

**EAST COAST RAILWAY**  
**WALTAIR DIVISION**

**STATION WORKING RULES OF SITANAGARAM [BROAD GAUGE]**

Date of Issue: -  
Date brought in force:

NOTE: -

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

1. **STATION WORKING RULE DIAGRAM:**

(i) The Station Working Rule diagram no: SI/WRD/23080

(ii) CSTE/East Coast Railway Signal Interlocking Plan No. SI/23080

(iii) Date up to which is corrected:

2. **DESCRIPTION OF STATION**

2.1 **GENERAL : LOCATION:**

a) Name of the station	: SITANAGARAM
b) Class of station	: 'B' class
c) Section	: Vizianagaram-Tie line 'A' cabin
d) Double line/Single line	: Double line
e) Electrified/Non Electrified	: Non-Electrified
f) Railway	: East Coast Railway
g) Route	: 'D' Special
h) Situated at	: Km 401.685
i) Reckoned from	: Raipur
j) Number of cabins	: Centrally operated Domino type full-fledged panel along with VDU.

2.2. **BLOCK STATIONS, IBH. IBS ON EITHER SIDE AND THEIR DISTANCE AND OUT LYING SIDINGS:**

2.2.1 **BLOCK STATIONS, IBH. IBS ON EITHER SIDE AND THEIR DISTANCES:-**

Block section	Distance	Direction
Bobbili	11.3km	South-west
Parvitipuram	12.8km	North-east

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**2.2.2. OUT LYING SIDINGS/D.K.STATION :-**

NIL

**2.2.3. PASSENGER HALT :-**

NIL

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

Between Stations	The Point from which the 'Block Section' Commences	The Point at which the 'Block Section' ends
SNM-VBL UP Direction	From UP advanced starter signal no. 13 of SNM	Up to point No. 31A of VBL.
SNM-PVP DN Direction	From DN advanced starter signal no.14 of SNM	Up to point No. 18B of PVP.

**2.4 GRADIENTS**

(a) From the centre of the station building towards Bobbili:

Chainage in Mtrs. From CSB		Stretch	Gradient
From	To		
0.000	CH: 786.2	786.2	1 in 400 falling on UP line
CH: 786.2	CH: 850.4	64.2	Level on UP line
CH: 850.4	CH:1141	290.6	1 in 200 raising on UP line
CH: 1141	CH: 1400	259	Level on UP line
CH: 1400	CH: 2243.3	843.3	1 in 180 falling on UP line
CH:2243.3	Into section	----	Level on UP line
CH:0.000	CH:879.09	879.09	1 in 400 falling on DN line
CH:879.09	CH:1149.35	270.26	1 in 1370 falling on DN line
CH:1149.35	CH:1400	250.65	Level on DN line
CH:1400	CH:1800.125	400.125	1 in 275 falling on DN line
CH:1800.125	CH:2243.33	443.205	1 in 353 falling on DN line
CH:2243.33	Into section	----	Level on DN line

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b) From the centre of the station building towards Parvitipuram:

Chainage in Mtrs. From CSB		Stretch	Gradient
From	To		
0.000	CH: 412.8	412.8	1 in 400 raising on UP line
CH: 412.8	CH: 1516	1103.2	1 in 150 raising on UP line
CH: 1516	CH: 1751	235	1 in 1100 raising on UP line
CH: 1751	CH:2185	434	1 in 900 raising on UP line
CH:2185	CH:2790	605	Level on UP line
CH:2790	Into section	---	1 in 300 falling on UP line
0.000	CH:412.8	412.8	1 in 400 raising on DN line
CH:412.8	CH:1516	1103.2	1 in 150 raising on DN line
CH:1516	CH:1751	235	1 in 1100 falling on DN line
CH:1751	CH:1956.6	205.6	1 in 900 falling on DN line
CH:1956.6	CH:2461	504.4	1 in 470 raising on DN line
CH:2461	Into section	---	1 in 220 raising on UP line

## 2.5 **LAY OUT:**

A. Number of running lines: 4 (Four)

Number of non running lines:1 (One)

Running line/Non running line	Electrified/Non Electrified
Route-1 (DN loop)	Non Electrified
Route-2 (DN main)	Non Electrified
Route-3 (UP Main)	Non Electrified
Route-4 (common loop)	Non Electrified
Engineering siding	Non Electrified

### B. ENGINEERING SIDING:

Engineering siding takes off from line no.4 of the yard and is isolated by derailing switch and Motor loading ramp. The entrance points and derailing switches are operated individually by arc levers in succession. Hand plunger locks fitted at the entrance point unlocked by key 'P' released from RKT provided in location box through control no. 27 from panel. When control 27 is transmitted from panel S1/C1, S4/C4, SH3 and SH-6 signals of line no.4 will be locked in their normal position.

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## (c) PLATFORMS:

- i) One low level passenger platform on line no1 is provided with a measurement of 351.73MX6.1M.
- ii) One Rail level passenger platform between Line No.3 & Line No.4 is provided with measurement of 351.73Mx 6.1M.

**2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT & HOLDING CAPACITY**

## (a) DIRECTION OF TRAFFIC:-

The trains coming from Parvatipuram end are UP trains and the trains coming from Bobbili end are DN trains.

**RUNNING LINES AND THEIR HOLDING CAPACITIES:**

## (b) HOLDING CAPACITIES:

Line No 1	DN loop	725 Meters	Non-Electrified	From Starter to SB
Line No 2	DN Main line	747 Meters	Non-Electrified	From Starter to SB
Line No 3	UP Main line	745 Meters	Non-Electrified	From Starter to SB
Line No 4	Common loop line	719 Meters	Non-Electrified	From Starter to Starter

**2.5.2 NON RUNNING LINES AND THEIR CAPACITY:**

1	Engineering Siding	491M Meters	Non-Electrified	From Glued joint to glued joint
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**2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT:**

Nil

**2.6 LEVEL CROSSINGS:**

- i) One 'C' class LC gate (manned) is situated at km 397/1 (LC No. RV-290) between SNM-PVP.
- ii) One 'A' class LC gate East cabin operated is situated at km 402.288 (LC No. RV-294) between SNM-VBL.
- iii) One 'B' class LC gate is situated at km 403/11-12 (LC No. RV-295) between SNM-VBL.

**3.0 SYSTEM AND MEANS OF WORKING:-**

- i) System of working: Absolