starter No 51	DN Starter No.42	End of ORL OR upto Intermediate Starter No 52
Line No.2	UP Starter No.49	End of D.S.Point No.114 OR upto UP Adv Starter No 51	DN Starter No.46	End of D.S.Point No.137 OR upto Intermediate Starter No 52
Line No.3	UP Starter No.47	End of D.S.Point No.112	DN Starter No.44	End of D.S.Point No.141 OR uptoDNAdv Starter No 58 OR uptoDNAdv Starter No 60
Line No.4	UP Starter No.23	End of D.S.Point No.126	DN Starter No.38	End of D.S.Point No.139B OR uptoDNAdv Starter No 58 OR uptoDNAdv Starter No 60
Line No.5	UP Starter No.25	End of D.S.Point No.134	DN Starter No.36	End of D.S.Point No.129 or upto Intermediate Starter No 48 OR upto Advanced Starter 60.
Line No.6	UP Starter No.27	End of D.S.Point No.138	DN Starter No.34	End of D.S. Point No.125 B OR upto Intermediate Starter No 48
Line No.7	UP Starter No.29	End of ORL	DN Starter No.32	End of D.S. Point No.123 B OR upto Intermediate Starter No 48
Line No.8	UP Starter No.31	End of ORL	DN Starter No.30	End of D.S. Point No.123 B OR upto Intermediate Starter No 48

6.5 COMPLETE ARRIVAL OF TRAIN :

The entire block sections between TIG-KSNG (Both UP & DN Line), TIG-SFK & TIG-RNBT are monitored by axle counter system and the position of the block section whether clear or occupied are indicated in the panel. When the block section is clear, 'GREEN' indication appears in the panel. As soon as a train enters in to the block section, the GREEN indication disappears and 'RED' indication appears in the panel. As soon as the train clears the Block Section, the 'RED' indication disappears and 'GREEN' indication appears in the panel. This

confirms the complete arrival of the train and the Dy.SS on duty shall give, "TRAIN OUT OF BLOCK SECTION" report on seeing the section clear (GREEN) indication on the panel.

If a train passes the Station without confirming the Last Vehicle Indicator then the Dy SS on duty shall advise the Station in advance to stop the train to see the complete arrival of the train under exchange of private number and he shall close the Block Instrument of the concerned section vide GR 4.17 (2)(b)

After obtaining confirmation about the complete arrival of the said train under exchange of private number he may send another train into the block section.

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 that the complete arrival of the train by verification of the Last Vehicle Indicator vide SR 4.16.05 that the train arrived complete.

Train passing on adjacent lines shall be stopped and Guard & Driver shall be issued with Caution Order to proceed cautiously & stop short of any obstruction as per SR4.17.03.

On occasion when a motor trolley following a train, the point shall not be altered until the following motor trolley is admitted on the same line. In the event of motor trolley delays in the section, the SM on duty shall take action as per SR 15.25.03(b)(vi).

6.5.1 CHECKING OF COMPLETE ARRIVAL OF TRAIN DURING FAILURE/SUSPENSION OF AXLE COUNTERS:

The DySS/SM on duty shall depute a pointsman with Private Number book during failure/suspension of axle counter for checking the complete arrival of the train. The points man shall be responsible for watching the last vehicle indication of all trains and give one assurance Private Number to the SM through a nearby telephone available at the location box.

6.6 DESPATCH OF TRAINS :

Despatch of train is governed by General Rules 3.38, 3.42 and SR 3.36.04, 3.42.01(b) 3.42.02(a)(iv), 3.42.03, 3.42.04 and BWM 4.03 & other relevant provisions of GR, SR, BWM and SWR. For despatch of a train, the DySS on duty having obtained "Line Clear" for a train, shall set the out going route correctly and satisfy himself by observing visual indication on the control panel. (For coaching trains, the SS on duty at the platform shall advise the Dy.SS on duty at RRI Cabin to obtain "Line Clear" and take 'OFF' departure signal supported by a Private Number on completion of loading, un-loading etc.)

The SM on duty shall ensure the closure of Level Crossing Gates i.e. at KM 206/10-11 in TIG-KSNG block section and level crossing gates at KM 739/3-4 & 740/2-3 in TIG-SFK block section and shall then take 'OFF' the departure signal. The Driver shall start the train on seeing the aspects of the Route Starter and Advanced Starter. The SM on duty shall watch the passage of train with last vehicle indicator. After the train passes the Advanced Starter complete, he shall send the "Train Entering Block section" report to the Station in Advance.

6.6.1 PUTTING BACK SIGNALS TO 'ON' IN CASE OF EMERGENCY: -

If a signal once taken 'Off' for reception/despatch of a train has to be, in an emergency, put back to 'ON', the procedure laid down in General Rules 3.36.02 shall be followed. In case of reception of train, route shall not be altered until the train has come to a stand outside Home signal. In case of departure signal before changing route, the SM shall take action as per SR 3.36.02(i).

6.7 TRAINS RUNNING THROUGH :

For run through trains, the signals should be taken 'OFF' as per the sequence and instructions laid in SR 3.42.02(a)(iv). While the train passes RRI Cabin, the SM on duty shall observe/watch the condition of the train and exchange hand signal with the train Driver and Guard and take necessary action in accordance with the GR 4.42(2) & SR 4.42.02 to 4.42.07.

In case the view of the passing train is otherwise obstructed, the SM on duty shall depute one staff to exchange signal for the purpose at a place from where the view of the train can be seen.

The SM on duty shall obtain "Line Clear" from the station in Advance and shall take 'OFF' the reception and departure signal in time to avoid detention to the through train.

6.8 **WORKING IN CASE OF FAILURE:**

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

(I) **SUSPENSION / FAILURE OF SIGNALS :**

When signals become defective, the procedure laid down in GR 3.68 to 3.71 and SRs thereto shall be followed.

(a) **FAILURE OF TRACK CIRCUIT:**

In the event of failure of track circuit on any nominated route, the SS/SM on duty at RRI cabin shall advise the SS/SM on Platform duty to physically check and confirm its clearance. The SS/SM on platform duty shall physical check and ensure the clearance of nominated line. He shall confirm the same to SS/SM on duty in RRI cabin, under exchange of private number. SS/SM on duty in RRI cabin shall then permit any movement over the route either for reception or despatch of train or for any shunting operations. However, the SS/SM on Line clear duty at RRI cabin shall assist the SS/SM on platform duty at center for physical verification of the line.

(b) **AXLE COUNTER:**

In the event of failure of axle counter of concerned block section SM on duty shall initiate resetting of axle counter after ensuring the complete arrival of the train by SM of other end Station. After resetting the first train will be piloted 'OUT' to the concerned Block section for normalising the system of working. Details of operations involved in resetting of axle counter is given in Appendix-'B'.

(c) **BLOCK INSTRUMENT:**

In the event of partial interruption/ failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer GR 6.02 .03, 6.02.04 and SR 6.02.06].

At the time of failure of Block Instrument between TIG-SFK & TIG-RNBT the authority will be Paper Line Clear Ticket (T/B 1425 or T/C 1425) with Identification number & Private Number issued from the Station in advance.

During the failure of Block Instrument between TIG-KSNG; the authority will be T/369(3b) with identification number and Private Number issued from the station in advance written both in figure and words.

(d) **RECEPTION OF TRAIN ON OBSTRUCTED LINE:**

Whenever trains are to be admitted on an obstructed line it is necessary that the train is piloted IN on a written authority given by the Dy SS on duty and delivered by a competent Railway servant to the Driver of the train. [Refer GR 5.09 & SRs there to].

(e) **RECEPTION OF TRAIN ON NON-SIGNALLED LINE:**

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

- i) The train is brought to a stand at the first stop signal.
- ii) The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.

- iii) All points over which the train has to pass are correctly set and the facing points Clamped and Pad locked.
- iv) The Driver is authorized to pass the approach stop signals at 'ON' through a written authority. [Refer GR 5.10].

(f) **DEFECTIVE SIGNAL:**

(i)APPROACH SIGNAL :

In the event of suspension/failure of Home Signal/ Routing Signal, the calling-on signal may be taken 'OFF' for reception of a train. If the calling on signal also becomes defective, the train shall be worked in accordance with GR 3.69 and SRs thereto. If the defective stop signal can not be kept at 'ON', SR 3.68.02 shall be followed. Before taking 'OFF' calling on Signal, the SS/SM of RRI panel must ensure clearance of track between the calling on signal and next stop signal ahead in the direction of movement either by track circuit indication or by physical verification through SS/SM on platform duty or SS/SM on duty on L/C duty of RRI cabin under exchange of private number, in case of failure of track circuit.

(ii)DEPARTURE SIGNAL:

In the event of Starter Signal becomes defective, calling on signal may be taken 'OFF' in accordance with GR 3.13(6)(b) and GR 3.45 for despatch of train and if the calling on signal is also defective, train shall be worked in accordance with GR 3.70 and SRs thereto. Before taking 'OFF' calling on signal below starter signal, the SS/SM of RRI panel must ensure clearance of track between the calling on signal and the next stop signal ahead in the direction of movement either by track circuit indication or by physical verification through SS/SM on platform duty or SS/SM on duty on L/C duty of RRI cabin under exchange of private number, in case of failure of track circuit.

In the event of Advanced Starter Signal becomes defective, "Paper Line Clear Ticket" will be given to the Driver to pass the last stop signal at 'ON' for single line section.

In the event of Advanced Starter Signal becomes defective, a Pilot Memo (T/369 (3b)) will be given to the Driver to pass the last stop signal at 'ON' for the double line section.

UP Advanced Starter is interlocked with Route Starter Signal. In case of failure of Advanced Starter/Block Instrument, the Starter Signal cannot be taken 'OFF' & in that case the calling on signal provided below starter signal can be taken 'OFF'.

(g) **PILOTING OF TRAIN IN TO STATION YARD:**

Whenever Home Signal and Calling on Signal provided below Home Signal cannot be taken 'OFF' for reception of a train, the procedure laid down in SR 3.69.03(a) & (c) shall be followed for piloting 'IN' the train. The SS/SM, operating the panel at RRI Cabin shall nominate a clear line for admission of incoming train. He shall advise the SS/SM on platform duty to set clamp and padlock both the trailing & facing points of the nominated route nearest to station yard. Then outermost and farthest points are to be set, clamped and padlocked by the SS/SM on Line Clear duty of RRI Cabin. The SS/SM on platform duty after ensuring the correct setting of nominated points of the concerned line nearest to the station shall exchange PN with SS/SM on Line Clear duty.

After satisfying about the correct setting clamping & padlocking of all the facing & trailing points concerned for the admission of the train on the route, the SS/SM on L/C duty of RRI cabin shall hand over the written authority T/369(3b) to the TPM for piloting the train from the defective Home Signal. After the train has been brought to a dead stop at the Home Signal, the TPM shall hand over the pilot memo to the Driver, board the engine & shall display proceed hand signal to pass the defective Home Signal at 'ON' position.

NOTE: -

1. The SS/SM on duty (L/C) at RRI cabin shall personally supervise the correct setting, clamping and padlocking of the facing and trailing points at farthest end and ensure clearance of the nominated route vide SR [Ref-SR3.69.03(c)] Likewise, the SS/SM on platform duty at center

shall personally supervise the correct setting, clamping and padlocking of the facing and trailing points of the route nearest to platform and then exchange PN with SS/SM on Line clear duty. They shall coordinate with each other for safe admission of a train during failure of signals and interlocking.

2. The Key of padlock of the clamps put on to the points on the route for piloting In or piloting OUT shall be in the personal custody of the SS/SM on duty or any other authorized operating officials till such time the train/engine/vehicle has utilized the route or alternatively such movement is cancelled.
3. The SS/SM on duty at RRI should ensure closer of the Interlocked LC gate before piloting in the train under exchange of Private Number with the gateman on duty.

(h) **PILOTING OF TRAINS OUT OF STATION YARD:**

When the starter signal has become defective, the SS/SM at operating panel shall take 'OFF' calling on signal for despatch of train. When both starter signal and calling on signal cannot be taken 'OFF', then both the trailing and facing points for the despatch of the train shall be clamped and padlocked after ascertaining the clearance of the route (both facing and trailing) and the Driver shall be given pilot memo (T/369 (3b) to pass the defective starter at 'ON' position.

The SS/SM, operating the panel at RRI Cabin shall advise the SS/SM on platform duty to set clamp and padlock the outermost and farthest points of the nominated route in trailing & facing direction. SS/SM on Line Clear duty of RRI Cabin shall set, clamp and padlock the points nearest to platform. The SS/SM on platform duty after ensuring the correct setting of nominated points of the concerned line shall exchange PN with SS/SM on Line Clear duty. Then the SS/SM on Line Clear duty after getting PN from SS/SM on platform duty shall hand over the Pilot out memo to the Loco Pilot for dispatching a train.

In case of Advanced Starter has become defective or Token less Block Instrument is suspended for Single Line Section, such signal shall be passed on the authority of "Paper Line Clear Ticket".

For double line section the Advanced Starter Signal shall be passed on the authority (T/369(3b)).

NOTE: -

1. The SS/SM on duty (L/C) at RRI cabin shall personally supervise the correct setting, clamping and padlocking of the facing and trailing points nearest to platform and ensure clearance of the nominated route vide SR [Ref-SR3.69.03(c)] Likewise, the SS/SM on platform duty at center shall personally supervise the correct setting, clamping and padlocking of farthest points of the nominated route in trailing & facing direction and exchange PN with SS/SM on Line clear duty. They shall coordinate with each other for safe despatch of a train during failure of signals and interlocking.
2. The Key of padlock of the clamps put on to the points on the route for piloting In or piloting OUT shall be in the personal custody of the SM on duty or any other authorized operating officials till such time the train/engine/vehicle has utilized the route or alternatively such movement is cancelled.
3. The SS/SM on duty at RRI should ensure closer of the Interlocked LC gate before piloting in the train under exchange of Private Number with the gateman on duty.

(i) **INSPECTION OF POINTS BEFORE DECLARING THEM DEFECTIVE:**

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

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

(j) **DEFECTIVE INTERLOCKING:**

During failure/suspension of interlocking gears, all points concerned both facing and trailing must be clamped and padlocked for reception & despatch of train. The SM on duty of RRI Cabin is responsible for ensuring correct setting and locking of points (both facing & trailing) before permitting any movement over them.

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, SM on duty shall before giving line clear initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]

(k) DEFECTIVE/DAMAGED POINT:

In case of points controlled by RRI Cabin become defective, the procedure laid down in OM 20.06 should be followed for setting of the points by crank Handle.

Crank Handles are provided in location box located at either end of the yard nearer to the point zone for manually setting of the electric motor operated points in the event of failure/defects of the points. The crank Handle at the location huts are released by the operation of control push button by the SM on duty of the RRI Cabin.

CRANK HANDLE	CRANK POINTS
CH-1	102,106
CH-2	110,112
CH-3	108,114,116
CH-4	104,118,120,122
CH-5	148,150
CH-6	124,126,130,132,134,136,138
CH-7	140
CH-8	133,135,137
CH-9	139,141
CH-10	123,125,129
CH-11	107,111,119,127
CH-12	109,121
CH-13	143,145,147,149,151,153

These crank handles are interlocked with the signaling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals are in Normal Position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'trans' push button (GSB) and concerned Crank Handle control push button simultaneously. When the keys are taken out no signal can be taken "OFF" over the particular route on the points nominated by that Crank Handle. This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points.

The failure of motor operated points must be ensured by physical checking at site that there is no obstruction. SM on duty at RRI Cabin shall personally ensure the clamping and padlocking of all facing & trailing points. An emergency Crank handle register shall be maintained by the SM on duty at the RRI Cabin as per Para 20.06(d) of the Operating Manual. Correct setting clamping and padlocking of the points is the responsible of DYSS/SM on duty. (Details of use of Crank Handle is given in Appendix-'B').

6.9 PROVISION FOR WORKING OF MOTOR TROLLIES, MATERIAL TROLLIES AND TOWER WAGONS ETC:

Motor Trollies & Material Trollies, Tower Wagons shall be worked as per GR 15.25, 15.27, 17.08 and SR thereto, Block Working Manual 4.39, 4.40, 5.11(2), 5.12, 5.13, 5.14(2)(b) and Circulars and Orders issued from time to time. Material Trollies shall be worked as per GR 15.27 and SRs thereto and in accordance with the provision of BWM.

The following precautions must be taken:

- i) The section where axle counters are provided in lieu of track circuits, trolleys, motor trolleys, Lorries etc which are not insulated, shall not be allowed to run except on line clear.
- ii) Motor trolleys / tower wagons / material Lorries are not likely to actuate the axle counter correctly. When they are to run over the sections split by axle counters, the whole section to be treated as one and next train to be started after the first train has arrived complete.

- iii) In all other respects, the working of a light Motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley.

7.0 **BLOCKING OF LINES :**

- (i) A clear remark in Red Ink shall be made immediately in the Train Signal Register indicating time and Number of Running Line blocked and record shall be made in SM's. Diary by SM on duty.
- (ii) Loose vehicles stabled in the sidings and on running lines must be secured in accordance with GR 5.23 and SR thereto. It is the responsibility of the incharge of the shunting operation to ensure that the loose vehicles in the siding and running lines are secured properly after the completion of the shunting operations.
- (iii) When a running line is obstructed, points at either end shall be set against blocked line and precautions shall be taken by the SM on duty in accordance with SR 5.23.01.
- (iv) When a line is obstructed for any reason, magnetic RED button collars should be placed on relevant route button for the obstructed line on the operating panel and the obstructed line shall be protected by the SM on duty in accordance with SR 3.36.03(b) and 5.04.01.
- (v) Except smalls loading and unloading of vehicles on Running line is prohibited unless permitted by Sr.DOM vide SR 5.19.01.

7.1 **SECURING OF VEHICLES :**

Rules laid down in GR 5.23 and SR 5.23.01 shall be followed. Special care should be taken to secure special type vehicles fitted with roller bearings while standing on running lines vide SR 5.23.01(b).

7.2 **USE OF REMINDER BLOCK COLLAR:**

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

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

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

8.0 **SHUNTING:**

8.1 **GENERAL PRECAUTIONS:**

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16 to 5.21, 8.09, 8.10, 8.12, 8.13 and 8.15 with relevant SRs shall be observed. All shunting movements shall be supervised by Yard Master/Shunting Master/Points man /Station Master/Guard of the train as per SR 5.13.03.

8.2 SHUNTING IN THE FACE OF APPROACHING TRAIN:

Shunting in the face of an approaching Train is prohibited.

8.3 PROHIBITION OF SHUNTING, SPECIAL FEATURES IF ANY:

- i) Shunting in face of on approaching train is prohibited.
- ii) Hand shunting is prohibited at both end of the yard.
- iii) Fly shunting is prohibited.

8.4 SHUNTING WITHIN STATION SECTION:

If the necessary signals are kept at 'ON' shunting may be carried on within the station section provided the block section at that end is clear of approaching train.

8.5 SHUNTING OUTSIDE STATION SECTION:

The line outside the station section and upto the Home Signal shall not be obstructed unless a Railway Servant specially appointed on his behalf by the Station Superintendent on duty who is the in-charge of the operations and unless the block section into which the shunting is to take place is clear of approaching train and all relevant & necessary signals are kept at "ON" position.

8.6 SHUNTING IN THE SIDING TAKING OFF FROM STATION YARD:

When shunting in the station yard and sidings, relevant GR 5.14 and SRs thereto to be followed. In case of failure of shunt signals all facing and trailing points of the route shall be clamped and padlocked.

9.0 ABNORMAL CONDITIONS:**9.1. PARTIAL FAILURE: -**

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

- A. Failure/Suspension of Block Instrument or Track Circuit or Axle counters-
Line Clear shall be obtained on the Telephone attached to the Block Instrument or station telephone exchanged ID number and supported by Private Number.
- B. Failure/Suspension of Block Instrument or Track Circuit or Axle Counters or telephone attached to the Block Instruments or station fixed telephones-
'Line Clear' shall be obtained on Railway auto phone or BSNL phone by exchanging Identification Number supported by a Private Number.
- C. Failure/Suspension of Block Instrument or Track Circuit or Axle counters or telephone attached to the Block Instruments or station-to-station fixed telephone or Railway auto phone or BSNL phone.
'Line Clear' shall be obtained on control phone by exchanging Identification Number supported by a Private Number.
- D. Failure / suspension of block instrument or block telephone attached to the block instrument, or station to station fixed telephone or Railway auto telephone or BSNL phone or control telephone line clear shall be obtained on the VHF set exchanging ID number supported by Private Number provided that the instructions contained in SR 14.01.02 are followed vide GR 6.02.06(i)(d), Chapter-III part-I of Block Working Manual.

The authority to proceed for the Driver on Double line territory is T/369(3b) bearing identification Number and Private Number received from the station in advance written both in figure and words. [Refer SR 6.02.06 & Chapter –V of BWM]

9.1.A TOTAL FAILURE OF COMMUNICATION (SINGLE LINE SECTION):

In the event of total interruption of communication occurring between TIG-RNBT or TIG-SFK Stations, i.e when line clear can not be obtained by one of the following means stated in order of preference viz

- a. Block Instruments, Track Circuits or Axle Counters
- b. Telephone attached to the Block Instruments
- c. Station to Station fixed telephones whenever available
- d. Fixed telephone such as Railway auto telephone &BSNL phone
- e. Control telephone
- f. VHF sets

and actions shall be taken as per SR 6.02.04. The train which is to be despatched to the affected section will be stopped and the Driver and Guard of the train shall be informed about the fact.

Before dispatching the light engine /main engine/motor trolley /Tower wagon/Trolley /Cycle trolley/Moped trolley/Diesel car/rail motor car/EMU rake, the SM on duty shall hand over a Authority for opening of communication during total failure interruption of communication on Single Line Section to the driver /motorman/Guard/SM who is being sent to open communication, which includes.

- (i) An authority to proceed without “Line Clear” in the prescribed form (T/B 602).
- (ii) A Caution Order restricting to speed of the train to 15Kmph by day when the view ahead is clear and 10 Kmph during night or when view ahead is obstructed in addition to other speed restrictions in force (T/B409).
- (iii) Paper Line Clear Ticket to pass the Last Stop Signal at ‘ON’ position.
- (iv) A “Line Clear” enquiry message (T/E602) asking “Line Clear” for the awaiting train (T/F602).
- (v) A conditional “Line Clear” message for the light engine to return with or without a train attached, supported by a Private Number.

On arrival of the engine at the next station, the conditional “Line Clear” message and enquiry message shall be collected by the SM on duty who shall prepare conditional “Line Clear” ticket (T/G602 or T/H602) for engine to return either light or a train attached to it and conditional “Line Clear” reply message for the enquiry message, giving “Line Clear” for the train waiting at the other end shall be handed over to the Driver of the light engine. On return trip, the Driver will come on booked speed subject to any other speed restriction in force.

As soon as any one of the means of communication has been restored the conditional “Line Clear” working of train shall be cancelled when there is no train in the affected block section and messages shall be exchanged supported by Private Number. The section controller shall be informed.

9.1.B TOTAL FAILURE OF COMMUNICATION BETWEEN TIG-KSNG (DOUBLE LINE SECTION):

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

- (a) Block Instruments, Track Circuits or Axle counters,
- (b) Telephone attached to the Block Instruments,
- (c) Station to station fixed telephones wherever available,
- (d) Fixed telephones such as Railway auto phones & BSNL phones,
- (e) Control telephone, and
- (f) VHF sets.

The trains shall be worked in terms of GR.6.02.03, which is summarized in brief as follows:

- (i) Each train before being allowed to enter into the Block Section should be stopped and the Guard and Driver of the train apprised of the situation.

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- (ii) The SM will hand over an authority for working of train during total interruption of communication to the driver of each train which shall include-
 - a) Authority to proceed without 'Line Clear'. [T/C 602]
 - b) Authority to pass the Last Stop Signal at its "ON" position, i.e. T/369(3b).
 - c) A caution order restricting the speed to 25KMPH by day when view ahead is clear and 10KMPH by night or when view ahead is not clear.
- (iii) No train shall be allowed to enter the Block Section until there is a clear interval of 30minutes between the train about to leave and the train, which has immediately proceeded.
- (iv) Fixed signals except the last stop signal may be taken "OFF" for the dispatch of the train and for the reception of the train at the next block station, reception signals may be taken only after the train has been brought to a stand outside it.
- (v) On arrival at the next block station the driver shall hand over the authority to proceed with out line clear to the SM on duty who will preserve the same for further inspection.
- (vi) Before resuming normal working when any means of communication is established. SM of either end must satisfy that there is no train in the block section. [Refer SR 6.02.03].

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

During temporary single line working, when one line is clear and the other line is obstructed between TIG-KSNG the trains shall be worked as per the procedure, which is summarized as follows:

- (a) Before introducing single line working the SM on duty must satisfy that the line on which single line working will be introduced is clear and free from all obstructions.
- (b) The Lock and Block instrument will be suspended. The Commutators of Lock & Block Instrument will be kept on "Train on line position".
- (c) SM proposing single line working must issue a message with
 - (i) The cause of introduction of single line working,
 - (ii) Line on which the single line will be introduced,
 - (iii) Source of information about the clearance of the line on which single line will be introduced,
 - (iv) Place of obstruction,
 - (v) Restriction of speed, If any,
 - (vi) Assurance about keeping the last stop signal at 'ON' position if the train runs on right line and in case of wrong line all signals are to be kept at 'ON' position etc under the exchange of Private Number.
- (d) Dy.SS/SM on duty at the other end of the block section will acknowledge the message and confirm the same by a Private Number.
- (e) After obtaining line clear for the train from the Advance station the Driver must be given as-
 - (i) Authority for Temporary Single Line (TSL) working on double line (T-D/602) indicating there in
 - Caution order
 - The line on which single line working is introduced.
 - The chainage kilometer of obstruction.
 - Any other speed restriction, if any existing.
 - Endorsement to inform all Gang man and Gateman about the single line working (for the first train only).
 - The speed of the first train to be restricted to 25 KMPH subject to other speed restriction.
 - Authority to pass Signal in "ON" position
 - (ii) A pilot memo T/369(3b) to pass the last stop signal at its 'ON' position. The approach stop signals at the station in advance may be taken "OFF". In case a train proceeding on wrong line, the train shall be piloted out and at the receiving station, the train shall be piloted 'IN', on the authority of T/369(3b).

On being ensured that the obstructed line is clear of all obstructions, the Dy.SS/SM will resume normal working after exchanging message with the SS/SM of the other concerned end supported by private number in consultation with the Section Controller on duty when there is no train in the block section.

A goods train or an engine may be allowed on wrong line by blocking back the section without introducing single line working. [Refer SR. 6.02.05(g)(i)]

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

9.3 **THE AUTHORITY TO PROCEED IN OCCUPIED BLOCK SECTION IN CASE OF OBSTRUCTION ON LINE OR ACCIDENT:**

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

After sending a train on block tickets, a following train shall not be dispatched in the same direction unless:

- a) The previous Block Ticket is collected and Cancelled or
- b) Necessary endorsement is given on the previous block ticket with the advise to wait at the site for a next train to follow or
- c) The previous train has met with an accident or has been disabled or
- d) The Block ticket has been cancelled from the driver of the previous train by the official – in-charge at the site and kept in the personal custody & shall be kept until the arrival of the next train and such assurance is given over the telephone installed at the site quoting the serial number of the Block Ticket so collected.
- e) SM will suspend the Absolute Block System of Working and both SMs concerned should arrange for running of trains on the authority of Block Ticket
- f) SM at the dispatching end will hand over to the driver the block Ticket as the authority which shall include:
 - i. Caution Order: Existing Speed Restriction/s shall be indicated in the Caution Order portion. The Speed Restriction to 15 KMPH during clear visibility and 10 KMPH when visibility is obstructed shall be clearly indicated.
 - ii. An authority to pass the Stop Signal at “ON” position
- g) Before resumption of normal working a message between the SMs of the concerned stations shall be exchanged with private number.[Ref SR 6.02.05(d)(vi)]
The Block Ticket so issued must be collected by SM of either end with a certificate about the complete arrival of the train with its time and the section is clear of all obstructions from Driver/Guard of the train and cancelled.

9.4 **TRAINS DELAYED IN BLOCK SECTIONS**

If a train carrying passenger does not arrive within 10 minutes or if a goods train does not arrive within 20 minutes after allowing for its normal running time from the station in rear, the SM at the station in advance shall immediately advise the station in rear and the control this fact. There after SMs at either end of the Block section shall immediately stop all trains proceeding in to the block section on adjacent line in either direction and warn the Drivers and Guards of such trains by issue of suitable Caution Orders. [Refer GR 6.04 & SRs thereto]

10.0 **VISIBILITY TEST OBJECT :**

Common Loop line No.1 Starter Signals at both ends are nominated as V.T.O to enable the SM on duty to take action in terms of GR 3.61 and SRs there to. The light of these signals shall be

verified from the V.T.O platform earmarked for this purpose at the center of platform No.1, in between two starters by the SM on duty.

11.0 **ESSENTIAL EQUIPMENTS OF THE STATION:**

The list of the essential equipments is mentioned in Appendix –‘E’ which shall be kept ready on hand in good condition with necessary relief stock.

12.0 **FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG:
FOG SIGNALLING:**

In case of thick, foggy, tempestuous weather or during dust storm impairing visibility, whenever it is necessary to indicate to the Driver of an approaching train the locality of signal, the Station Superintendent on duty at Station shall arrange for signaling in terms of GR 3.61 and SR there to. The assurance of the staff shall be obtained in the month of OCTOBER every year in the Fog Signal Register vide SR.3.61 as a token of their knowledge in the Rules of Fog Signalling.

Fog signal men shall be detailed for duty at stations being recruited partly from the station traffic staff & party from Engineering Gangman and must not be substitute or casual labour but the regular employees of the Railway.

STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

(a) **INSTRUCTIONS:**

This register contains the following parts.

Part. - I: Particulars of fog signalmen posted at the station from time to time.

Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.

Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.

Part – IV: Particulars of issue and testing of fog signals at the station.

- b. In charge of the station shall ensure that the information maintained in the register is kept upto date and is accurate in all respects.
- c. Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

CERTIFICATE:-

NOTHING IN THESE RULES SHALL BE READ AS CANCELLING, AMENDING AND MODIFYING ANY OF THE GENERAL RULES, SUBSIDIARY RULES, BLOCK WORKING MANUAL AND OPERATING MANUAL. THESE RULES HENCEFORTH CANCEL ALL PREVIOUS STATION WORKING RULES OF TITLAGARH STATION.

APPENDICES

- APPENDIX 'A' -- WORKING OF L.C. GATE.
- APPENDIX 'B' -- SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.
- APPENDIX 'C' -- ANTI COLLOISION DEVICE (RAKSHA KAVACH).
- APPENDIX 'D' -- DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT.
- APPENDIX 'E' -- ESSENTIAL EQUIPMENTS OF STATION.
- APPENDIX 'F' -- RULES FOR WORKING OF DK STATIONS, PASSENGER HALTS, IBH, IBS AND OUTLYING SIDINGS.
- APPENDIX 'G' -- WORKING OF TRAINS IN ELECTRIFIED SECTIONS.

APPENDIX – ‘A’

DETAILS OF LEVEL CROSSING GATES TOGETHER WITH INSTRUCTIONS TO THE OPERATING STAFF (INCLUDING LEVEL CROSSING GATE MEN) ABOUT THEIR NORMAL WORKING, THEIR MAINTENANCE AND THEIR WORKING INCASE OF FAILURES EMERGENCIES WITH SPECIAL PROVISIONS, IF ANY.

GATE WORKING RULES OF “SPL” CLASS TRAFFIC INTERLOCKED LEVEL CROSSING GATE AT KM 201/12-13 (No.RV-159) BETWEEN THE UP HOME SIGNAL AND UP ROUTING HOME SIGNALS OF TIG STATION.

1. GENERAL INSTRUCTIONS: -

1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:-

1. Number of level crossing gate	: RV-159
2. Engineering or Traffic Gate	: Traffic.
3. Under control of Station Master or Permanent Way Inspector	: SM/TIG
4. Location at KM	: 201/12
5. At station	: TITILAGARH
6. In between station	: TIG –SFK/RNBT
7. BG/MG/NG	: BG
8. Single line/Doubling Line/Multiple Line	: Single line
9. Normal position	: Open to road traffic
10. Interlocked/Non-interlocked	: Interlocked
11. Means of interlocking	: EKT
12. Provision of gate Signal at Kms	: NIL
13. Signalling arrangement	: Station stop signals
14. Means of communications Telephone/Bell etc.	: Telephone Connection between Gate Goomty with SM/TIG of RRI Cabin.
15. Width of Level Crossing Gate	: 7.5 MTRS
16. Type of Road (NH/SH/Others)	: Others
17. Name of Road	: TIG-KBJ road
18. Metaled/Non Metaled	: Metalled
19. Approach Road	: Metalled
20. Width of the Road	: 7.5 MTRS.
21. Angle of Road Crossing (incase of the SKEW gates)	: 90 degree
22. Road Gradient (if any)	: (a) North/East side - (b) South/West side-
23. Road alignment (straight/curve)	: (a) North/East side- (b) South/West side-
24. Provision of height gauge	: Not provided
25. Type of Barrier	: Winch operated Lifting Barrier
26. Length of check Rail	: 9.5 M
27. Road surface in between level crossing gates.	: Metalled
28. Length of Rumble strip/speed breakers.	: 7.5 mtr.
29. Road Signs	: Provided
30. Speed breakers indication board	: Provided
31. TVU	: 157293 on 07/2010

32. Census next due on : 07 /2013
33. Demarcation for placement of detonators. : Provided
34. No. of gateman working : 3(Three)
35. Nearest Railway Medical Assistance : Titlagarh
36. Nearest Private Medical Assistance available (if any) : Titlagarh
37. List of equipment available Yes / No. : Yes

1.2. EQUIPMENTS:-

SI No	ITEMS	QUANTITY
1.	Hand signal lamp /Tri colour Torch	: 03
2.	Hand Signal Flag Green	: 01 (Mounted on stick)
3.	Hand Signal Flag Red	: 03
4.	Banner Flag Red	: 03
5.	Posts for exhibiting red banner flag	: 02
6.	Spare chains with padlocks	: 02 (with stop mark)
7.	Detonators	: 10 in tin case
8.	Gate lamps	: 02
9.	Tommy bar	: 01
10.	Motor pan	: 01
11.	Spade/Fhowrah	: 01
12.	Rammer	: 01
13.	Pick axe	: 01
14.	Tin case for flag	: 01
15.	Cane for oil	: 01
16.	Water pot/Bucket	: 01
17.	Canister for Muster Roll	: 01
18.	Set of spare spectacles of gateman wearing glasses	: 01
19.	Board demarcating protection of level crossing Gate diagram in case of obstruction on gate	: 01
20.	Basket	: 01
21.	Whistle	: 01
22.	Wall clock	: 01
23.	Small size chain with padlocks to be used in case of failure of gate boom lock.	02

1.3 THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS: -

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) General Rules Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as Gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.

1.4 **DUTIES OF GATEMAN:**

1. **ALERTNESS:** The Gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the Gate shall be in his personal custody.

2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

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

- i) Gateman will stand attentively in front of the Gate – lodge facing the approaching train.
- ii) In daytime, Gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, 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 and blow the whistle to draw the attention of Driver & Guard of the passing train.

3. **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red lamp by night is placed across the track whenever the Gate is kept in open condition during emergencies or obstruction on track.
- ii) Gateman shall ensure that all Gate lamps and hand signal lamps 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 his reliever arrives and takes over charge from him. However, if it is necessary to leave the Gate in an emergency, he must close and lock the Gates against road traffic, before leaving the Gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/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) 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.
- vii) Gateman shall report the Permanent Way Inspector any defect in his Gate or apparatus pertaining to it, as soon as possible.
- viii) Gateman shall wear badge and prescribed uniform while on duty at level crossing Gate.
- ix) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- x) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
- xi) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
- xii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiii) Gateman must keep the road surface well-watered and rammed in case of unmetalled roads.

- xiv) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
- xv) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE OF 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 driver/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 driver/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If driver/guard fails to take notice, Gateman shall immediately inform the SM on duty to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Driver/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 SM to take appropriate action, under exchange of private number.

5. ACTION IN EMERGENCY AT THE LEVEL CROSSING:-

- i) In case of an obstruction at the level crossing Gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, Gateman shall immediately advise the SM on duty/TIG regarding the defects/obstructions at the Gate, under exchange of private number.
- iii) If there is no response from the SM on duty after three attempts, he shall first protect the Gate and then inform on phone.

a) The Gateman shall protect the line as under : -

- 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, fusees and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing Gate and place 3 detonators on the track in 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 which was placed at boom.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in (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 driver 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 stop the approaching train by waving his red flag by day, red hand signal lamp by night repeatedly.

(b) Other actions 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 SM/TIG regarding the particulars and obstructions at the level crossing Gate, through messenger or other means available.

1.5 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION :-

This is a Manned, interlocked L.C. Gate situated in between UP Home signals and UP Routing Home Signal of TIG station at Km 201/12-13. Telephone communication is provided between the L C. gate lodge with SM on duty of RRI/TIG Station. The level crossing gate is of lifting barrier type operated by means of winch provided at the gate lodge. The normal position of the gate is open to road traffic. A two-lever ground lever frame type is provided at the gate lodge. The key of the LC remains in the winch when the gate is opened condition. When it is necessary to close the gate, for taking OFF signals or for train passing or shunting operations the SM on duty shall inform the gate man to close and lock the gate.

The gate man, shall after satisfying himself that the level crossing is clear of the obstruction, operate the winch till the booms are properly seated on their respective rests and extract the key 'M' from the winch and insert the same in 'E' type lock provided on gate lever frame (2GF). 2GF when reversed locks the gate booms and releases Gate lever 1GF and key 'N'. The key 'N' shall be transmitted to the SM on duty through RKT in conjunction with 1GF reversed. On doing so SM on duty will get the 'white' flashing light and GFRR indication on the control Panel. When SM acknowledges the gate key by pressing control push button 161 along with GSRB button simultaneously he will get the steady white light indication on Panel, then SM on duty shall take off the relevant signals.

After passage of train, on duty SM shall grant permission and transmit the Gate key to the gateman by pressing gate control 161 and GSB button simultaneously. The white indication starts flashing at SM's control Panel and gate man will get red indication on the RKT which indicates that the key 'N' can be extracted from RKT by pressing the push button fitted below it which when inserted and operated in E type lock fitted on 2GF and normalised it releases key 'M'. Then the key 'M' is to be inserted and operated in E type lock fitted with winch for unlocking the winch for operation. The gate man on duty shall operate the winch for opening the gate for passage of road traffic.

In case of Emergency, 1GF shall be put back to normal from reversed position for putting back the concerned UP & DN Signal to 'ON' position.

EMERGENCY OPERATION OF GATE :Gate is locked when a signal is taken off. Locking of the gate is released only when the train movement for which Signals are taken off is completed. For emergency opening of the LC Gate if the route given for a train has not been released, then emergency gate release operation has to be initiated in the following manner. The emergency gate release button along with control 161 button has to be pressed. A flashing white indication will appear on the top of the emergency gate release button. When the Gate lock indication disappears (i.e. after 120 seconds) gate key can be transmitted by pressing gate key and GSRB button simultaneously to open the gate.

The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

2. **INTIMATION TO GATEMAN: -**

- i) Before taking off reception/departure signals SM/TIG, at RRI Cabin shall inform the gateman, the number, description, and direction of the train.
- ii) The gateman shall close the gate and transmit the key to the SM/TIG.
- iii) The reception/departure signals will then be taken 'OFF'
- iv) In order to ensure that road traffic is not held up for a long time, the SM/TIG must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.
- v) When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train to perform the shunting across the gate shall be personally responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate.

3. **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 on duty/ TIG shall send written advice to the gateman through the porter with full details of number, description and direction of the train.
- ii) Gateman on receipt of such advice shall close the gate and transmit the key to the SM/TIG, which will enable him to take 'OFF' reception/Departure signals.
- iii) When sufficient time is not available because of greater frequency of train service, station Master/ TIG will issue written authority to the train driver to pass the signal at 'ON' position.
- iv) In addition Station Master/ TIG shall also issue a caution order advising the driver to whistle continuously and approach the gate cautiously.
- v) The train driver shall be instructed to pass the gate cautiously, on before signaled by the gateman. If hand signal is not seen, driver should be prepared stop short of the gate and ensure that gate is closed following GR.3.73.
- vi) In case of an approaching UP train, the Station Master/ TIG shall advise the Station Master/SFK/RNBT, under exchange of private number, that the telephone at the gate has failed.
- vii) The station Master/ SFK/RNBT shall then issue a caution order to the driver before dispatching an UP train into the block section from his end.
- viii) He should also advise S&T staff responsible for maintenance of the telephone rectify the defect at he earliest.
- ix) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection /fit memo for the same.

4. FAILURE OF LIFTING BARRIERS OF GATES:

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

5. FAILURE OF THE GATE KEY WITH THE GATE IN CLOSED POSITION WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE.

- i) If the gate key cannot be extracted from the gate winch or the key transmitter, then gateman must immediately inform the SM/TIG on duty on telephone, under exchange of private number.
- ii) One spare key with a ring is riveted firmly to the normal working key of the HKT in the West cabin. In the event of failure of HKT when the gate could not be opened for road traffic, SM on duty shall authorize the cabin man to take out the spare key supported by P.N and the spare key shall be taken out by cutting the ring and shall be transmitted manually to the L.C. gate to facilitate the opening of the gate. Till such time the spare key is riveted back after restoration of the HKT failure by ESM/MSM/Sl.
- iii) Thereafter, the gate must be treated as non – interlocked and procedure for reception/ despatch of trains as prescribed for non – interlocked gates, should be adopted. All UP trains shall be piloted in and DN trains shall be piloted out.
- iv) Station Master/TIG on duty shall issue a caution order to the driver of every DN train
- v) He shall also advise the station Master/ SFK/RNBT at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching an UP train into the block section from his end.
- vi) Station Master/ TIG will advise S&T staff responsible for maintenance of winch/key transmitter to rectify the defect at the earliest.
- vii) Normal working will resume only after S&T staff repairs the winch /key transmitter and issue reconnection/fit memo for the same.

6. FAILURE OF THE GATE KEY, WITH THE GATE IN OPEN CONDITION:

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

6. 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 SM/TIG on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) SM/TIG 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 SM/TIG after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, fusee 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.1.4. (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 reply these details to the SM/TIG, who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/ TIG shall also inform the station Master/SFK/RNBT at the despatching end, under exchange of private number, asking him not to despatch any train into the block section from his end, until the track has been cleared of all obstructions.

- ix) After the track has been cleared of all obstructions the gateman shall inform the SM/TIG accordingly, under exchange of private number.
- x) Station Master/ TIG and SFK/RNBT shall then issue a caution order to drivers of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and they're after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master/ TIG 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 staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

8. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment, which is visible to the gateman, the gateman, SM/TIG will adopt the procedure given under item No. 7 above. If the obstruction fouls the level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

2.0 **GATE WORKING INSTRUCTIONS FOR “B-2” CLASS LEVEL CROSSING GATE AT KM 203/3 (NO.RV-160) BETWEEN DN HOME AND UP STARTER SIGNALS AT TIG YARD.**

2.1 **DESCRIPTION OF THE LEVEL CROSSING GATE:**

- | | |
|---|-------------------------------|
| 1. Number of Level Crossing Gate: - | RV-160 |
| 2. Engineering or Traffic Gate: - | Traffic |
| 3. Under control of Station Master/Permanent Way Inspector: SM/TIG | |
| 4. Location KM | 203/3 |
| 5. At. Station: - | TIG Yard. |
| 6. In between Stations: - | TIG-KSNG |
| 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: - | Interlocked. |
| 11. Means of interlocking: - | EKT. |
| 12. Provision of Gate signal at Kms. | |
| | i. Up line- NIL |
| | ii. Dn line - NIL |
| 13. Signalling arrangement: - | NIL. |
| 14. Means of Communication: Telephone Communication from LC gate Cabin with SM RRI Cabin/TIG. | |
| 15. Width of level crossing Gate: - | 7.5 Meters. |
| 16. Type of road. (NH/SH/Others): - | Others |
| 17. Name of Road: - | Town Road. |
| 18. Metaled/Non Metaled | Metaled |
| 19. Approach Road: - | Metaled. |
| 20. Width of the road: - | 7.5 m. |
| 21. Angle of road crossing (In case of the skew Gates) | 90 Degree. |
| 22. Road gradient (If any) | |
| | i. North/East side. ---- |
| | ii. South/West side ---- |
| 23. Road alignment (Straight/Curve): - | |
| | i. North/East side- Straight |
| | ii. South/West side- Straight |
| 24. Provision of height gauges: - | Not provided. |
| 25. Type of Barriers: - | Lifting barriers. |
| 26. Length of checkrails: - | 9.5 Meter. |
| 27. Road surface in between Level Xings Gates: - | Metaled |
| 28. Length of speed breakers: - | 7.5 Meters. |
| 29. Road signs: - | Available. |
| 30. Speed breaker indication board: - | Provided. |
| 31. TVU: - | 20310 on 07/2010 |
| 32. Census next due on: - | 07/2013. |
| 33. Demarcation for placement of Detonators: - | Available. |
| 34. Number of the Gateman working: - | 02. |
| 35. Nearest Railway Medical Assistance: - | Titlagarh |
| 36. Nearest Private Medical Assistance available (if any |)Titlagarh |
| 37. List of equipment available Yes/No: - | Yes. |

2.2 THIS GATE IS PROVIDED WITH EQUIPMENTS VIDE SR16.02.01 AND REGISTERS VIDE SR 16.02.03.

EQUIPMENTS:-

<u>SINo</u>	<u>ITEMS</u>	<u>QUANTITY</u>
1.	Hand signal lamp/Tri colour Torch	: 03
2.	Hand Signal Flag Green	: 01 (Mounted on stick)
3.	Hand Signal Flag Red	: 03
4.	Banner Flag Red	: 03
5.	Posts for exhibiting red banner flag	: 02
6.	Spare chains with padlocks	: 02 (with stop mark)
7.	Detonators	: 10 in tin case
8.	Gate lamps	: 02
9.	Tommy bar	: 01
10.	Motor pan	: 01
11.	Spade/Fhowrah	: 01
12.	Rammer	: 01
13.	Pick axe	: 01
14.	Tin case for flag	: 01
15.	Cane for oil	: 01
16.	Water pot/Bucket	: 01
17.	Canister for Muster Roll	: 01
18.	Set of spare spectacles of gateman wearing glasses	: 01
19.	Board demarcating protection of level crossing Gate diagram in case of obstruction on gate	: 01
20.	Basket	: 01
21.	Whistle	: 01
22.	Wall clock	: 01
23.	Small size chain with padlocks to be used in case of failure of gate boom lock.	02

2.3 THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS: -

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) General Rules Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as Gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.

2.4 **DUTIES OF GATEMAN:**

1 **ALERTNESS:** The Gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the Gate shall be in his personal custody.

2 **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

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

- i) Gateman will stand attentively in front of the Gate – lodge facing the approaching train.
- ii) In daytime, Gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, 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 and blow the whistle to draw the attention of Driver & Guard of the passing train.

3 **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red lamp by night is placed across the track whenever the Gate is kept in open condition during emergencies or obstruction on track.
- i) Gateman shall ensure that all Gate lamps and hand signal lamps are lighted and kept burning continuously from sunset to sunrise.
- ii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the Gate unless his reliever arrives and takes over charge from him. However, if it is necessary to leave the Gate in an emergency, he must close and lock the Gates against road traffic, before leaving the Gate.
- iii) 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.
- iv) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/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.
- v) 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.
- vi) Gateman shall report the Permanent Way Inspector any defect in his Gate or apparatus pertaining to it, as soon as possible.
- vii) Gateman shall wear badge and prescribed uniform while on duty at level crossing Gate.
- viii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- ix) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
- x) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
- xi) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xii) Gateman must keep the road surface well-watered and rammed in case of unmetalled roads.
- xiii) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
- xiv) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4 ACTION IN CASE OF UNUSUAL OCCURRENCE OF 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 driver/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 driver/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If driver/guard fails to take notice, Gateman shall immediately inform the SM on duty to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Driver/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 SM to take appropriate action, under exchange of private number.

5 ACTION IN EMERGENCY AT THE LEVEL CROSSING:-

- i) In case of an obstruction at the level crossing Gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, Gateman shall immediately advise the SM on duty/TIG regarding the defects/obstructions at the Gate, under exchange of private number.
- iii) If there is no response from the SM on duty after three attempts, he shall first protect the Gate and then inform on phone.

The Gateman shall protect the line as under : -

(a) ON DOUBLE LINE SECTION:

- (i) If both lines are obstructed the gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- (ii) The he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- (iii) Gateman shall then proceed to protect the gate along with detonators, fusees and red flag by day and red hand signal lamp by night.
- (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track in 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- (v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- (vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the driver 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 light up and fix the fusee to warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

(b) **Other actions 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 SM / TIG regarding the particulars and obstructions at the level crossing Gate, through messenger or other means available.

2.5 **SPECIAL INSTRUCTIONS:**

1 **MODE OF OPERATION :-**

This is a Manned, interlocked L.C. Gate situated in between DN Home signal and UP Starter signals at Km 203/3 of TIG station. Telephone communication is provided between the L C. gate cabin with SM on duty of RRI/TIG Station. The level crossing gate is of lifting barrier type operated by means of winch provided at the gate cabin. The normal position of the gate is open to road traffic. An eight-lever CH lever frame type is provided at the gate cabin. The key of the LC remains in the winch when the gate is opened condition. When it is necessary to close the gate, for taking OFF signals or for train passing or shunting operations the SM on duty shall inform the gate man to close and lock the gate.

The gate man, shall after satisfying himself that the level crossing is clear of the obstruction, operate the winch till the booms are properly seated on their respective rests and extract the key 'X' from the winch and insert the same in 'E' type lock provided on gate lever No. 2 for unlocking of the Lever and put the lever no. 2 from normal to reversed position. Lever no. 2 when reversed locks the gate booms and releases Gate lever no. 1 and key 'Y'. The key 'Y' shall be transmitted to the SM on duty through RKT in conjunction with lever no. 1 reversed. On doing so SM on duty will get the 'white' flashing light and GFRR indication on the control Panel. When SM acknowledges the gate key by pressing control push button 156 along with GSRB button simultaneously he will get the steady white light indication on Panel, then SM on duty shall take off the relevant signals.

After passage of train, on duty SM shall grant permission and transmit the Gate key to the gateman by pressing gate control 156 and GSB button simultaneously. The white indication starts flashing at SM's control Panel and gate man will get red indication on the RKT which indicates that the key 'Y' can be extracted from RKT by pressing the push button fitted below it which when inserted and operated in E type lock fitted on lever no. 2 and normalised it releases key 'X'. Then the key 'X' is to be inserted and operated in E type lock fitted with winch for unlocking the winch for operation. The gate man on duty shall operate the winch for opening the gate for passage of road traffic.

In case of Emergency lever no. 1 shall be put back to normal from reversed position for putting back the concerned UP & DN Signal to 'ON' position. Lever no. 3,4,5,6,7& 8 are spare levers

EMERGENCY OPERATION OF GATE :

Gate is locked when a signal is taken off. Locking of the gate is released only when the train movement for which Signals are taken off is completed. For emergency opening of the LC Gate if the route given for a train has not been released, then emergency gate release operation has to be initiated in the following manner. The emergency gate release button along with control 161 button has to be pressed. A flashing white indication will appear on the top of the emergency gate release button. When the Gate lock indication disappears (i.e. after 120 seconds) gate key can be transmitted by pressing gate key and GSRB button simultaneously to open the gate.

The LC gate shall be so worked as to cause least possible inconvenience to the vehicular traffic consistence with safety as per subsidiary rule 16.03.01 (a).

2. INTIMATION TO GATEMAN: -

- i) Before taking off reception/departure signals SM/TIG at RRI Cabin shall inform the gateman, the number, description, and direction of the train.
- ii) The gateman shall close the gate and transmit the key to the SM/TIG.
- iii) The reception/departure signals will then be taken 'OFF'
- iv) In order to ensure that road traffic is not held up for a long time, the SM/TIG must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.
- v) When a train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train to perform the shunting across the gate shall be personally responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate.

3 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 on duty/ TIG shall send written advice to the gateman through the porter with full details of number, description and direction of the train.
- ii) Gateman on receipt of such advice shall close the gate and transmit the key to the SM/TIG, which will enable him to take 'OFF' reception/Departure signals.
- iii) When sufficient time is not available because of greater frequency of train service, station Master/ TIG will issue written authority to the train driver to pass the signal at 'ON' position.
- iv) In addition Station Master/ TIG shall also issue a caution order advising the driver to whistle continuously and approach the gate cautiously.
- v) The train driver shall be instructed to pass the gate cautiously, on before signaled by the gateman. If hand signal is not seen, driver should be prepared stop short of the gate and ensure that gate is closed following GR.3.73.
- vi) In case of an approaching DN train, the Station Master/ TIG shall advise the Station Master/KSNG, under exchange of private number, that the telephone at the gate has failed.
- vii) The station Master/ KSNG shall then issue a caution order to the driver before dispatching a DN train into the block section from his end.
- viii) He should also advise S&T staff responsible for maintenance of the telephone rectify the defect at the earliest.
- ix) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection /fit memo for the same.

4. FAILURE OF LIFTING BARRIERS OF GATES:

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

5. FAILURE OF THE GATE KEY WITH THE GATE IN CLOSED POSITION WHEN GATE KEY CANNOT BE EXTRACTED FOR OPENING THE GATE.

- i) If the gate key cannot be extracted from the gate winch or the key transmitter, then gateman must immediately inform the SM/TIG on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non – interlocked and procedure for reception/ despatch of trains as prescribed for non – interlocked gates, should be adopted. All UP trains shall be piloted in and DN trains shall be piloted out.
- iii) Station Master/TIG on duty shall issue a caution order to the driver of every UP train
- iv) He shall also advise the station Master/ KSNG at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching an DN train into the block section from his end.
- v) Station Master/ TIG will advise S&T staff responsible for maintenance of winch/key transmitter to rectify the defect at the earliest.
- vi) Normal working will resume only after S&T staff repairs the winch /key transmitter and issue reconnection/fit memo for the same.

6. FAILURE OF THE GATE KEY, WITH THE GATE IN OPEN CONDITION:

- i) If the gate key cannot be extracted from the winch, gate lever or key transmitter then gateman must immediately inform the SM/TIG on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/despatch of trains as prescribed for non-interlocked gates should be adopted.
- iii) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass the trains on hand signals.
- iv) Station Master on duty/ TIG shall issue caution order to the driver of a departing train.
- v) He shall also advise the station Master/KSNG at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching a DN train into the block section from his end.

- vi) Station Master/ TIG will advise S&T staff responsible for maintenance of winch/key transmitter to rectify the defect at the earliest.
- vii) Normal working will resumed only after S&T staff repairs the winch/key transmitter and issue reconnection/fit memo for the same.

7. 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 SM/TIG on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) SM/TIG 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 SM/TIG after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, fusee 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.1.4. (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 reply these details to the SM/TIG, who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/ TIG shall also inform the station Master/KSNG at the despatching end, under exchange of private number, asking him not to despatch any train into the block section from his end, until the track has been cleared of all obstructions.
- ix) After the track has been cleared of all obstructions the gateman shall inform the SM/TIG accordingly, under exchange of private number.
- x) Station Master/ TIG and KSNG shall then issue a caution order to drivers of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and they're after exhibit green hand signal, if the gate is not obstructed.
- xii) Station Master/ TIG 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 staffs rectify the defective lifting barriers and issue reconnection/fit memo for the same.

8. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment, which is visible to the gateman, the gateman will adopt the procedure given under item No. 7 above. If the obstruction fouls the level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

3.0 GATE WORKING INSTRUCTIONS OF “C” CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE AT KM 740/2-3 (No.JT-127) BETWEEN SFK-TIG STATIONS.

3.1 GENERAL INSTRUCTIONS: -

3.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

- | | | |
|-----|--|--|
| 1. | Number of Level Crossing Gate: - | JT-127 |
| 2. | Engineering or Traffic Gate: - | Engineering. |
| 3. | Under control of Station Master/Permanent Way Inspector: - | PWI. |
| 4. | Location KM | 740/2-3 |
| 5. | At. Station: - | -----. |
| 6. | In between stations: - | SFK-TIG |
| 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: - | NIL. |
| 12. | Provision of Gate signal at Kms. | |
| | | i) Up line NIL |
| | | ii) Dn line NIL |
| 13. | Signalling arrangement: - | NIL. |
| 14. | Means of Communication: | Telephone Connection from Gate Goomty to SM RRI Cabin/ TIG |
| 15. | Width of level crossing Gate: - | 5.5 Meters. |
| 16. | Type of road. (NH/SH/Others): - | Others (Village). |
| 17. | Name of Road: - | ----- |
| 18. | Metaled/Non: | Metaled |
| 19. | Approach Road: - | KCH. |
| 20. | Width of the road: - | 5.5M. |
| 21. | Angle of road crossing (In case of the skew Gates) | NIL. |
| 22. | Road gradient (If any) | |
| | | i) North side. 1 in 40. |
| | | ii) South side. 1 in 40 |
| 23. | Road alignment (Straight/Curve): - | |
| | | i) North side:- Straight |
| | | ii) South side:- Straight. |
| 24. | Provision of height gauges: - | Not Provided |
| 25. | Type of Barriers: - | Winch Operated Lifting barrier type. |
| 26. | Length of check rails: - | 7.5 Meter. |
| 27. | Road surface in between Level XingsGates :- | Cement Concrete Blocks |
| 28. | Length of Rumble strip/speed breakers: - | 5.5 Meters. |
| 29. | Road signs: - | Available |
| 30. | Speed breaker indication board: - | Provided. |
| 31. | TVU: - | 9879 on 02/2013. |
| 32. | Census next due on: - | 02/2016. |
| 33. | Demarcation for placement of Detonators: - | Provided. |
| 34. | No. of Gateman working: - | 02. |
| 35. | Nearest Railway Medical Assistance: - | TIG. |
| 36. | Nearest Private Medical Assistance available (if any) - | SFK. |
| 37. | List of equipment available Yes//No: - | Yes. |

**3.2. EQUIPMENT:
ITEMS**

	QUANTITY/NUMBERS
1. Hand signal Lamp/ Tri Colour Torch	3(5 on Quadruple/Line or twin single line)
2. Hand signal Flag Green	1 mounted on sticks
3. Hand Signal Flag Red.	3 (6 on Quadruple/line or Twin single line and 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. Motor Pan	1
11. Spade/Fowrah	1
12. Rammer	1 (in case of asphalted road this may not be provided)
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. Small size chains with padlocks to be used in case of failure of boom lock.	2

3.3 The Gateman shall be provided with following registers: -

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) Gateman Rule Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as Gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing Gate.
- x) Public complaint Book.
- xi) Inspection Book.

3.4 DUTIES OF GATEMAN:**1. ALERTNESS:**

The gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the gate shall be in his personal custody.

2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

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

- i) Gateman will stand attentively in front of the gate – lodge facing the approaching train.
- ii) In daytime, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, 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 by day and red light by night is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that all gate lamps and hand signal lamps 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 his reliever arrives and takes over charge from him. However, if it is necessary to leave the gate in an emergency, he must close and lock the gate against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/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) 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.
- vii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- viii) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- ix) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- x) Gateman shall work the gate as per gate working instructions and remain well conversant with these instructions.
- xi) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiii) Gateman must keep the road surface well watered and rammed in case of unmetalled roads.
- xiv) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xv) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN.**

In case gateman observes anything unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the Loco pilot/guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.

- iii) If Loco pilot/guard fails to take notice, gateman shall immediately inform the station Master/ TIG (RRI), to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Loco pilot/Guard by whistling continuously, shouting, gesticulating, and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master/ TIG (RRI), to take appropriate action, under exchange of private number.

5. **ACTION IN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master/ TIG (RRI) on duty, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master/ TIG after three attempts, he shall first protect the gate and then inform on phone.

A) THE GATEMAN SHALL PROTECT THE LINE AS UNDER: -

- 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.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction, which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track in 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, which was placed at boom.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in (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 stop the approaching train by waving his red flag by day, red hand signal lamp by night repeatedly.

(B) OTHER ACTIONS 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 Station Master/ TIG (RRI) and Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

3.5 **SPECIAL INSTRUCTIONS:**

1. **MODE OF OPERATION:**

This is a Non-interlocked 'C' Class Engineering L.C.Gate situated at Km 740/2-3 between SFK-TIG stations. This gate is provided with winch operated coupled lifting barriers. The gateman closes and opens the lifting barriers of gate manually by operating the winch. Telephone connection is provided between the L C. gate lodge and SM (RRI) of TIG station. The level crossing gate is normally kept open to road traffic and closed against road traffic for passage of trains. The gateman shall be authorized to open the L.C.Gate after complete passage of train from the gate by observing tail board/ tail lamp. The gateman before opening the gate shall ensure that SM has not advised him to keep the gate closed for any other train from the same direction or from other direction. He shall display a banner flag across the track while the gate is in open condition.

2. **EXCHANGE OF PRIVATE NUMBERS.**

- (a) When Gate is connected with the station at the dispatching end:
 - i) Station Master / TIG(RRI) at the dispatching end shall advise the gateman the number, description, direction and expected time of the passage of the train at the gate, under exchange of private number.
 - ii) Such advice shall be given before taking 'OFF' departure signal or giving an authority to proceed to the Loco pilot.
 - iii) The gateman on receipt of the advice shall close the gate well in time and confirm the same, under exchange of private number.
 - iv) Station Master / TIG(RRI) will take off the departure signals after getting the private number of the gateman.
 - v) The gateman shall be authorized to open the L.C.Gate after complete passage of train from the gate by observing tail board/ tail lamp. The gateman before opening the gate shall ensure that SM has not advised him to keep the gate closed for any other train from the same direction or from other direction. He shall display a banner flag across the track while the gate is in open condition.
- (b) When Gate is connected with the station at the receiving end:
 - i) Station Master /SFK at the despatching end shall advise the Station Master / TIG(RRI) at the other end the number, description, direction and expected time of passage of the train at the gate, under exchange of private number.
 - ii) Such advice shall be given before obtaining line clear.
 - iii) Station Master / TIG (RRI) at the receiving end shall in turn convey the same advice to the gateman, under exchange of private number.
 - iv) Gateman shall close the gate and thereafter give his private number to the Station Master / TIG (RRI)
 - v) Only then shall the Station Master / TIG(RRI) at the receiving end grant line clear to the Station Master /SFK at the despatching end.
 - vi) The gateman shall be authorized to open the L.C.Gate after complete passage of train from the gate by observing tail board/ tail lamp. The gateman before opening the gate shall ensure that SM has not advised him to keep the gate closed for any other train from the same direction or from other direction. He shall display a banner flag across the track while the gate is in open condition.

3. **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or SM/ TIG does not get any response from the Gateman despite 2 or 3 attempts, the following procedure shall be adopted:

1. SM/ TIG(RRI) shall serve a caution order to the Loco pilot and the Guard of every train proceeding into the affected section giving the number and kilometreage of the level crossing and directing the loco pilot:-
 - (i) To whistle frequently to attract the attention of the gateman,
 - (ii) To proceed cautiously, and stop 30M. short of the level crossing and be guided by hand signal.
2. (i) The Loco Pilot after stopping, if the gateman is available and apparently in a fit condition to continue his duty and the gates are closed, shall arrange to advise the station master / TIG as the case may be of the fact using the telephone provided at the gate. The Station Master/ TIG(RRI) on receipt of such an advice from the Loco Pilot shall discontinue issue of caution order to the following trains provided the acknowledgement of the gateman is available over the telephone.
 - (ii) In the above circumstance, the Loco Pilot should not stop his train at the next station to advise the Station Master.
3. (i) If the loco Pilot does not find the gateman at the level crossing or if the gateman is apparently unfit for duty and the gates are not closed, he shall depute his Assistant, the Loco Pilot shall seek assistance of the Assistant Guard or Guard of the train. The same should be informed to the Station Master/ TIG (RRI) on gate telephone.
 - (ii) The Loco Pilot, after being hand signaled, shall pass the level crossing and stop clear of it by at least 2 bogie lengths to pick up the Assistant or Assistant Guard / Guard, as the case may be. The Railway servant deputed for closing the gate shall reopen it for road traffic after the passage of the last vehicle of the train.
 - (iii) If, however, the telephone is out of order or the gateman is not available or is apparently unfit to continue his duty and intimation of the fact could not be given to the station/ TIG (RRI) from the gate, the Loco Pilot shall stop his train at the next station (even if it is through passing station) and give a memo to the Station Master/SFK indicating the condition of the gateman, gate and telephone.
 - (iv) The Station Master/ TIG(RRI) on receipt of the Loco Pilot's report regarding absence or unfitness of the gateman, shall advise the station Master/SFK, the Notice Station, the Section Controller, JE/SE/SSE (P.Way) and AEN concerned and the Gangmate of the nearest gang for immediate posting of a gateman. He shall also inform the maintenance staff to attend and repair the telephone, if required. Issue of caution order should continue till normal working condition is restored.
4. Before giving line clear to a train, the Station Master/ TIG(RRI) shall advise the Station Master/SFK of the facts by message supported by a Private Number, and obtain his acknowledgement with a Private Number. The latter shall issue a caution order to the Loco Pilot as detailed in Para (1).
5. Necessary entries shall be made in the Caution Order Register, Station Diary or Signal Failure Register as the case may be by Station Masters at either end of the affected station. The Section Controller shall also keep a note in his chart indicating the action taken by him.

4. **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/ TIG(RRI), under exchange of Private number, and ensure that lifting barriers do not foul the track.

- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure the Gate against road traffic by means of safety chains and padlocks.
- iv) After securing the Gate against road traffic, he shall show green hand signal flag by day and green light by night to the Loco pilot of an approaching train.
- v) Station Master on duty/ TIG (RRI) shall issue caution order to the Loco pilot of departing UP train.
- vi) SM/ TIG(RRI) shall also advise the Station Master/ SFK at the despatching end, under exchange of private number, to similarly issue a caution order to the Loco pilot before despatching a DN train into the block section from his end.
- vii) SM/ TIG(RRI) should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the defect 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.

5. **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 / TIG on duty regarding the defects/obstruction at the Gate under exchange of private number.
- iii) Stationmaster at TIG on duty shall be advised to put the departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master / TIG(RRI) after two or three attempts, he shall first protect the Gate and then inform him on phone.
- v) Gateman shall then rush with detonator 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.1.4. (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 SM/ TIG(RRI) who shall not allow the trains unless he has been assured by the Gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/ TIG(RRI) shall also inform the station Master/ SFK, under exchange of private number, asking him not to despatch any train into 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/ TIG(RRI) accordingly under exchange of private number.
- x) Gateman shall secure the Gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the Gate is not obstructed.
- xi) Station Master/ TIG(RRI) shall advise maintenance staff responsible for maintaining the lifting barriers Gates to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

6. **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment, which is visible to the Gateman, the Gateman and Station Master/ TIG(RRI) will adopt the procedure given under item No.5 above. If the obstruction fouls the level Crossing Gate, Gateman must keep the Gates closed against road traffic till the track is cleared of obstructions.

4.0 GATE WORKING INSTRUCTIONS OF “C” CLASS ENGG. NON-INTERLOCKED LEVEL CROSSING GATE (NO-RV-164) AT KM 206/10-11 BETWEEN TIG &KSNG STATIONS.

4.1 GENERAL INSTRUCTIONS:

4.1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

1.	Number of Level Crossing Gate: -	RV-164.
2.	Engineering or Traffic Gate: -	Engineering.
3.	Under control of Station Master/PWI:	PWI.
4.	Location KM	206/10-11
5.	At. Station: -	---
6.	In between stations: -	KSNG-TIG .
7.	BG/MG/NG: -	BG.
8.	Single line/Double line/Multiple line: -	Single Line.
9.	Normal Position: -	Closed to road traffic.
10.	Interlocked/Non Interlocked: -	Non-interlocked.
11.	Means of interlocking: -	NIL.
12.	Provision of Gate signal at Kms.	(I) Up line NIL (II) DN line NIL
13.	Signalling arrangement: -	NIL.
14.	Means of Communication:	Telephone Communication from Gate Goomty with SM office/TIG RRI CABIN.
15.	Width of level crossing Gate: -	7.5 Meters.
16.	Type of road. (NH/SH/Others): -	Others
17.	Name of Road: -	Village Road.
18.	Metaled/Non Metaled:	Metaled.
19.	Approach Road: -	C.C.Block
20.	Width of the road: -	5.50 M.
21.	KSNGe of road crossing (In case of the skew Gates) --.	
22.	Road gradient (If any)	(I) North/East side- 1 in 30. (II) South/West side- 1 in 30.
23.	Road alignment (Straight/Curve): -	(I) North/East side.- Straight. (II) South/West side. –Straight.
24.	Provision of height gauges: -	Not provided
25.	Type of Barriers: -	Winch operated Lifting barriers.
26.	Length of checkrails: -	9.5 Meter.
27.	Road surface in between Level Xings Gates	C.C.Block
28.	Length of speed breakers: -	7.5 Meters.
29.	Road signs: -	Provided
30.	Speed breaker indication board: -	Available
31.	TVU: -	4332 on 03/2013.
32.	Census next due on: -	03/2016.
33.	Demarcation for placement of Detonators: -	Provided.
34.	No. of Gateman working: -	02.
35.	Nearest Railway Medical Assistance: -	TIG.
36.	Nearest Private Medical Assistance available (if any)	TIG.
37.	List of equipment available Yes/No: -	Yes.

4.2. EQUIPMENT:

	ITEMS	QUANTITY/NUMBERS
1.	Hand signal Lamp /Tri Colour:Torch	3 (5 on Quadruple/Line or twin single line)
2.	Hand signal Flag Green:	1 mounted on sticks
3.	Hand Signal Flag Red:	3 (6 on Quadruple/line or Twin single line and 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.	Spares chains with padlocks:	2 with stop mark
7.	Detonators:	10 in tin case
8.	Gate Lamps:	2
9.	TommyBar:	1
10.	Motor Pan:	1
11.	Spade/Fowrah:	1
12.	Rammer:	1 (in case of asphalted road this may not be provided)
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.	Small size chains with padlocks to be used in case of failure of boom lock.	2

4.3 THE GATEMAN SHALL BE PROVIDED WITH FOLLOWING REGISTERS:

- i) Gate working instructions in Hindi / English.
- ii) Gate working instructions in local vernacular language.
- iii) Gateman Rule Book in Local vernacular language.
- iv) List for tools and books.
- v) Duty Roster.
- vi) Certificate for working as gateman.
- vii) Bio–Data particulars of Gateman, including date of passing vision test, initial/refresher course, safety camp etc.
- viii) Accident Register.
- ix) Records of last census of road traffic at level crossing gate.
- x) Public complaint Book.
- xi) Inspection Book.

4.4 **DUTIES OF GATEMAN:**

1. **ALERTNESS:**

The gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the gate shall be in his personal custody.

2. **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

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

- i) Gateman will stand attentively in front of the gate – lodge facing the approaching train.
- ii) In daytime, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, 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 by day and red light by night is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that all gate lamps and hand signal lamps 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 his reliever arrives and takes over charge from him. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/battery/box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also be prepared to repeat any signal which guard may give to driver 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.
- 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 must 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 shall prevent tress passing by persons or cattle to the maximum extent.

4. ACTION IN CASE OF UNUSUAL OCCURRENCE OF TRAIN:

In case gateman observes anything unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the driver/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 driver/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If driver/guard fails to take notice, gateman shall immediately inform the station Master to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Driver/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/TIG RRI Cabin, to take appropriate action, under exchange of private number.

5. ACTION IN EMERGENCY AT THE LEVEL CROSSING:

- i) In case of an obstruction at the level crossing gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master/TIG RRI Cabin on duty, regarding the defects/obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master/TIG RRI Cabin after three attempts, he shall first protect the gate and then inform on phone.

B) THE GATEMAN SHALL PROTECT THE LINE AS UNDER:

- 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, red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction, which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track in 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, which was placed at boom.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in (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 driver 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 stop the approaching train by waving his red flag by day, red hand signal lamp by night repeatedly.

C) OTHER ACTIONS 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 Station Master/TIG RRI Cabin and sectional Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

4.5 ENGINEERING ITEMS:

- i) Visibility: -

Direction	Side	Visibility Distance
UP	Right	500 M
	Left	500 M
DN	Right	400 M
	Left	400 M

- ii) Speed Breaker: - Speed Breakers of approved design are provided on either side of this Level Crossing gate.
- iii) Periodical Census of traffic has been taken and the latest TVU is 4332 on 03/2013.

4.6 SPECIAL INSTRUCTIONS:

1. MODE OF OPERATION:

This is a Manned & Non-interlocked Engineering L.C.Gate situated at Km 206/10-11 in between TIG-KSNG.Stations. This gate is provided with winch operated coupled lifting barriers and the gate is closed/opened by the gateman manually by winch operation. Telephone communication is provided between the L C. gate lodge with SM office of TIG/RRI Cabin station. The level crossing gate is normally kept closed and locked against road traffic. The Station Master TIG/RRI Cabin shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number. When the gateman desires to open the gate for passage of road traffic he should ensure that no PN has been exchanged with the Station Master TIG/RRI Cabin for the passage of train or the whole of the train with last vehicle indicator has passed over the level crossing gate for which the gateman has exchanged private number with the SM TIG/RRI Cabin Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate.

2. EXCHANGE OF PRIVATE NUMBERS.

- (i) The normal position of level crossing gate being “Closed to Road Traffic” it should 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 TIG/RRI Cabin before permitting each train to enter into the block section, shall ask Gateman on the telephone by giving a Private Number whether, gate is closed against road traffic for the passage of train. The Gateman only after ensuring that the gate is actually closed and locked against road traffic shall give a Private Number to the Station Master TIG/RRI Cabin in assurance of gate being closed and locked against road traffic.

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- (iii) The Station Master TIG/RRR Cabin shall not permit any train to enter the block section, unless he is assured of the closure and locking of the gate by the gateman supported by exchange of private number.
- (iv) When the gateman desires to open the gate for passage of road traffic he should ensure that:
 - (1) He has not exchanged any private number with the SM TIG/RRR Cabin as per (ii) above.
 - (2) If he has exchanged private number with the Station Master TIG/RRR Cabin, the whole of the train with last vehicle indicator has passed over the level crossing gate and Station Master / TIG/RRR Cabin has not exchanged private number with him for any other movement immediately in rear of the train or on the adjacent line..

Before opening the gate for road traffic, he shall display banner flag/danger signal at either side of the track at a distance of 5 meters away from the gate. Then he shall open the gate for passing the road traffic, keeping a red flag / red hand signal lamp ready 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 not received from the Gateman, the Station Master TIG/RRR Cabin shall adhere to the procedure prescribed in SR 16.03.04.
- (vi) In the event of failure of telephone, if the gate is required to be opened for the passage of road traffic, the gateman shall look out in both directions before opening the gate to ensure that no train is approaching from either end. He shall then plant a banner flag during day and a hand signal lamp with the red light during night, 5 meters away from the gate on the track on either side. He will thereafter, open the gate for passing the road traffic keeping a red flag / red hand signal lamp ready in his hand to stop approaching train if any.

3. **FAILURE OF TELEPHONIC COMMUNICATION:**

When Telephonic Communication fails or SM TIG/RRR Cabin does not get any response from the Gateman despite 2 or 3 attempts, the following procedure shall be adopted:

1. SM TIG/RRR Cabin shall serve a caution order to the Loco pilot and the Guard of every train proceeding into the affected section giving the number and kilometreage of the level crossing and directing the loco pilot:-
 - (iii) To whistle frequently to attract the attention of the gateman,
 - (iv) To proceed cautiously, and stop 30M. short of the level crossing and be guided by hand signal.
2. (i) The Loco Pilot after stopping, if the gateman is available and apparently in a fit condition to continue his duty and the gates are closed, shall arrange to advise the station master TIG/RRR Cabin as the case may be of the fact using the telephone provided at the gate. The Station Master TIG/RRR Cabin on receipt of such an advice from the Loco Pilot shall discontinue issue of caution order to the following trains provided the acknowledgement of the gateman is available over the telephone.
 - (ii) In the above circumstance, the Loco Pilot should not stop his train at the next station to advise the Station Master.
3. (i) If the loco Pilot does not find the gateman at the level crossing or if the gateman is apparently unfit for duty and the gates are not closed, he shall depute his Assistant, the Loco Pilot shall seek assistance of the Assistant Guard or Guard of the train. The same should be informed to the Station Master TIG/RRR Cabin on gate telephone.
 - (ii) The Loco Pilot, after being hand signaled, shall pass the level crossing and stop clear of it by at least 2 bogie lengths to pick up the Assistant or Assistant Guard / Guard, as the

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case may be. The Railway servant deputed for closing the gate shall reopen it for road traffic after the passage of the last vehicle of the train.

- (iii) If, however, the telephone is out of order or the gateman is not available or is apparently unfit to continue his duty and intimation of the fact could not be given to the station TIG/RRI Cabin from the gate, the Loco Pilot shall stop his train at the next station (even if it is through passing station) and give a memo to the Station Master/KSNG indicating the condition of the gateman, gate and telephone.
- (iv) The Station Master TIG/RRI Cabin on receipt of the Loco Pilot's report regarding absence or unfitness of the gateman, shall advise the station Master/KSNG, the Notice Station, the Section Controller, JE/SE/SSE (P.Way) and AEN concerned and the Gangmate of the nearest gang for immediate posting of a gateman. He shall also inform the maintenance staff to attend and repair the telephone, if required. Issue of caution order should continue till normal working condition is restored.
- 4. Before giving line clear to a train, the Station Master TIG/RRI Cabin shall advise the Station Master/ KSNG of the facts by message supported by a Private Number, and obtain his acknowledgement with a Private Number. The latter shall issue a caution order to the Loco Pilot as detailed in Para (a).
- 5. Necessary entries shall be made in the Caution Order Register, Station Diary or Signal Failure Register as the case may be by Station Masters at either end of the affected station. The Section Controller shall also keep a note in his chart indicating the action taken by him.

4. **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/ TIG RRI cabin, under exchange of Private number, and ensure that lifting barriers do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure the Gate against road traffic by means of safety chains and padlocks.
- iv) After securing the Gate against road traffic, he shall show green hand signal flag by day and green light by night to the driver of an approaching train.
- v) SM on duty/ HKG shall issue caution order to the driver of departing DN train.
- vi) SM/ HKG shall also advise the Station Master/KSNG at the despatching end, under exchange of private number, to similarly issue a caution order to the driver before despatching an UP train into the block section from his end.
- vii) SM/ TIG RRI cabin should also advise maintenance staff responsible for maintenance of the lifting barriers to rectify the defect 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.

5. **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/TIG RRI Cabin on duty regarding the defects/obstruction at the Gate under exchange of private number.
- iii) Stationmaster at TIG RRI Cabin on duty shall be advised to put the departure signals back to 'ON' position, if taken 'OFF' for a train.

- iv) If there is no response from the Station Master /TIG RRI Cabin after two or three attempts, he shall first protect the Gate and then inform him on phone.
- v) Gateman 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.4.4 (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/TIG RRI Cabin who shall not allow the trains unless he has been assured by the Gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master/TIG RRI Cabin shall also inform the station Master/KSNG, under exchange of private number, asking him not to despatch any train into the block section from his end, until the track has been cleared of all obstructions.
- ix) After the track has been cleared of all obstructions the Gateman shall inform the Station Master/TIG RRI Cabin accordingly under exchange of private number.
- x) Gateman shall secure the Gate against road traffic by means of safety chains and padlocks and thereafter exhibit green hand signal, if the Gate is not obstructed.
- xi) Station Master/TIG RRI Cabin shall advise maintenance staff responsible for maintaining the lifting barriers Gates to repair the same at the earliest.
- xii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

6. **OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING GATE:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment, which is visible to the Gateman, the Gateman and Station Master/TIG RRI Cabin will adopt the procedure given under item No.5 above. If the obstruction fouls the level Crossing Gate, Gateman must keep the Gates closed against road traffic till the track is cleared of obstructions.

APPENDIX-“B”

STATION WORKING RULES OF TITLAGARH STATION.DETAILS OF SIGNALING AND INTERLOCKING FOR WORKING THEM NORMALLY AND IN EMERGENCY ETC.INCLUDING THE POWER SUPPLY ARRANGEMENTS.

- 1.1 The power signaling and interlocking installations are as per the signaling plan No.SI-22033 Alt-D together with control tables, route section plans and wiring diagrams.

Based on the above signaling plan, the Station Working Rules Diagram attached to the Station Working Rule shows the following.

The complete layout of the Station including the non-interlocked lines and sidings within the station limits. In addition to signaling features, the diagram indicates gradients, holding capacity of all individual lines, the position and number of lines, over run lines, special restrictions, track circuits, ground frames, cabins, goomties, aspect control of signals etc.

- 1.2 In this installation, where the points are power operated, the point remains in the last operated position. If the position of the points is required to be changed, it can be changed individually by operating the concerned point button [WN] in conjunction with Point Group Button [WWN] to required position.
- 1.3 Charts given in the Appendix-“B” showing the operation of entrance and exit buttons for various routes governed by stop signals, calling on signals and shunt signals, slots, the designation of various signals etc.
- 1.4 The Station is of Standard I-R interlocked and equipped with Multi Aspect Colour Light Signals and power operated points with track circuit control over points and berthing tracks etc., centrally controlled from Route Relay Cabin through Siemens Type Route Relay installation based on the principles of entrance and exit to conform to signaling and interlocking plan
- 1.5 Route Relay Cabin is controlling the movements of trains from/to SAMBALPUR, RAIPUR & VIZIANAGARAM ends.

2.0 SIEMENS DOMINO PANELS – OPERATING AND INDICATING FOR OPERATION OF THE POWER SIGNALING:-

Two panels viz. operating (control) panel and Indication panel are installed in the RRI Cabin TITLAGARH.

2.1 OPERATING (CONTROL) PANEL:-

The operating (control) panel is a small console, provided with various operating push buttons for signals, points, individual route section release, emergency operations and other miscellaneous buttons on a small layout to accord with the geographical position at site. Special illuminated indicator indicating power failures is provided on this panel. All the controlling push buttons are provided with indications and designation, number showing the corresponding number of the signal or route or points or any other field units as per the signaling and interlocking plan. The Station Master while operating the controlling buttons, switches, counters etc., on the operating panel for controlling the traffic movements or any other operation connected with power signaling installations in the yard should at the same time monitor the conditions of the traffic movements, condition of lines, position of the Block Instruments and condition of all other units on the indication panel.

2.2 INDICATION PANEL:-

The indication panel shows in a domino form interlocked portion of TITLAGARH Station yard with connections with the geographical co-relation to the tracks, points, signals and various other controls as existing at site. This panel through various illuminating indications provided for the field functions, indicates the condition of a particular field gear at a given time in a miniature form so that the entire traffic operation in the yard as well as the position of power signaling and interlocking installations may be constantly monitored by the Station Master. Each track circuited line on the indication panel is represented by a separate and distinct colour on the face of the panel and is illuminated indicating the conditions of route setting, route releases, track clearance and occupancy of the track etc.

- a) A white indication is provided on the panel to indicate closing of the level crossing gate.
- b) The level crossing key is electrically interlocked with the panel. The key extracted from the winch after closing the level crossing when inserted in the RKT for “key in contact” release the concerned signals.
- c) The track circuits are indicated on the panel with “WHITE” for clear and “RED” for occupation.
- d) Point indicators are provided for “Reverse” and “Normal” position of the points.
- e) A point failure indication is also provided with flashing light.
- f) In case of failure of Motor operated points, the procedure detailed in rule No. 20.06 of Operating Manual should be followed for setting of the points by Crank Handle.

2.3 POSITIONING OF CONTROLLING BUTTONS ON THE OPERATING PANEL :-

The field function controlling buttons of points, signals, routes, slots etc., are located close to the position where the field function are represented on the operation panel. The common buttons such as emergency cancellation button, common point buttons and various counters (meant for counting emergency operations), signal power supply control buttons, signal and point intensity control buttons, are all housed on the top of the panel. In order to avoid the difficulty of the operator in reaching two buttons “for any operation”, some common buttons are multiplied on the operation panel at convenient places.

2.4 CRANK HANDLE RELEASE PUSH BUTTON:-

To release any Crank Handle, concerned Crank Handle control button and Crank Handle Group releasing button [CHNB] to be pressed simultaneously. Then the steady White light near the Crank Handle button starts flashing till such time the control released accepted by the field agency. At site Red indication appears when the key is extracted from RKT, a flashing Red indication will appear on the panel and White light extinguishes after completing the work when the key is inserted and turned in the RKT, the flashing Red light becomes steady and the White light starts flashing. After seeing the indication, SM shall withdraw the control by operating the concerned CH button in conjunction with Group Crank Handle Receiving Button [CHRB].

2.5 LAMP MUTING PUSH BUTTON:-

Whenever any signal lamp is fused, a flashing indication appears on the panel in the concerned signal aspect with a buzzer. To stop the buzzer this button (XYN) is to be operated.

2.6 SIGNALS AND THEIR INDICATIONS:-

- a) Manually operated multiple aspect colour light signals are provided at this RRI installation. The indications of various aspects of signals provided in this yard are as follows: -

i) Red:-

Red indicates “Danger” aspect and signifies stop dead till the signal is taken ‘OFF’.

- ii) **Single Yellow:**
Single Yellow indicates “Caution” aspect and signifies proceed cautiously preparing to stop dead at the next stop signal.
- iii) **Double Yellow:**
Double Yellow indicates “Attention” aspect and signifies proceed prepared to pass the next signal at a restricted speed.
- iv) **Green:**
Green indicates “Clear” aspect and signifies “Proceed”.
- b) **Route Indicators:**
It takes the form of a row of a lunar white lights above the signals at junction points at various degrees from the vertical to the left or right as the case may be to indicate whether the turn out at the junction point is set to the right or to the left side of the Driver. In case of more than one such arm of route indicator on the same side, the top most reads to the first loop and the others for subsequent loops in regular order of sequence.

3.0 [a] **LIST OF COUNTERS WITH THEIR CODE AND FUNCTION:-**

Any emergency operations such as full route release, sub-route release, emergency overlap release, emergency point operation etc., are registered in respective counters which are fixed on the top of the panel adjacent to the concerned emergency operation button. The following counters are provided.

Sl. No.	Description	Code	Remarks
1.	Emergency full-route release counter.	EUUYN	Three-button cancellation of any route, which is set, is registered in this counter.
2.	Emergency sub route release counter.	EUYN	Individual sub route release in case of failure is registered in this counter
3.	Emergency overlap release counter.	OYN	Emergency release of any over lap in case of failure is registered in this counter.
4.	Emergency point operation counter.	EWN	Emergency operation of points under track circuit failure operation is registered in this counter.
5.	Calling on signal counter.	COGGN	Whenever a calling on signal is cleared the operation is registered in this counter.
6.	Emergency Gate release counter	---	Emergency Gate release in case of failure registered in this counter.

3 [b] **LIST OF OPERATING BUTTONS WITH THEIR CODE AND COLOUR:-**

The operating buttons are distinctly coloured for easy identification. The following is the list of the important buttons with their designations in codes and colours: -

Sl. No.	Description	Code	Colour	Remarks
1.	Main signal button.	S.1 GN	Red	S.1 indicates signal number.

2.	Shunt signal button.	SH.3 GN	Yellow	SH.3 Indicates shunt signal number.
3.	Route button.	L1 UN	Grey	L1 indicates the line number
4.	Buttons for panel illumination control.	Ind. Lamps 1,2,3.	White	Three such buttons are provided for controlling the intensity of illumination of the panel.
5.	Points button without emergency route section release facility.	104 WN	Blue	104 indicates the point number.
6.	Points button with emergency route section release facility.	102A WN	Blue with White dot.	102A indicates the point number.
7.	Emergency full route release button (group).	EUUYN	Grey	Used for emergency full route release
8.	Emergency route section release button (individual)	EUYN	Blue with white dot	Used for emergency sub route release
9.	Common push button for points.	WWN	Blue	Duplicated for easy access
10.	Point emergency push button.	EWN	Blue	Used for emergency operation of points
11.	Button for silencing buzzer for signals when RED filament fails.	GXYN	White	To silence buzzer informing Signal Blanking
12.	Button for silencing buzzer for points failure.	WXYN	White	To silence buzzer informing failure of point
13.	Emergency group button for putting back a signal to 'ON' position.	EGGN	Red	Used for signal cancellation.
14.	Calling on signal group button.	COGGN	Grey	For taking off a Calling on signal. This button is pressed along with the concerned signal button.
15.	Group slot button.	GSBN	Green	Used in conjunction with LC gate control for transmission of gate keys
16.	Group slot cancellation button.	GSRBN	Green	Used in conjunction with LC gate control for reception of gate keys
17.	Emergency overlap release button.	OYN	Grey	Used for emergency overlap release.
18.	Crank handle group button (individual).	CH 4	Blue	CH 4 indicates crank handle group No.4.
19.	Group crank handle release button.	CHNB	Blue	Duplicated for easy reach. These buttons are pressed along with the individual crank handle group button for receiving the crank handle.

20	Group crank handle receiving button	CHRB	Blue	Duplicated for easy reach. These buttons are pressed along with the individual crank handle group button to trans the crank handle.
21	Level crossing control button	LX-156	Chocolate	No.156 indicates the control No. This button is to be pressed along with GSBN/GSRBN.
22	Power failure alarm suppression button. (M1, M2 & M3)		White	Button to be pressed to mute alarm bell due to power failure.
23.	DN Block Release button section (TIG-KSNG)		Chocolate with white dot.	Button to be pressed for release of block handle for DN Trains.
24	UP Block Handle Release button section (TIG-RNBT)		Chocolate with white dot.	Button to be pressed for release of block handle for UP Trains.
24	UP Block Handle Release button section (TIG-SFK)		Chocolate with white dot.	Button to be pressed for release of block handle for UP Trains.
25.	Emergency Gate Release button		Chocolate with red dot.	For emergency Gate release.

The sequences/of button operations to be made for different operations on the panel is as under: -

SI. No	Operation	Button used	Sequence of operation
1	To clear a Calling on Signal	GN, UN, EGGN & COGGN	First initiate the stop signal route by pressing GN & UN simultaneously, then press GN and EGGN to throw back the stop signal to "ON" [whether it is cleared or not] and then press GN & COGGN simultaneously, release COGGN keeping GN pressed and press UN.
2	To clear a MAIN SIGNAL	GN & UN	Press both buttons simultaneously.
3	To clear SHUNT SIGNAL	SH.GN & UN	Press both buttons simultaneously.
4.	To throw cleared signal to danger whether a Stop Signal or a Calling on Signal or a Shunt Signal.	GN & EGGN	Press the concerned signal button and EGGN simultaneously.

5	To cancel a route already set after replacing the cleared signal "ON" [whether it is a Stop Signal or Calling on Signal or a Shunt Signal].	GN, EUUYN & UN	Press the GN & EUUYN simultaneously, release EUUYN keeping GN pressed and press UN. This is known as three-button cancellation.
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NOTE:-

When the signal is approach locked or dead approach locked on pressing GN & UN, a flashing dot indication below the concerned signal appears. Wait till it becomes steady and then press GN & EUUYN, release EUUYN keeping GN pressed and press UN.

6	To release individual route section under emergency.	WN & EUYN	The key under the custody of SSE/SE/JE/Sig/RRI to be inserted and turned to "ON" position. Then WN and EUYN buttons are to be pressed simultaneously for emergency sub-route release.
7	Individual operation of points when track circuits are clear.	WN & WVN	Press the point's button concerned and common points button together.
8	Individual operation of points, when point zone track circuit fails.	WN & EWN	Insert & Turn the EWN key and press both WN and EWN buttons simultaneously. This operation by panel Station Master is registered in the EWN Counter.
9	To release a locked overlap in case of failure.	UN & OYN	The key under custody of the SSE/SE/JE/Sig/RRI is to be inserted and turned to "ON" position. Then "UN" and "OYN" buttons to be pressed simultaneously for emergency over-lap release.

4.0 SPECIAL AND IMPORTANT NOTES:-

- a) It is essential that only two push buttons concerned are pressed positively with deliberation and the buttons should be kept pressed for three to eight seconds. [as necessary]
- b) In order to avoid failure of any operation, when the two buttons concerned are pressed, it is essential that no other button is to be pressed.
- c) Whenever bi-directional movements are permitted over a berthing track, two buttons viz., one route button for movements in Down direction and one for UP direction are provided.
- d) The locking on the points giving flank protection cannot be released by cancellation of the individual route section within which these points are located but by release of the individual route section which had commanded such flank protection/isolation.

In the power signaling installations, generally the complete route of a stop signal comprises of the route between the concerned signal and signal ahead and also the adequate distance [signal over lap]. The complete route of shunt signal or a calling on signal comprises of the route between the subject signal and signal ahead.

Normally the portion of the track between two consecutive stop signals or between two consecutive shunt signals or between a shunt signal and the stop signal ahead termed as full-route is made up of several individual route sections, each route section controlling the various

field elements like track circuits, points, level crossing gates, flank protection etc., not only in its immediate jurisdiction but also within its ambit of control. The signal over lap locking/setting is released in an emergency operation through the berthing track control.

Normally each route section is designated after the most pre-eminent number of the points that fall within the immediate jurisdiction of the individual route section, so the numbers of the point button and individual route section are the same. Therefore the common point button coloured blue with a white dot on the top [along with the concerned group push button] should be operated either for individual operation of the points in the route section or for the release of individual route section in case of failures etc., under special emergency provisions.

In some cases, however, where there are more than one set of points or cross overs in a particular individual route section, the route section is designated generally after the number of the pre-eminent set of points or cross overs in that part of the route section zone.

In all such cases the individual operation of the points and the release of the individual route section occur with the operation of the common button [which is coloured blue with white dots]. The operation of all other individual points or cross-overs in that route section zone is dependent on the individual operation of the concerned point button [which are coloured blue without any white dot] together with the group button provided such an operation is only possible when the controlling route section is not engaged. This is applicable in the following cases:-

**POINT BUTTONS WITHOUT
WHITE DOT.**

104, 112, 114, 120A, 124, 122, 126, 134, 136B, 138, 148, 149, 151, 141, 145, 129, 137 section/sections being free

POINT BUTTONS WITH WHITE DOT.

102A/B, 106B, 108B, 110A/B, 116A, 118, 130, 132, 140, 150B, 147A, 153A, 139A, 143A, 133A, 135A, 123A, 125A, 127A/B, 121A/B, 111A/B, 119A/B, 107A & 109A For operation of individual point and releasing of individual route setting.

In addition to the provision of the buttons on the operating panel for initiating a route setting and taking off a signal certain other illuminated white or coloured light indications and Buttons as below are provided on the operation and indication panels to enable the panel Station Master to constantly watch the condition or state of various fields gears and to control the traffic movements in a direct and expeditious manner.

INDICATIONS:-

These indications exhibited on the operation panel to indicate the condition or state of controls at any given line of field gears, ground frames, goomtys, siding controls and shunting free indicator controls. These controls released by the Panel Station Master for controlling:-

- I) Rotary Key Transmission unit for siding operations.
- II) Crank Handle Transmission control for emergency motor point crank handle control keys are clubbed into one group and the following are the indications exhibited on the operation panel.
 - a) A white steady light appears on the control Panel i.e., Crank Handle not released.
 - b) Whenever a control is released from the RRI cabin to the field agencies, a flashing white light will appear till such time the said control release is accepted by the concerned field agencies and as the control is accepted at the field site, a flashing Red light appears.
 - c) A steady Red light and a White flashing appears when the fieldwork is completed and controls returned by the field agencies.
 - d) After the Panel Station Master withdraws his control or releases by operating the appropriate buttons, a White steady light appears again.

5.0 ELECTRIC POWER SUPPLY INDICATIONS:-

Power signaling and interlocking installations and the ancillary field units are fed from the following sources of power supply.

- I) Normal supply from OSEB supply three Phase 440V- 50HZ.
- II) Stand by supply – two Diesel Generator power supply – three phase 440V-50HZ.

The availability of the normal power supply is indicated by a stencil indicator “ M1” on the Operating panel. M2 is spare; M3 is for DG set supply.

In the event of failure of power supply, a power supply failure buzzer/indication appears on the SM panel. The Station Master on duty shall acknowledge and advise his staff to start the D/Generator provided in the D/Generator Room in the RRI compound. After the D/Generator is started, the Station Master on duty should put "ON" the Main Switch provided in the Panel Room. Then the D/Generator supply will be extended to panel. The indication “M3” glows on the panel. When the normal power supply is restored, the same will be switched over automatically. Whenever power is switched to normal supply a buzzer/indication appears. This should be acknowledged by the panel operator by pressing the Acknowledgement button and then put off the main switch and stop the Diesel Generator.

7.0 INTENSITY OF PANEL LIGHT INDICATORS:-

These indicators provided at Operating Panel along side the panel illumination intensity control button 1, 2, & 3, show the accordance of the illumination brightness of the panel lights with the controlling buttons Nos.1, 2, & 3. Only one button can be operated at a time.

8.0 TRACK INDICATORS:-

Each track circuit is given a separate and distinguishable colour on the face of the indication panel and entire length of the track circuited portion of the track provided with rectilinear transparent filters and illuminated from behind to indicate the conditions of track circuited lines at any given movement [whether route set or occupied].

When a route is set by pressing the entrance and exit buttons for signaled route, for the purpose of giving indications to the Panel Station Master about the occupancy of any or all of the track circuited section/sections, the route is split into four portions and the details of the four portions are as follows: -

- I) Approach track either in rear of the first stop signal or any other stop signal in the station yard.
- II) Entry portion of a route from the subject signal up to the fouling mark of the berthing track.
- III) The berthing track and
- IV) The over lap [where provided].

In the first part of the route, whenever a vehicle or train occupies the approach track in rear of the first stop signal at the station, the concerned approach track indications show a RED flashing light and this will continue till the Panel Station Master takes off the Home Signal. The approach track of a stop signal [other than the first stop signal] is normally lit WHITE when a route is set for a train movement leading to the above stop signal and this white strip of indication of the track [throughout the route section and berthing tracks en-route] change to RED one after the other progressively in the direction of the train movement as the train passes and finally the RED light extinguishes when the vehicle or train clears these various portions of the track circuits on the route.

In the second part of the route whenever a train is occupying the track circuited section i.e., at the entrance end at the track circuit indication shows RED light [changing from WHITE to RED] and as soon as a train or vehicle has cleared this portion of the route section/track circuited portion of the line, the RED light extinguishes on this portion of the track. This sequence of operation of track indications signify the sectional route release for facilitating subsequent traffic movements.

In the third part of the route, whenever a train is on the berthing track, it continues to show the RED light [changing from White to Red] till berthing track is cleared of this train or vehicle.

In the fourth part of the route the over lap will continue to show WHITE light for period of 120 seconds after the berthing track is occupied by the train and when these lights extinguish, it shows the release of the over lap control [because by the time a train would have either come to a stop at the stop signal protecting the over lap or has passed past it]. The over lap WHITE light indication originally showing WHITE light at the time of route setting will change to RED if the over lap portion of the track circuit is occupied by the train.

In all the four parts of complete route the failure or occupation of any track circuit is indicated by a RED light.

9.0 POINT ENGAGED INDICATION:-

At the apex of points, a small circular dot indicator is provided on the panel on the track portion itself. This indicator lights up whenever the point is locked in a particular position indicating that it is engaged. [Constituting either a part of the route section or an over lap set].

10.0 POINT INDICATION:-

At each point the Normal and Reverse indications of point positions are shown by a small strip light on the straight for the normal setting and on the cross over portion i.e., diagonally for the Reverse setting.

11.0 APPROACH TRAIN INDICATION:-

At the approach of all three UP & DN directions of TITLAGARH Station yard, approach track indications are provided which shall show RED lights as soon as the train occupies the track in rear of the Home Signals from respective directions.

12.0 APPROACH LOCKING INDICATIONS:- NIL

13.0 BLOCK RELEASE INDICATIONS (Train Arrival Indication) :

There is one indication (Chocolate with White dot) provided on the operating panel.

a) DN train arrived indication TIG-KSNG.

Whenever a DN train clears Block section TIG-KSNG and arrives at TIG, a “yellow” indication appears on the panel. The SM on duty has to press the button before normalising the block handle.

Whenever an UP train clears Block section RNBT-TIG or SFK-TIG and arrives at TIG, a “yellow” indication appears on the panel. The SM on duty has to press the button before normalising the block instrument.

14.0 BUTTON STUCK UP INDICATION :

When any of the Signal Buttons/Point Buttons or Route Buttons (GNCR, WNCR, UNCR) remains in the pressed position for more than 15 seconds, the Panel becomes inoperative and White light appears on the Panel with an audible indication (Buzzer).

If Signal Button (GN) remains in pressed position, a White light appears near GNCR or if a point Button (WN) remains in pressed position, a White light appears near UNCR. The visible audible indication will continue till such time the fault is rectified.

15.0 AUDIBLE INDICATIONS ON OPERATING PANEL: -**15.1 SIGNAL FAILURE BUZZER: -**

Whenever a signal becomes blank due to fusing of RED lamp the signal failure buzzer/sounds and continues till the buzzer muting button viz., GXYN on the panel is pressed for acknowledging the failure. A stencil “red” indication also appears and continues till the lamp is replaced.

15.2 POINT FAILURE BUZZER :-

In case of failure of a point, this buzzer/sounds and continues till the buzzer muting button viz., WXYN is pressed for acknowledging the failure. A stencil “red” indication also appears and continues till the defect is rectified.

15.3 GROUP BUTTON BUZZER: -

When one or more of the operating button/buttons remains/remain in the pressed down position for more than 15 seconds, this buzzer continues to buzz until the fault is rectified and all the buttons are put at normal position, the panel remains inoperative. So, it should be ensured by Station Master that no operating button is pressed for more than 15 seconds

15.4 POINT CHAIN GROUP BELL:-NIL**16.0 SIGNAL SYMBOLS AND THEIR INDICATION ON INDICATION PANEL: -**

Main Signals are symbolically represented by a small rectangular box with a stem [in black painted over the indicating panel] along the track lines corresponding to their position at site with provision of exhibiting two aspect viz., a steady Red light when the signals at the site shows ON aspect and a steady Green light when the signal at the site displays OFF aspect.

Route indicators on the stop signals are indicated in a box at the top of the stop signal symbolically and provision for indicating a WHITE light in a slit whenever any route indicator of the signal concerned at the site lit.

In case of a shunt signal below a stop signal, the aspect of the same is shown in a hexagonal box [coloured black] with an aperture. When the shunt signal is taken “OFF”, it displays a WHITE light on a diagonal slit and no light when the signal is at “ON” position.

In case of a Calling on signal, it displays a WHITE DOT light on the stem with a circular box [coloured black] and no light when the signal is at “ON” position.

In case of independent shunt signal it is shown as small rectangular block [coloured black] with one horizontal and one diagonal slit. Horizontal slit is lit when signal is at ON and diagonal slit is lit when signal is at OFF.

17.0 SPECIAL INSTRUCTIONS REGARDING SIGNAL LAMPS:

At this station, Triple pole lamps with two filaments viz. Main and Auxiliary are provided for all Main Signals. In the triple pole lamp of Signal, if the Main filament is fused, Auxiliary filament will lit automatically. However a Buzzer will ring and an indication will appear on the indication panel. When one of the Main filaments of the Signal lamps controlled by TIG RRI cabin fuses.the Station Master on duty on panel has to press the ACK (Acknowledgement) button provided on the operating panel for stopping the Buzzer.

The Station Master on duty shall inform the incidence of fusing of the Signal lamp main filament at RRI cabin to S&T maintenance staff [ESM/JE/SE (Signal)] to attend the above. Reporting the fusing of main filament of Signal lamp should be promptly done by the Station Master on duty, so that Signal lamp is replaced by S&T staff in time before Auxiliary filament also fails which will other wise result detention of trains.

17.1.1 The Station Master on duty at 00.00 hours must also ensure that all the Signal lights are burning properly. This fact must be recorded in the diary under a separate entry and confirm to the Section controller on duty as per the instructions contained in Division Safety Circular No.82/82, Dated.03.05.1982.

17.1.2 INDICATIONS IN CASE OF FAILURE OF SIGNAL ASPECT:-

In case of any off aspect lamp fuses at the site, the Green indication flashes on the corresponding signal aspect indicating on the indication panel. If the Red lamp fuses the RED indication on the corresponding signal symbol flashes.

Magnetic button collars are provided and the same should be used on the operating panel on the concerned lines/points when the same are engaged/blocked as visual reminders in accordance with SR 5.04.01.

17.1.3 FAILURE OF POWER SUPPLY INDICATIONS:-

The failure of power supply to the Route Relay Installations is indicated by audio and visual indicators on the operating panel.

18.0 CHART SHOWING THE OPERATION OF THE ENTRANCE AND EXIT BUTTONS FOR CLEARING STOP SIGNAL :

The push buttons chart for initiating Stop Signals and Calling on Signals.

Sl. No.	Signal Route	From Signal	To Destination	BUTTONS OPERATED		REMARKS
				SIGNAL	ROUTE	
1.	S-1A	S-1	S-5	S-1	5	Released by S5
2.	S-1B	S-1	S-7	S-1	7	Released by S7
3.	S-2A	S-2	S-4	S-2	4	Released by S4
4.	S-2(B1)	S-2	S-38	S-2	L4D1	
5.	S-2(B2)	S-2	S-38	S-2	L4D2	
6.	S-2(B3)	S-2	S-38	S-2	L4D3	
7.	S-2(C1)	S-2	S-44	S-2	L3D1	
8.	S-2 (C2)	S-2	S-44	S-2	L3D2	
9.	S-2(C3)	S-2	S-44	S-2	L3D3	
10.	S-2(D1)	S-2	S-46	S-2	L2D1	
11.	S-2(D2)	S-2	S-46	S-2	L2D2	
12.	S-2(E1)	S-2	S-42	S-2	L1D1	

13.	S-2(E2)	S-2	S-42	S-2	L1D2	
14.	S-3(A1)	S-3	S-21	S-3	L1U1	
15.	S-3(A2)	S-3	S-21	S-3	L1U2	
16.	S-3(B1)	S-3	S-49	S-3	L2U1	
17.	S-3(B2)	S-3	S-49	S-3	L2U2	
18.	S-3(C)	S-3	S-5	S-3	5	Released by S5
19.	S-3(D)	S-3	S-7	S-3	7	Released by S7
20.	S-4(A)	S-4	S-30	S-4	L8D	
21.	S-4(B)	S-4	S-32	S-4	L7D	
22.	S-4(C1)	S-4	S-34	S-4	L6D1	
23.	S-4(C2)	S-4	S-34	S-4	L6D2	
24.	S-4(D1)	S-4	S-36	S-4	L5D1	
25.	S-4(D2)	S-4	S-36	S-4	L5D2	
26.	S-4(D3)	S-4	S-36	S-4	L5D3	
27.	S-5(A1)	S-5	S-21	S-5	L1U1	
28.	S-5(A2)	S-5	S-21	S-5	L1U2	
29.	S-5(B1)	S-5	S-49	S-5	L2U1	
30.	S-5(B2)	S-5	S-49	S-5	L2U2	
31.	S-5(C)	S-5	S-47	S-5	L3U	
32.	S-5(D)	S-5	S-23	S-5	L4U	
33.	S-5(E)	S-5	S-25	S-5	L5U	
34.	S-7(A)	S-7	S-25	S-7	L5U	
35.	S-7(B)	S-7	S-27	S-7	L6U	
36.	S-7(C)	S-7	S-29	S-7	L7U	
37.	S-7(D)	S-7	S-31	S-7	L8U	
38.	S-21	S-21	S-51	S-21	51A	Released by S-51
39.	S-23	S-23	S-51	S-23	51A	Released by S-51
40.	S-25	S-25	S-51	S-25	51A	Released by S-51
41.	S-27	S-27	S-51	S-27	51A	Released by S-51
42.	S-29	S-29	S-51	S-29	51A	Released by S-51
43.	S-30	S-30	S-48	S-30	48	Released by S-48
44.	S-31	S-31	S-51	S-31	51A	Released by S-51
45.	S-32	S-32	S-48	S-32	48	Released by S-48
46.	S-34	S-34	S-48	S-34	48	Released by S-48
47.	S-36(A)	S-36	S-48	S-36	48	Released by S-48
48.	S-36(B)	S-36	S-58	S-36	58A	Released by S-58
49.	S-38(A)	S-38	S-60	S-38	60A	Released by S-60
50.	S-38(B)	S-38	S-58	S-38	58A	Released by S-51
51.	S-39	S-39	S-51	S-39	51A	Released by S-51
52.	S-41	S-41	S-51	S-41	51A	Released by S-51
53.	S-42	S-42	S-52	S-42	52	Released by S-52
54.	S-44(A)	S-44	S-60	S-44	60A	Released by S-60
55.	S-44(B)	S-44	S-58	S-44	58A	Released by S-52
56.	S-46	S-46	S-52	S-46	52	Released by S-53
57.	S-47	S-47	S-51	S-47	51A	Released by S-51
58.	S-48(A)	S-48	S-60	S-48	60A	Released by S-60
59.	S-48(B)	S-48	S-58	S-48	58A	Released by S-58
60.	S-49	S-49	S-51	S-49	51A	Released by S-51

61.	S-51	S-51	UP Home signal of KSNG	S-51	51A	Controlled by TIG-KSNG block instrument.
62.	S-52A	S-52	S-60	S-52	60A	Released by S-60
63.	S-52B	S-52	S-58	S-52	58A	Released by S-58
64.	S-58	S-58	DN Home signal of SFK	S-58	58	Controlled by TLBI of TIG-SFK section
65.	S-60	S-60	DN Home signal of RNBT	S-60	60	Controlled by TLBI of TIG-RNBT section

19.0 CHART SHOWING THE OPERATION OF THE ENTRANCE AND EXIT BUTTONS FOR CLEARING OF CALLING – ON – SIGNALS :

Sl. No.	Signal Route	From Signal	To Destination	BUTTONS OPERATED		REMARKS
				SIGNAL	ROUTE	
1	C-1A	S-1	S-5	S-1 & COGGN	5	Clearance after 120 seconds on occupation of 1AT
2	C-1B	S-1	S-7	S-1 & COGGN	7	Clearance after 120 seconds on occupation of 1AT
3	C-2A	S-2	S-4	S-2 & COGGN	4	Clearance after 120 seconds on occupation of 2AT
4	C-2B	S-2	S-38	S-2 & COGGN	L4 D1	Clearance after 120 seconds on occupation of 2AT
5	C-2C	S-2	S-44	S-2 & COGGN	L3 D1	Clearance after 120 seconds on occupation of 2AT
6	C-2D	S-2	S-46	S-2 & COGGN	L2 D1	Clearance after 120 seconds on occupation of 2AT
7	C-2E	S-2	S-42	S-2 & COGGN	L1 D1	Clearance after 120 seconds on occupation of 2AT
8	C-3A	S-3	S-21	S-3 & COGGN	L1 U1	Clearance after 120 seconds on occupation of 3AT
9	C-3B	S-3	S-49	S-3 & COGGN	L2 U1	Clearance after 120 seconds on occupation of 3AT
10	C-3C	S-3	S-5	S-3 & COGGN	5	Clearance after 120 seconds on occupation of 3AT
11	C-3D	S-3	S-7	S-3 & COGGN	7	Clearance after 120 seconds on occupation of 3AT
12	C-4A	S-4	S-30	S-4 & COGGN	L8 D	Clearance after 120 seconds on occupation of 130T

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13	C-4B	S-4	S-32	S-4 & COGGN	L7 D	Clearance after 120 seconds on occupation of 130T
14	C-4C	S-4	S-34	S-4 & COGGN	L6 D	Clearance after 120 seconds on occupation of 130T
15	C-4D	S-4	S-36	S-4 & COGGN	L5 D1	Clearance after 120 seconds on occupation of 130T
16	C-5A	S-5	S-21	S-5 & COGGN	L1 U1	Clearance after 120 seconds on occupation of 119AT
17	C-5B	S-5	S-49	S-5 & COGGN	L2 U1	Clearance after 120 seconds on occupation of 119AT
18	C-5C	S-5	S-47	S-5 & COGGN	L3 U	Clearance after 120 seconds on occupation of 119AT
19	C-5D	S-5	S-23	S-5 & COGGN	L4 U	Clearance after 120 seconds on occupation of 119AT
20	C-5E	S-5	S-25	S-5 & COGGN	L5 U	Clearance after 120 seconds on occupation of 119AT
21	C-7A	S-7	S-25	S-7 & COGGN	L5 U	Clearance after 120 seconds on occupation of 119BT
22	C-7B	S-7	S-27	S-7 & COGGN	L6 U	Clearance after 120 seconds on occupation of 119BT
23	C-7C	S-7	S-29	S-7 & COGGN	L7 U	Clearance after 120 seconds on occupation of 119BT
24	C-7D	S-7	S-31	S-7 & COGGN	L8 U	Clearance after 120 seconds on occupation of 119BT
25	C-21	S-21	S-51	S-21 & COGGN	51A	Clearance after 120 seconds on occupation of L1T1
26	C-23	S-23	S-51	S-23 & COGGN	51A	Clearance after 120 seconds on occupation of L4T1
27	C25	S-25	S-51	S-25 & COGGN	51A	Clearance after 120 seconds on occupation of L5T1
28	C-27	S-27	S-51	S-27 & COGGN	51A	Clearance after 120 seconds on occupation of L6T1
29	C-29	S-29	S-51	S-29 & COGGN	51A	Clearance after 120 seconds on occupation of L7T1

30	C-30	S-30	S-48	S-30 & COGGN	48	Clearance after 120 seconds on occupation of L8T3
31	C-31	S-31	S-51	S-31 & COGGN	51A	Clearance after 120 seconds on occupation of L8T1
32	C-32	S-32	S-48	S-32 & COGGN	48	Clearance after 120 seconds on occupation of L7T3
33	C-34	S-34	S-48	S-34 & COGGN	48	Clearance after 120 seconds on occupation of L6T3
34	C-36(A)	S-36	S-48	S-36 & COGGN	48	Clearance after 120 seconds on occupation of L5T3
35	C-36(B)	S-36	S-58	S-36 & COGGN	58A	Clearance after 120 seconds on occupation of L5T3
36	C-38(A)	S-38	S-60	S-36 & COGGN	60A	Clearance after 120 seconds on occupation of L4T3
37	C-38(B)	S-38	S-58	S-38 & COGGN	58A	Clearance after 120 seconds on occupation of L4T3
38	C-39	S-39	S-51	S-39 & COGGN	51A	
39	C-41`	S-41	S-51	S-41 & COGGN	51A	
40	C-42	S-42	S-52	S-42&COGGN	52	Clearance after 120 seconds on occupation of L1T3
41	C-44(A)	S-44	S-60	S-44&COGGN	60A	Clearance after 120 seconds on occupation of L3T3
42	C-44(B)	S-44	S-58	S-44&COGGN	58A	Clearance after 120 seconds on occupation of L3T3
43	C-46	S-46	S-52	S-46&COGGN	52	Clearance after 120 seconds on occupation of L2T3
44	C-47	S-47	S-51	S-47&COGGN	51A	Clearance after 120 seconds on occupation of L3T1
45	C-48(A)	S-48	S-60	S-48&COGGN	60A	Clearance after 120 seconds on occupation of 123/125T
46	C-48(B)	S-48	S-58	S-48&COGGN	58A	Clearance after 120 seconds on occupation of 123/125T

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47	C-49	S-49	S-51	S-49&COGGN	51A	Clearance after 120 seconds on occupation of L2T1
48	C-52(A)	S-52	S-60	S-52&COGGN	60A	Clearance after 120 seconds on occupation of 133AT
49	C-52(B)	S-52	S-58	S-52&COGGN	58A	Clearance after 120 seconds on occupation of 133AT

20.0 CHART SHOWING THE OPERATION OF THE ENTRANCE AND EXIT BUTTONS FOR CLEARING SHUNT SIGNAL:

Sl. No.	Signal Route	From Signal	To Destination	BUTTONS OPERATED		REMARKS
				SIGNAL	ROUTE	
1	SH-4(A)	SH-4	SH-30	SH-4	L8D	
2	SH-4(B)	SH-4	SH-32	SH-4	L7D	
3	SH-4(C)	SH-4	SH-34	SH-4	L6D	
4	SH-4(D)	SH-4	SH-36	SH-4	L5D1	
5	SH-5(A)	SH-5	SH-37	SH-5	L1U	
6	SH-5(B)	SH-5	SH-49	SH-5	L2U	
7	SH-5(C)	SH-5	SALLON SDG.	SH-5	SSDG	
8	SH-5(D)	SH-5	SH-47	SH-5	L3U	
9	SH-5(E)	SH-5	SH-23	SH-5	L4U	
10	SH-5(F)	SH-5	SH-25	SH-5	L5U	
11	SH-7(A)	SH-7	SH-25	SH-7	L5U	
12	SH-7(B)	SH-7	SH-27	SH-7	L6U	
13	SH-7(C)	SH-7	SH-29	SH-7	L7U	
14	SH-7(D)	SH-7	SH-31	SH-7	L8U	
15	SH-7(E)	SH-7	SHORTING LINE-1	SH-7	SRL1	
16	SH-7(F)	SH-7	SHORTING LINE-2	SH-7	SRL2	
17	SH-7(G)	SH-7	SICK LINE-1	SH-7	SL1	
18	SH-7(H)	SH-7	SICK LINE-2	SH-7	SL2	
19	SH-8(A)	SH-8	SH-4	SH-8	4	
20	SH-8(B)	SH-8	SH-38	SH-8	L4D1	
21	SH-8(C)	SH-8	SH-44	SH-8	L3D1	
22	SH-8(D)	SH-8	SH-46	SH-8	L2D1	
23	SH-8(E)	SH-8	SH-16	SH-8	16	
24	SH-8(F)	SH-8	SH-18	SH-8	ART	
25	SH-8(G)	SH-8	SH-20	SH-8	ARME	
26	SH-10(A)	SH-10	SH-16	SH-10	16	
27	SH-10(B)	SH-10	SH-18	SH-10	ART	
28	SH-10(C)	SH-10	SH-20	SH-10	ARME	
29	SH-12(A)	SH-12	SH-4	SH-12	4	
30	SH-12(B)	SH-12	SH-38	SH-12	L4D1	
31	SH-13(A)	SH-13	SH-5	SH-13	5	
32	SH-13(B)	SH-13	SH-7	SH-13	7	
33	SH-15(A)	SH-15	SH-37	SH-15	L1U1	
34	SH-15(B)	SH-15	SH-49	SH-15	L2U1	
35	SH-15(C)	SH-15	SALLON SDG	SH-15	SSDG	

36	SH-15(D)	SH-15	SH-5	SH-15	5	
37	SH-15(E)	SH-15	SH-7	SH-15	7	
38	SH-16	SH-16	SH-42	SH-16	L1D1	
39	SH-18	SH-18	SH-42	SH-18	L1D1	
40	SH-20	SH-20	SH-42	SH-20	L1D1	
41	SH-21(A)	SH-21	IOCL SDG	SH-21	IOC	
42	SH-21(B)	SH-21	SH-51	SH-21	51A	
43	SH-22	SH-22	SH-48	SH-22	48	
44	SH-23(A)	SH-23	SH-51	SH-23	51A	
45	SH-23(B)	SH-23	SHUNTING NECK	SH-23	SNK	
46	SH-24	SH-24	SH-48	SH-24	48	
47	SH-25(A)	SH-25	S-51	SH-25	51A	
48	SH-25(B)	SH-25	SHUNTING NECK	SH-25	SNK	
49	SH-26	SH-26	SH-48	SH-26	48	
50	SH-27(A)	SH-27	S-51	SH-27	51A	
51	SH-27(B)	SH-27	SHUNTING NECK	SH-27	SNK	
52	SH-28	SH-28	SH-48	SH-28	48	
53	SH-29(A)	SH-29	S-51	SH-29	51A	
54	SH-29(B)	SH-29	SHUNTING NECK	SH-29	SNK	
55	SH-30	SH-30	SH-48	SH-30	48	
56	SH-31(A)	SH-31	S-51	SH-31	51A	
57	SH-31(B)	SH-31	SHUNTING NECK	SH-31	SNK	
58	SH-32	SH-32	SH-48	SH-32	48	
59	SH-34	SH-34	S-48	SH-34	48	
60	SH-36(A)	SH-36	SH-48	SH-36	48	
61	SH-36(B)	SH-36	S-58	SH-36	58A	
62	SH-37(A)	SH-37	SH-39	SH-37	ARME	
63	SH-37(B)	SH-37	SH-41	SH-37	ART	
64	SH-37(C)	SH-37	SH-21	SH-37	16	
65	SH-38(A)	SH-38	S-60	SH-38	60A	
66	SH-38(B)	SH-38	S-58	SH-38	58A	
67	SH-39(A)	SH-39	IOCL SDG	SH-39	IOC	
68	SH-39(B)	SH-39	S-51	SH-39	51A	
69	SH-40	SH-40	SH-52	SH-40	52	
70	SH-41(A)	SH-41	IOCL SDG	SH-41	IOC	
71	SH-41(B)	SH-41	S-51	SH-41	51A	
72	SH-42	SH-42	S-52	SH-42	52	
73	SH-44(A)	SH-44	S-60	SH-44	60A	
74	SH-44(B)	SH-44	S-58	SH-44	58A	
75	SH-46	SH-46	S-52	SH-46	52	
76	SH-47	SH-47	S-51	SH-47	51A	
77	SH-48A	SH-48	S-60	SH-48	60A	
78	SH-48B	SH-48	S-58	SH-48	58A	
79	SH-49	SH-49	S-51	SH-49	51A	
80	SH-52A	SH-52	S-60	SH-52	60A	
81	SH-52B	SH-52	S-58	SH-52	58A	

21.0 **THE PUSH BUTTON CHART FOR CRANK HANDLES, SIDINGS AND LEVEL CROSSING GATES: -**

Sl. NO	Description of control	Buttons operated
1.	Releasing control for opening level crossing gate at KM 203/3	156+Group Trans GSBN
2.	Withdrawing control after closing level crossing gate at KM 203/3	156+Group Release GSRBN
3.	Releasing control for opening level crossing gate at KM 201/12-13	161+Group Trans GSBN
4.	Withdrawing control after closing level crossing gate at KM 201/12-13	161+Group Release GSRBN
5.	Permission to release CH-1 key	CH-1+ CHNB
6.	Withdrawal of control of CH-1 Key	CH-1 + CHRB
7.	Permission to release CH-2 key	CH-2 + CHNB
8.	Withdrawal of control of CH-2 Key	CH-2 + CHRB
9.	Permission to release CH-3 key	CH-3 + CHNB
10.	Withdrawal of control of CH-3 Key	CH-3 + CHRB
11.	Permission to release CH-4 key	CH-4 + CHNB
12.	Withdrawal of control of CH-4 Key	CH-4 + CHRB
13.	Permission to release CH-5 key	CH-5 + CHNB
14.	Withdrawal of control of CH-5 Key	CH-5 + CHRB
15.	Permission to release CH-6 key	CH-6 + CHNB
16.	Withdrawal of control of CH-6 Key	CH-6 + CHRB
17.	Permission to release CH-7 key	CH-7 + CHNB
18.	Withdrawal of control of CH-7 Key	CH-7 + CHRB
19.	Permission to release CH-8 key	CH-8 + CHNB
20.	Withdrawal of control of CH-8 Key	CH-8 + CHRB
21.	Permission to release CH-9key	CH-9 + CHNB
22.	Withdrawal of control of CH-9 key	CH9 + CHRB
23.	Permission to release CH-10 key	CH10 + CHNB
24.	Withdrawal of control of CH-10 key	CH10 +CHRB
23.	Permission to release CH-11 key	CH11 + CHNB
24.	Withdrawal of control of CH-11 key	CH11 +CHRB
23.	Permission to release CH-12 key	CH12 + CHNB
24.	Withdrawal of control of CH-12 key	CH12 +CHRB
23.	Permission to release CH-13 key	CH13 + CHNB
24.	Withdrawal of control of CH-13 key	CH13 +CHRB

22.0 **OPERATION OF SIGNALS :-**

All signals are directly operated from the Route Relay Interlocking cabin as shown in the Station Working Rules diagram.

23.0 **STATION MASTER KEY FOR OPERATING PANEL :-**

This key when inserted in the lock [provided on the Operating Panel] and turned to right the panel becomes operative. The key when inserted in the lock and either turned to left or extracted out from the lock renders the panel inoperative except for putting back the signals to "ON" position in case of emergencies. When the SM's Key is inserted and turned to right a white indication lits by the side of SM's Key.

24.0 DISTANT SIGNALS AND THEIR ASPECTS: -

The Distant signals work automatically, the aspects of these signals being controlled by the aspect of the respective Home Signals.

25.0 EMERGENCY OPERATIONS AND THE COUNTERS :-

Operation of the following buttons is recorded on the respective counters provided on the operating panel.

- I) Emergency Point Button [EWN].
- II) Emergency Full Route Release Button [EUUYN].
- III) Emergency Route Section Release Button [EUYN].
- IV) "Calling on" Signal Group Button [COGGN].
- V) Emergency Overlap Release Button [OYN].

The Panel Station Master on duty should keep a proper record of all such operations. A Register with separate portions for each button should be maintained. Each time a button is operated the readings on the respective counter should be recorded in the register mentioning clearly therein the circumstances under which the emergency operation had to be resorted to. At the time of handing over charge the relieved Panel Station Master should record and sign the last readings on the counters in the register and the Panel Station Master who takes over charge must verify, by physically check, the correctness of the readings recorded and counter sign the entry.

In case of failure of track circuit, the points can be set by operation of the emergency point button [EWN] and the point button [WN] concerned (after unlocking the EWN control lock) provided the point concerned was not engaged earlier or not locked. This electrical lock (Ignition type) is provided on the operating panel close to EWN button. This key should be kept in the personal custody of the Panel Station Master and no emergency operations should be carried out without his permission. The Panel Station Master on duty is responsible for all emergency operations explained above. The Panel Station Master is responsible for correct operation of the emergency buttons by breaking the seal and record the operations in the register.

The Panel Station Master should not permit any unauthorized person to operate the control panel.

For every operation the Signal button at the entrance point and the Route button at the exit point have to be simultaneously positively pressed down for initiating the route setting, locking and taking off the signal.

Similarly for any individual point operation, the Points button (WN) and the Group point button (WWN) have to be pressed simultaneously.

The Panel Station Master on duty must ascertain as visual verification that the indication appearing on the indicating panel is in conformity with the operation of the buttons on the operating panel. The Panel Station Master must also ensure that not more than two buttons are operated simultaneously at any given time.

26.0 APPROACHING LOCKING OF A ROUTE :-

Once a signal (either a stop signal or a shunt signal) is taken off, the route including signal overlap in case of main signal gets back locked and the set route cannot be altered or interfered with unless the signal concerned is put back to "ON" position and the route is

cancelled by emergency three button operation. After the initiation of such emergency three-button operation, the complete route gets cancelled provided there is no train on the approach track. If there is a train/vehicle on the approach track, the route gets approach locked and can be released only after the count down of 120 Seconds by the timer. [The approach locking distance being variable according to the aspect of the signal in rear and other important safety considerations such as maximum permissible sectional speed on the approaching line etc.]

27.0 **EMERGENCY RELEASE OF INDIVIDUAL-ROUTE SECTION AND OVERLAPS :-**

A complete route of signal comprises of one or more Route Sections (as also the overlap in case of a stop signal) and whenever any route section or overlap is not released by either passage of the train or by emergency cancellation of the entire route as already mentioned above, the emergency cancellation of the Route Section with the co-ordination of the SSE(Sig)/SE(Sig)/RRI on duty can be done and such cancellation is individually countered on the counter fitted on the panel.

28.0 **TAKING OFF CALLING ON SIGNALS :-**

The “Calling on” signals have been provided below the following stop signals at RNBT & SFK end:-

Sl.No.	Button No.	Signal No.
1.	C 1	On Up Main Home Signal at RNBT end.
2.	C 3	On Up Main Home Signal at SFK end
3.	C 5	On UP Routing home signal on main line.
4.	C 7	On UP Routing home signal
5.	C 42	On DN starter signal on line No.1
6.	C 46	On DN Starter signal on line No.2
7.	C 52	On DN intermediate starter signal
8.	C 44A/B	On DN Starter signal on line no.3
9.	C 38A/B	On DN Starter signal on line No.4
10.	C 36A/B	On DN starter signal on line no 5
11.	C 34	On DN starter signal on line No 6
12.	C 32	On DN starter signal on line No7
13.	C 30	On DN starter signal of line No8

The “Calling on” signals have been provided below the following stop signals at KSNG end.

Sl.No.	Button No.	Signal No.
1.	C 2	On DN Main Home Signal
2.	C 4	On DN Routing Home signal
3.	C 21	On UP Starter signal of line No.1
4.	C 23	On UP Starter signal of line No.4
5.	C 25	On UP Starter signal of line No.5
6.	C 27	On UP Starter signal of line No.6
7.	C 29	On UP Starter signal of line No.7
8.	C 31	On UP Starter signal of line No.8
9.	C 39	On UP Starter signal of ARME SDG
10.	C 41	On UP Starter signal of ART SDG
11.	C 47	On UP starter signal of line No.3
12.	C 49	On UP starter signal of line No.2

During the failure of the stop signal either due to failure of any track circuits on the route including the overlap or for any other causes the “Calling on” signals may be taken off after the train has come to a stand at the stop signal, provided all the other conditions for taking off the stop signal have been fulfilled and the approach track immediately in rear of the said stop signal is occupied by the train. After initiating the “Calling on” signal, the “Calling on” signal indication shows a White flashing light for 120 seconds and after which it shows a steady White light. It is only when such a steady White light appears the “Calling on” signal displays “OFF aspect”. Every such operation is registered on a counter provided on the operating panel.

29.0 FAILURE OF CALLING - ON TRACK AND SPECIAL MEASURES FOR TAKING OFF A “CALLING ON” SIGNAL :-

In case of failure of the Calling ON track, instead of taking off the “Calling on” signal, the trains shall be piloted treating Calling-on signal as failure and S&T official shall be informed for rectification.

During the failure of track circuit, before taking off “Calling on” signal, the clearance of the track on the entire route between stop signal to signal must be certified by the field Station Master to the Panel Station Master.

In all cases of Reception/Despatch of a train by taking off the “Calling on” signal, necessary particulars including the train No. “Calling on” signal No. and the Number Registered on the corresponding veeder counter should be recorded in a Register maintained for the purpose.

30.0 TAKING OFF THE SHUNT SIGNALS :-

For taking off a shunt signal, the corresponding route button (UN) and the shunt signal button (SH-GN) should be pressed simultaneously and released.

31.0 CLEARING OF STOP SIGNAL: -

Whenever it is necessary to clear a stop signal, it is necessary to press the signal button and the exit Route button where after this route setting is initiated, the route is lined up and locking executed on all the route sections and the overlap thus holding the route ultimately proving the way and circuits for the signal clearance.

32.0 ORDINARY AND SPECIAL ALTERNATIVE OVERLAP OF STOP SIGNALS :-

Some of the stop signals have been provided with more than one overlap [which is designated after the next stop signal ahead].

The details of these over laps are as follows:-

Sl. No.	Signal No.	Route No.	Move to	Over lap.	Point
1.	S-1A	1A	S-5	OV1-21	104N, 108N, 116N, 120N, 122N
				OV2-21	102N, 106N, 108N, 116R, 114N, 118R
				OV1-49	114N
				OV2-49	102N, 106N, 108N, 116N, 114R
				OV-47	112N
				OV-23	126N
				OV25	134N

2.	S-1B	1B	S-7	OV-25	134N
				OV-27	138N
				OV-29	140N, 136N
				OV-31	136N, 140R
3.	S-2A	2A	S-4	OV-30	143R, 145N, 123 N, 147N, 149N
				OV-32	143N, 123N, 147N, 149N, 145N
				OV-1-34	125R
				OV2-34	125N, 123N, (129N OR127R)
				OV1-36	129N
				OV2-36	129R, 127N, 125N, 123N
4.	S-2B	2B	S-38	OV1-38	139N,
				OV2-38	139R, 127N, 121N, 119N, 111N, 109N, 107N, 141N
				OV3-38	139R, 127N, 121N, 119N, 11N, 109R
5.	S-2C	2C	S-44	OV1-44	141N,
				OV2-44	107N, 109N, 111N, 119N, 121N, 127N, 139N, 141R
				OV3-44	109R, 111N, 119N, 121N, 127N, 139N, 141R
6.	S-2D	2D	S-46	OV1-46	137N,
				OV2-46	135N, 137R, 133N
7.	S-2E	2E	S-42	OV1-42	133N
				OV2-42	133R, 135N, 137N
8.	S-3A	3A	S-21	OV1-21	116N, 120N 122N, 108N, 104N
				OV2-21	102N, 106N, 108N, 116R, 114N, 118R
9.	S-3B	3B	S-49	OV1-49	114N,
				OV2-49	102N, 106N, 108N, 116N, 114R
10.	S-3C	3C	S-5	OV1-21	116N, 120N, 122N, 108N, 104N
				OV2-21	102N, 106N, 108N, 116R, 114N, 118R
				OV1-49	114N
				OV2-49	102N, 106N, 108N, 116N, 114R
				OV-47	112N
				OV-23	126N
				OV25	134N
11.	S-3D	3D	S-7	OV-25	134N
				OV-27	138N
				OV-29	140N, 136N
				OV-31	136N, 140R

NOTE:

Whenever any route is initiated by pressing the entrance and exit buttons, Overlap (OV) will set automatically along with the route. OV 1, OV 2 or OV 3 can be set either setting the route of the signal ahead or according to the line of the points as the case may be.

Alternative overlaps have been provided for some signals affording to flexibility in the yard operations. When a route is initiated, the overlap (designated as OV) is automatically set over the route on which the train traverses. But when an alternate overlap has to be set, first the route ahead has to be set by operation of entrance and exit buttons, then initiate the routes of the rear signal – after this operation the signal ahead may not be put back to "ON" and the route cancelled if required.

For these overlaps, it is not necessary to initiate the signal route for the advance section. The overlap will be set according to the lines of the points at the time of the initiation of the route and therefore the Station Master has to be mindful of keeping of the points in the overlap in the desired position before initiating the route.

33.0 **TIME RELEASE OF OVERLAP :-**

Any overlap, which is set for signaled route will be released after the train comes and stops at the berthing track to ensure that the train has come and stopped on berthing track, a time release of 120 seconds is provided for the release of overlap. Accordingly counting of time space as soon as the train comes on the berthing track just in rear of the signal and after a lapse of 120 seconds the overlap is released automatically permitting other routes to be set on the portion of the overlap.

In case of failure of release of the overlap at the end 120 seconds due to any reason, emergency overlap release is effected by pressing the concerned route button and overlap release button (OYN). The overlap is released immediately and the operation is recorded in the emergency overlap counter.

34.0 **PUTTING BACK THE SIGNAL TO "ON" POSITION :-**

In exigencies, when a stop signal or a "Calling on" signal or a shunt signal has to be put back to "ON" before passage of the train, the signal button (GN) concerned and the emergency signal cancellation button (EGGN) should be pressed simultaneously.

35.0 **LOCKING OF POINTS NORMAL AND SPECIAL CASES :-**

Normally the electric machine operated points can be set and locked provided the point zone track circuit is free and the subject point is not locked either by a route section or an overlap on flank protection arrangement.

The locking on the point is normally released immediately after the clearance of the route section or the overlap and the flank protection locking is released after the clearance of the controlling route section.

36.0 **INDIVIDUAL OPERATION OF POINTS WHEN THE TRACK CIRCUITS IN THE POINT ZONE HAVE NOT FAILED: -**

Whenever an individual point/crossover is to be set the point button (WN) concerned and the Point group button (WWN) should be simultaneously pressed and released. Such an operation will change the point/crossover from normal to reverse or from reverse to normal provided the track circuit/circuits in the point zone are not occupied.

Whenever any point cannot be operated to house either in normal or reverse position, a flashing indication appears on the point concerned on the indication panel. The point can be set to its original position by the operation of the point button (WN) concerned and the group point button (WWN).

37.0 **INDIVIDUAL OPERATION OF POINTS IN CASE OF FAILURE OF TRACK CIRCUITS/POINT ZONE TRACK CIRCUITS:-**

In the event of failure of the track circuits controlling the points, the Panel Station Master should first ensure personally or through SS/SM Line clear in RRI Cabin that the track circuit concerned is not occupied by a train/vehicle and then for emergency operation of points the Panel Station Master should unlock the EWN lock on the operating panel by operating the EWN key (provided for the purpose), press the point button (WN) along with the emergency point button (EWN) and release the buttons. Each time point is thus operated, the same will be recorded on the "EWN" counter.

38.0 **FAILURE OF THE POINTS DUE TO ANY OTHER CAUSES: -**

If any point fails before a route is lined up, the Panel Station Master should first try to set and reset the same point by individual operation to ascertain if the said point can be set in a particular position. If the said points cannot be set in any position, the Panel Station Master should not use the route concerned for normal signaled movement until the defect is rectified by Signal staff and certificate to this effect is obtained from SSE/SE/JE(Sig)/RRI, on duty. However, Crank handle operation may be done.

39.0 **PADLOCKING AND CRANKING OF POINTS WITH CRANK HANDLE AND ITS CONTROLLING KEYS AND SPECIAL PRECAUTIONS :-**

For the use of Crank handle for motor operated points the instructions laid down in rule No.20.06 of Operating Manual should be followed.

When the points are set by means of Crank handle, the panel Station Master on duty at RRI cabin shall ensure through SS /Station Master in RRI Cabin (L/C duty) that the entire route is correctly set, all the facing and trailing points are clamped and padlocked. All the points on the route must be clamped and padlocked for any no signaled movement.

The keys of the padlocks of all the clamped and locked points should be kept in the personal custody of the Station Master before the pilot memo is handed over to the Driver.

When once the route is so set manually by the Station Master and all the points on the route are clamped and padlocked, the same shall not be interfered in any way until the movement over the points concerned is completed or, any movement is cancelled, and such cancellation is authenticated by exchange of Private Number.

If any point has failed after setting of the route in Normal/Reverse position or both. a White indication strip starts flashing depending upon the position at which the point had failed. In such case the route concerned shall be cancelled and shall not be used until signal staff rectifies the defect.

40.0 **RELEASING OF A SUB-ROUTE SECTION: -**

If any route section over a point zone is not released after passage of a train due to failure of track circuit or otherwise, the route section can be released by means of Emergency operation by SSE (Sig)/SE (Sig) and the field Station Master .

41.0 **FAILURE OF TRACKCIRCUITS AND SIGNALS;-**

In the event of failure of track circuits over point zone, setting of the points will be done by panel SM through Emergency operation after the SS/SM on duty (L/C duty) at RRI cabin ensures that the points zone is clear of obstructions and gives assurance to panel operator supported by exchange of Private number to that effect. In case of failure of track circuits, calling-on signals where provided may be taken off. If there is no Calling-on-signal or if the same is out of order, the train concerned should be piloted to pass the signal concerned up to next stop signal ahead after ensuring the clearance of the route and setting, clamping and padlocking the points on the route concerned.

42.0 **SIGNAL ASPECT:-**

The aspect control chart of the signals in Titlagarh Station Yard is in accordance with the aspect control chart as indicated in the Interlocking Plan No-22033, ALT-'C'.

The failure of a Signal lamp of an aspect of a signal at site renders the signal to its next restrictive aspect. During failure of signal lamp the physical aspects of the signal at site and indications on indication panels are given below:-

Srl No.	Aspect displayed before failure of signal lamp		Particulars of failure of lamp	Aspect displayed after failure of signal lamp	
	By signal at site	By signal symbol on indication panel.		By signal at site	By signal symbol on indication panel.
1.	Red	Red	Red lamp-main filament fused	Red	Steady red on Main filament failure indication
2.	Red	Red	Red lamp-both filament fused	No Light at ON position	Flashing red on signal configuration with steady red main filament failure indication
3.	Yellow	Green	Yellow lamp main filament fused	Yellow	Steady red on Main filament failure indication
4.	Yellow	Green	Yellow lamp both filaments fused	Red	Flashing green on signal configuration with steady red main filament failure indication
5.	Double yellow	Green	One yellow lamp both filaments fused	Yellow	Flashing green on signal configuration with steady red main filament failure indication
6.	Double yellow	Green	Both yellow lamps both filaments of both lamps fused	Red for StopSignal and no light for permissive signals	Flashing green on signal configuration with steady red main filament failure indication
7.	Green	Green	Green lamp main Filament or auxiliary filament fused	Green	Steady green on signal configuration with steady red main filament failure indication
8.	Green	Green	Green lamp both filaments fused	Double yellow in 4 aspect signals and yellow in 3 aspect signals	Flashing green on signal configuration with steady red main filament failure indication

SPECIAL NOTE:-

- 1] In the addition to the failure of both filaments of Green lamps, failure of one or both filaments of yellow Lamp fail, the aspect assumed by the signal at site is RED.
- 2] A small flashing white light is lit near the main signal symbol, if the signal is put to danger and route cancellation is initiated when it is approach locked. This light remains flashing for 120 seconds after which it becomes steady. Then the panel Station Master should operate three-button emergency route cancellation.
- 3] When a Calling on Signal below a stop signal is taken off, a White dot is lit below the stop signal.
- 4] White oblique strip is lit above Green indication signal symbol whenever signal is taken "off" with route indicator for a diversion.

43. **SIGNAL REPLACEMENT AND CANCELLATION OF A ROUTE ALREADY SET:-**

Once a signal is taken off, it should not be put back to "ON" position unless absolutely required. For this, the signal button concerned and the emergency signal group button EGGN should be pressed simultaneously. This operation will make the signal to assume danger aspect while the route is still held and the three button emergency route cancellation process must be carried out for canceling the route already set. Refer to the following para.

44. **CANCELLATION OF A ROUTE:**

If, after setting of the whole route and taking off the signal concerned, the route is to be altered, the signal concerned must first be put back to "ON". If there is a train on the approach track or the signal is provided with dead approach locking the subject route gets released only after countdown of 120 seconds after the signal is put back to "ON". Then route can be cancelled by three-button operation.

The countdown of 120 seconds time interval is indicated by flashing white light on the approach lock indicator provided at the foot of the corresponding signal symbol on the indication panel. After the interval 120 seconds a steady white light appears and the flashing light ceases.

The panel Station Master should press the signal button GN and the emergency Route Cancel button EUUYN, keeping the signal button still pressed on, he should press the relevant route button. This operation will release the whole route and this will be indicated by extinguishing of the concern route lights on the panel. However, if the approach track of the signal is not free, the cancellation cannot be done immediately. In both cases, this cancellation operation is counted electrically on the digital counter. The transaction along with the time and reasons and the number registered on the counter should be recorded in a register specially kept for the purpose.

45. **RERPLACEMENT OF 'CALLING-ON SIGNAL TO 'ON' POSITION**

After taking off a Calling-on-Signal, if the same is to be put back to "ON" position, the signal button concerned (GN) and the emergency signal group button (EGGN) should be pressed simultaneously; In this case, also the route that was originally set and locked by the process of clearance of the signal is to be cancelled in accordance with instructions contained in the route cancellation Para mentioned above.

ROUTE INDICATORS:-

The signal No. S1, S3, S5, S7, S48, S36, S38, S44, S52 on Raipur end and S2, S4 & S47 on Vizianagram end are provided with junction type route indicators. Directional type route indicators are provided in the form of 5 lunar white lights above the respective signals at varying degrees from the vertical to the left or to the right side of the Driver. In case of more than one

such route indicators on the same side the top most corresponds to the first loop and other for subsequent loops in the regular order of sequence.

46. **FORMAT FOR VARIOUS EMERGENCY OPERATIONS:-**

FORMAT [a] FOR EMERGENCY SUB-SECTION ROUTE RELEASE:-

Date & Time	Route Section	Counter Numbers		Remarks	Signature	
		Before Release	After Release		On duty Dy.SS RRI	On duty SSE [Sig]/ SE [Sig]/RRI

FORMAT [b] FOR EMERGENCY OVERLAP RELEASE:-

Date & Time	Overlap route button No.	Counter Numbers		Remarks	Signature	
		Before Release.	After Release.		On duty Dy.SS RRI	On duty SSE[Sig]/ SE[Sig]/RRI

FORMAT [c] FOR EMERGENCY POINT OPERATION:-

Date & Srl.No.	Time of operation	Counter Numbers		Track circuit No. failed	Signature On duty Dy.SS RRI	Remarks
		Before Operation.	After Operation.			

FORMAT [d] FOR EMERGENCY FULL ROUTE CANCELLATION :-

Date & Srl.No.	Time of operation	Counter Numbers		Route cancelled	Reason for cancellation	Signature On duty Dy.SS/ RRI	Remarks
		Before Operation	After Operation				

NOTE: - All “emergency operation buttons” on the Station Master’s control panel of RRI Cabin shall be kept sealed in normal condition by S&T staff. Whenever any emergency operation is initiated. SS/SM on duty shall break open the seal of the concerned button to make the button operative. Immediately after completion of emergency operation SS/SM on duty shall inform S&T staff for sealing of the concerned button.

47. **EMERGENCY CRANK HANDLE INTERLOCKING: -**

Excepting the mechanically operated points which are dually controlled by the Route Relay Cabin all points in the Station Yard are operated through electrical point machine provided at site. These are remotely controlled and operated from Route Relay Cabin normally.

Whenever there is a failure of a power operated point, cranking is being done at site. For this purpose, it is necessary to open insert aperture with the help of the concerned and associated control key unless this aperture is opened by the operation of the controlling key, the emergency crank handle cannot be inserted in the motor and operated to set the points.

This control key will remain held on the point motor while it is being operated by the emergency crank handle. After the point is set and the crank handle is removed, the control key can be extracted and in that process the crank handle-inserting aperture gets closed and locked automatically.

The crank handle-interlocking key is inserted in the crank handle-interlocking box housed in the location/Goomty and turned clockwise then it gets locked. This key cannot be extracted from the box unless the control for releasing the key is transmitted from the Route Relay Cabin. When the release control is transmitted from the Route Relay Cabin, a white indication appears just below the key. After obtaining the above indication, the RED button below the key must be pressed and the key must be turned anti-clockwise and extracted simultaneously. Two controlling keys are provided in each box with individual indication and button below the respective key.

Inter locking has been provided between signals and emergency crank handle control keys in such a way that once the crank handle key of the concerned Point/Points is extracted, it is not possible to set the route and clear the signal/ signals leading over that point/points till such time the key is restored back to its box.

For the purpose of facilitation, flexibility and quick reach of the emergency crank handle and crank handle; keys have been provided in different groups at UP and DN end areas in the yard.

CRANK HANDLE	CRANK POINTS
CH-1	102,106
CH-2	110,112
CH-3	108,114,116
CH-4	104,118,120,122
CH-5	148,150
CH-6	124,126,130,132,134,136,138
CH-7	140
CH-8	133,135,137
CH-9	139,141
CH-10	123,125,129
CH-11	107,111,119,127
CH-12	109,121
CH-13	143,145,147,149,151,153

One crank handle is kept in a pad locked box kept at each of the above places and the keys of this padlock after locking the crank handle shall remain in the personal custody of the Station Master RRI

The crank Handle along with the concerned controlling key can be handled only by the concerned SS/SM and the S&T maintenance staff as per the instruction of the Panel Station Master. It is the personal responsibility SS/SM of RRI Cabin in field/Point Zone to ensure that as soon as the required manual operation of the point/points in his zone are over, the crank handle is restored to the padlocked box and the box properly pad locked and that the crank handle control key is also returned to the respective crank handle interlocking box and transmitted to the Route Relay Cabin expeditiously.

It will be seen from the above table that, in all there are thirteengroups covering all the power-operated points in. Titlagarh Station yard Control keys have special arrangements of configuration for each group and the point machines of the corresponding group have a

matching configuration at the key hole permitting the entry of the key meant only for the particular set of points in that group. The detailed procedure of the emergency crank handle operation of points at different zone are given below:-

48. **POINT ON EAST AND WEST ZONES:-**

- 1) The concerned SS/SM on platform duty or SS/SM of RRI in field/point zone shall exchange Private Number with the Panel SS/Station Master from the respective zones (east and west) giving his identification. The Private Number shall be recorded in the Crank Handle Register. The Station Master in field should then advise the panel Station Master to release the concerned crank handle-controlling key. The Panel Station Master should release the control by pressing the concerned crank handle group button CH and CHNB. The release of the control is indicated by flashing WHITE indication on the panel near the crank handle group button.

At site on the concerned crank handle-interlocking box, the WHITE indication appears below the key. The field SS/SM should then press the RED button below that key and extract the key from the box. The extraction of the key is indicated on the Route Relay Panel by flashing RED indication.

The point/points is/are then operated with the help of the emergency crank handle taken out by the field SS/SM from the pad locked box in the Goomty/Location after opening the aperture in the point machine with the help of the controlling key by the field SM at site and set to the desired position, clamped and pad locked as desired by the Panel Station Master and the keys of the pad lock shall be in the personal custody of the field SM after which the field SM shall restore the controlling key to its original place in the crank handle interlocking box (after locking the crank handle in its box) and turned clockwise.

Restoration of the controlling key back in its place is indicated by turning of the flashing RED indication into steady RED with flashing WHITE indication. The panel operator should then withdraw the released control by pressing the crank handle group button CH and the CHRB. The steady RED indication disappears and steady WHITE indication appears indicating the normal condition. The WHITE indication appears indicating the normal condition. The WHITE indication on the crank handle-interlocking box at site also disappears.

When the control has been withdrawn, the field SM should advise the Panel Station Master communicating a Private Number assuring him that the desired point/points has been operated to the required position as advised by Panel Station Master, set correctly, clamped and padlocked in their proper position and the control is returned. The Private Number given by the field SM shall be recorded in the Crank Handle Register.

The Panel Station Master on duty after ensuring the correct setting of defective points shall verify from the visual indication available on the panel that all the points on the route are set to the desired position and shall take off the concerned signal for movement of train over the said point/points.

If the correct setting of the defective points in the desired position is not indicated on the panel, the train shall be piloted IN/OUT in terms of Subsidiary Rules No. 3.69.01, 3.69.02, 3.69.03, 3.70.01 and 3.70.02.

The route once set and locked for receiving or despatch a train shall not be interfered with unless the said movement is completed or cancelled and expressly so directed by the Panel Station Master.

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Whenever the crank handle is required to be used by a Signal Official for maintenance work or for attending failure, the signal official must give Disconnection memo (SI-4) to the Panel SS/Station Master on duty. After making necessary entries in the Crank Handle Register, the Panel Station Master shall obtain the acknowledgement of the signal official in the Crank Handle Register and then release the concerned crank handle-controlling key to the Signal Official.

The concerned point/points shall be treated as defective till the emergency crank handle controlling key is restored to its normal place and control is withdrawn by the Panel Station Master.

Before parting/releasing control with the emergency crank handle for maintenance work by signal official, the Panel Station Master shall ensure that the reception/departure signals for effected line/lines are at "ON" position. The points of the effected line should be treated as non-interlocked and the Panel Station Master should instruct the concerned field ASM for setting clamping and padlocking the facing and trailing points over which the train is to passed and such assurance is taken by the Panel Station Master from the field SM supported by Private Number before piloting IN/OUT of trains over the affected points as per GR 3.69.,3.70, 5.09 and SRs thereto.

An emergency Crank Handle Register is to be maintained in the Route Relay Cabin with the following proforma by on duty Panel Station Master of Route Relay Cabin wherein the particulars of usages of the emergency crank handle must be recorded.

- I) Date.
- II) Point No. which failed or required to be tested.
- III) Time of failure.
- IV) Disconnection Memo No. received from S&T staff.
- V) Points controlling key No. released from Route Relay Cabin.
- VI) Private Number or signature of the official to whom the controlling key is released.
- VII) Time when release was given.
- VIII) Private Number/signature assuring correct setting, clamping and padlocking of the concerned points.
- IX) Date and time fault rectified.
- X) Time when controlling key release withdrawn by Panel Station Master.
- XI) Signature and designation of official who rectified the fault.
- xii) Remarks

When points become defective the, Panel Station Master must comply with GR 3.51, 3.77, 5.10 and SRs thereto and he must notify all concerned promptly for speedy restoration.

When interlocking fails, all the affected points on a route, both facing and trailing points must be clamped and padlocked before allowing any movements over the affected points.

For use of Crank Handle for motor operated point refer to rule No.20.06 of Operating Manual also.

49. **INTERLOCKING BETWEEN SIGNALS AND BLOCK INSTRUMENTS:**

This Route Relay Interlocking Cabin is equipped with the following types of Block Instruments to control movements of trains from and to adjacent Block Sections.

	Section	Type of Block Instrument
1.	TIG-KSNG	Double line SGE Block Instrument.
2.	TIG-SFK	Daido Type Single line Token-less Block Instrument.
3.	TIG-RNBT	Daido Type Single line Token-less Block Instrument.

INTERLOCKING BETWEEN SIGNAL AND BLOCK INSTRUMENTS:-

1) **LAST STOP SIGNAL CONTROL:-**

- a) The block working of the sections TIG-SFK&TIG-RNBT is controlled with the provision of Token-less Block Instrument (Diado type)and TIG-KSNG double line is controlled by SGE Block Instrument provided at RRI cabin.
- b) The Advanced starter signals are interlocked with the respective Block Instrument in such a way that the any Advanced starter signal can not be taken off unless the Line Clear is obtained from the block station in advance and the handle of the Token-less Block Instrument is turned to "TGT" position.
- c) The concerned Advanced starter signal aspect will be changed its "OFF" aspect to "ON" aspect as soon as the leading pair of the train wheels occupies the concerned Advanced starter signal replacement track circuit provided ahead of the respective signal.

2) **BLOCK RELEASE:-**

- [a] The Block Instruments are restored to normal (Line Closed condition) only after the complete arrival of the train past the block over lap ahead of the respective Home signal on either side of the TIG Station yard.
- [b] All the power signaling installations in TIG Station yard are centrally controlled from the Route Relay Cabin and it is explicit in this arrangement that the complete arrival of a train into the yard from the block section can not be ensured by the operating personnel in the centrally located Route Relay Cabin hence, to ensure complete arrival of the incoming train, Axle Counters are provided between TIG-KSNG, TIG-RNBT and TIG-SFK sections.
Thus the Axle Counters provided at the end of the Block Overlap ahead of the respective Home signal to ensure complete arrival of the incoming trains at TIG Station yard.
- [c] In the event of failure of Axle Counter, block working of the section concerned is to be suspended, Line clear Station Master shall not normalize the commutator of the concerned Block Instrument to "Line Closed" position and shall not despatch "Train out of block section" report to the station in rear until he is satisfied by seeing the Last Vehicle Indicator on the last vehicle of the incoming train (after arrival) of which Axle Counters failed or obtaining the complete arrival certificate from the Guard of the train. Then station master shall resort to resetting procedure of the axle counter of concerned block section.

[d] **RESETTING PROCEDURE:-**

After complete arrival of train, if the axle counter of the section does not clear or Axle counter section free indication (GREEN) does not appear in the axle counter panel, The receiving station SM shall call the attention of the station in rear through telephone for resetting and shall establish communication with the said station if resetting of axle counter is considered necessary 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, if arrived fully, shall intimate authenticated by exchanging Private number with the sending station.

As digital Axle counters are provided as LVCD in Block section, resetting is to be done by both of sending end and receiving end individually.

The status of the section LVCD i.e. Clear (GREEN), occupied (RED), preparatory reset (Miniature GREEN) and power on indications (YELLOW) 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:-

- i) Insert SM's LV reset key, turn right and keep pressed.
- ii) Press LV reset button provided on the panel.
- iii) Release SM's LV reset key and reset button.
- iv) Turn left the SM's LV reset key and remove it.
- v) The system obtains preparatory reset state and preparatory reset indication (miniature Green) glows on the panel.
- vi) The counter reading increases by one count after a gap of 5 seconds approximately.
- vii) The counter reading should be recorded.
- viii) First train is to be piloted out into the section to make the system normal.

The SS/SM shall record in his Train Signal Register, Station Diary and register meant for it the details of resetting operation giving details of train number, time, Private Number exchanged with SS/SM in rear and reasons for the resetting operation.

If the axle counters functioning properly now, then Block Section cleared indication 'GREEN' will appear on the panel and the concerned Block working will be normalised.

If the axle counter section indication does not appear 'Green' and continues to show 'RED' indication, the concerned Block section shall remain suspended and failure intimation to be given to sectional signal Maintainer/JE/SE (Signal) for early rectification.

APPENDIX - 'C'

ANTI COLLISION DEVICE (RAKSHA KAVACH)

NIL

APPENDIX – D**APPENDIX – ‘D’ TO THE STATION WORKING RULES OF TIG STATION.**

(Operating and Commercial Duties are amalgamated)

1. **STATION MANAGER –I (SUPERVISORY) :**

He is over all in charge of the Station. He is responsible for the efficient discharge of duties devolving upon all the staff employed at the station whether permanently or temporarily accordingly to rules, Safe Working Instructions and Station Working Rules. He shall see that all signals, points, level crossings and the whole machinery at the station are in perfect working order. He shall report all defects to the concerned officials. He shall satisfy himself that the staff employed at his station are thoroughly conversant with the Station Working Rules and perform their duties correctly. It is his personal responsibility to maintain the Station Working Rules, all Rules Books and Assurance Register up to date. He shall conduct surprise night inspections safety meetings and fire drills. He shall also ensure that the safety equipments at the station/cabin as mentioned in Station Working Rules are supplied in full and they are in good working order.

He shall see that all the departments and staff under his control function efficiently according to rules in force. He shall see that proper cleanliness of the station is maintained and the whole working at the station and in the yard is carried out efficiently. He shall pay special attention towards the passenger amenities and coaching trains punctuality and yard fluidity. He shall endeavor for minimizing detention to freight trains by judicious planning of train staff.. He shall attend to all complaints by travelling/trading public.

His special attention is drawn to chapter No.II of GR (Amendments) & SR 2000 and GR 5.01 to 5.08 with relevant SRs. He shall follow the instructions laid down in SR 3.68.01(c) & (d) and SR 14.07.01 and BWM 2.09 (e). He will promptly attend to accidents and report them. He will supervise the work of staff and report lapses of staff under him.

1.1. **Assurance Register :**

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

No Railway Servant shall be entrusted with any duty involving the Safety of the public unless the station Manager 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 Station Manager is responsible to see that all the staff are well conversant with the Station Working Rules of the Station and their signature obtained in the Assurance Register after he is satisfied that they have thoroughly understood the working rules of the station. In case of Class-IV Staff their signature/thumb Impression must be obtained after explaining fully about their duties and responsibility.

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

The declarations are to be renewed in the following cases :

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

1.2. **Use of Private Number Books and Identification Number :**

Sufficient Private Number Books and Identification Number sheets in sealed cover shall always be kept in stock by Station Superintendent under lock and key. One Register shall be maintained with particulars of receipt brought into use, closed date sent back to office for renewal for this purpose.

1.3. **Accidents :**

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

2. **STATION SUPERINTENDENT : (PLATFORM DUTY AT CENTER)**

He shall perform duties detailed below and remain responsible for the efficient working of Station during his duty.

- (i) Maintenance of Caution Order and preparation of Caution Order for all trains during tenure of his duty hours.
- (ii) Right time departure of all trains. He shall deal with all passenger amenities and complaints by travelling public.
- (iii) Prompt attendance of all coaching trains to ensure loading and unloading is completed in time and to avoid complaints of any kind from the travelling public.
- (iv) Eliminating detention to the coaching trains & goods trains at station & outside signals.
- (v) He shall see that shunting is supervised by an authorised person and is carried out as per rules.
- (vi) Ensure proper co-ordination with all departments for quick movement of trains within the yard and expeditious reception/despatch thereof to and from the yard and platform.
- (vii) Ensure prompt attention to vehicles marked sick and reduce detention to such damaged/defective vehicles in shunting operation.
- (viii) Ensure improvement of turn-round of wagons/vehicles and ensure that placement and drawing out of rakes from sidings are promptly done.
- (ix) Maintain close liaison with the control office in all matters relating to train operation, balancing of Crew and Guard, yard clearance and coaching stock and fueling point.
- (x) He is responsible for over-all supervision in the station.
- (xi) He shall see the functioning of the catering units and brought to the notice of higher authority in case of any irregularity.
- (xii) Ensure proper provision and function of other passenger amenities like drinking water, water cooler, lights, fans, waiting Rooms/halls, retiring rooms, enquiry, reservation counters etc.
- (xiii) He shall ensure setting of facing and trailing points of the nominated route at the farthest end for dispatch and facing and trailing points nearest to platform for reception of a train during failure of signals in coordination with SS/SM line clear duty of RRI cabin.
- (xiv) He shall assist the SS/SMs at RRI cabin for admission/despatch of trains during failure of signals and piloting in and piloting out of trains.
- (xv) He shall be responsible for securing of the stabled load on a line and protection of Blocked line vide GR 5.23 and SR's thereto. The stabled load register shall be maintained by him.

- (xvi) He shall ensure alertness of all staff working at the station and maintain discipline law and order, cleanness in co-ordination with other departments.
- (xvii) Shunting movements will be supervised in case of emergency.
- (xviii) In the absence of Station Manager-1, his duties will devolve on him.

3(A)SS / SM : (IN RRI CABIN FOR PANEL OPERATION).

He is responsible for operation of panel Board for reception/despatch of trains, shunting operations and for any emergency operations on the panel. He shall ensure the complete arrival of the train through Axle counter or physical verification, in case failure of Axle counter. He shall be responsible for Axle counter resetting operation also. He shall nominate the line and take off signal for admission of train in consultation with the SS/SM on L/C duty. He shall be responsible for correct use of Crank Handles and transmitting Crank Handle, siding Key and reception/dispatch of trains from/to nonsignalled line and sidings. He shall be responsible for protection of Blocked line vide GR 5.23 and SR's thereto and put reminder collar on concerned route button, point button etc, vide SR 3.36.03 (b). He shall keep a close watch on every movement in the yard and take off signals for shunting operation in co-ordination with Shunting Supervisor on duty and the yard staff.

The SS/DY.SS/Station Master on duty shall check from panel indications the clearance and occupation of lines/yard position at the time of taking over charge. This will not, however, relieve his responsibility to ensure by physical check that the nominated line is clear of all obstructions before admission of any train on it. The duties of SS/SM on Line clear duty of RRI cabin, who is for the time being on field supervision for setting, clamping and padlocking of points during failure of points&signals, shall devolve on panel duty SM.

He is responsible for working beyond this period when called upon to do so in the exigencies of services. He will follow SR 3.68.01(c) & (d), SR 14.07.01. His special attention is drawn to Chapter II of GR & SR 2000 and GR 5.01 to 5.08 with relevant SRs. As an Assistant to the SMR, he shall follow the instructions given to him.

(B) SS/SM : (IN RRI CABIN ON L/C DUTY):

He is responsible for operation of Block Instruments. He shall ensure closing of interlocked Level Crossing Gates and Midsection Level Crossing Gates, when required for taking 'OFF' signals for granting/obtaining "Line Clear" and ensure the complete arrival of the train before closing the block section. He shall exchange alright signals with the Driver and Guard. He is responsible for correct setting, clamping and padlocking of concerning points enroute, in facing and trailing direction and ensure the route on which the train to pass is free from all obstructions during failure of signals and points. During piloting in and piloting out of trains, he shall take the assistance of SS/SM on Platform duty at center. He shall check the clearance of point zone track circuits and clearance of line during emergency operation of points. He shall plan with the SM of RRI panel about the crossing of train and shall give in and out report to the Section Controller. He shall maintain Train Signal Register properly. He shall be responsible for crank handling of points, maintenance of Crank Handle Register and Failure Register. He shall make necessary entries in TSR in red ink if any running line is blocked by stabled load.

The Station Superintendent/DY.SS/Station Master on duty shall record in the diary the condition of all the running lines, sidings, the caution orders in force, Emergency counter numbers and other counter Nos, safety circulars, last PN used etc at the time of handing over charge. These entries must be counter signed by SS/DY.SS/Station Master coming on duty while taking over charge.

He is responsible for working beyond this period when called upon to do so in the exigencies of services. He will follow SR 3.68.01(c) & (d), SR 14.07.01. His special attention is drawn to Chapter II of GR & SR 2000 and GR 5.01 to 5.08 with relevant SRs

4. TRAFFIC POINTS MAN :

They shall work according to the orders given by the Station Superintendent/Dy. Station Superintendent/Station Master on duty. They are responsible for supervising shunting operation, coupling and uncoupling of wagons, setting of points where necessary and relaying hand signals given by Guard/STJM. They are responsible for securing loose vehicles on the siding and running line. They will work as engine pilot man and pilot in and pilot out of trains in case of signal failure. When necessary, they will work in the Goomties for observing and reporting the complete/incomplete arrival/departure of trains as per the order of the Dy. Station Superintendent on duty in case of failure of Axle Counter/Track Circuit.

He must be thoroughly conversant with the GR 3.38, 3.46, 3.77(1), 5.09, 3.52 to 3.60, 3.62, 5.13, 5.15, 5.16, 5.21, 5.23 & SRs there to and clear his doubts regarding safe working rules from SS/SM.

5.0 **DUTIES OF TRAFFIC GATEMAN:**

1 **ALERTNESS:** The Gateman on duty shall be alert. He should be prepared to take immediate action, when danger is apprehended. Keys of the Gate shall be in his personal custody.

2 **POSITION OF GATE KEEPER DURING PASSAGE OF TRAINS:**

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

- i) Gateman will stand attentively in front of the Gate – lodge facing the approaching train.
- ii) In daytime, Gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In nighttime, 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 and blow the whistle to draw the attention of Driver & Guard of the passing train.

3 **ROUTINE DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag by day and red lamp by night is placed across the track whenever the Gate is kept in open condition during emergencies or obstruction on track.
- ii) Gateman shall ensure that all Gate lamps and hand signal lamps 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 his reliever arrives and takes over charge from him. However, if it is necessary to leave the Gate in an emergency, he must close and lock the Gates against road traffic, before leaving the Gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons /trains/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) 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.
- vii) Gateman shall report the Permanent Way Inspector any defect in his Gate or apparatus pertaining to it, as soon as possible.
- viii) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- ix) 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 must keep the road surface well-watered and rammed in case of unmetalled roads.
- xv) Gateman must be vigilant to see that inconvenience to road users due to closure of Gates should be to the minimum possible extent.
- xvi) Gateman on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xvii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4 ACTION IN CASE OF UNUSUAL OCCURRENCE OF 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 driver/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 driver/guard by whistling continuously, shouting, gesticulating, and throwing ballast on the brake van or by any other means.
- iii) If driver/guard fails to take notice, Gateman shall immediately inform the SM on duty to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the Driver/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 SM to take appropriate action, under exchange of private number.

5 ACTION IN EMERGENCY AT THE LEVEL CROSSING:-

- i) In case of an obstruction at the level crossing Gate, he shall place banner flag/red light lamps on the stave on track at 5 m. away from the edge of the road at Level Crossing.
- ii) Thereafter, if he is unable to remove the obstruction, Gateman shall immediately advise the SM on duty/TIG regarding the defects/obstructions at the Gate, under exchange of private number.
- iii) If there is no response from the SM on duty after three attempts, he shall first protect the Gate and then inform on phone.

The Gateman shall protect the line as under : -

(a) ON DOUBLE LINE SECTION:

- (i) If both lines are obstructed the gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- (ii) The he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
- (iii) Gateman shall then proceed to protect the gate along with detonators, fusees and red flag by day and red hand signal lamp by night.
- (iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 on BG from the level crossing gate and place 3 detonators on the track in 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- (v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- (vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the driver 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 light up and fix the fusee to warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

(b) 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, fusees and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction, which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track in 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator of his way back.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal similarly place detonators as described in (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 driver 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 light up and fix the fuse to warn the driver and stop the approaching train by waving his red flag by day, red hand signal lamp by night repeatedly.

(c) **Other actions 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 SM / TIG regarding the particulars and obstructions at the level crossing Gate, through messenger or other means available.

APPENDIX - 'E'**ESSENTIAL EQUIPMENT OF THE STATION**

Below is the list of essential safety equipment, which shall be readily available in good working order with necessary relief stock.

1.	Detonators	-	30 Nos.
2.	Tri Colour Lamp/Torch	-	6 Nos.
3.	Hand Signal Flag	-	6 Sets.
4.	Skids	-	08 Nos.
5.	Safety Chains with Pad Locks	-	08 Nos.
6.	Clamps with Pad Locks	-	12 Nos.
7.	Fire and Sand Buckets	-	05 Nos.
8.	D.C.P.T. Fire extinguisher	-	02 Nos.
9.	First Aid Box	-	02 Nos. (1 with Outdoor SS)
10.	Stretcher	-	01 No.
11.	Blanket	-	01 No.
11.	Reminder Collar	-	12 Nos.
13.	Motor Trolley on line Board	-	03 Nos.

APPENDIX - 'F'**RULES FOR WORKING OF DK STATIONS , HALTS,IBH, IBS,AND OUTLYING SIDING**

NIL.

APPENDIX - 'G'**RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTION**

NIL.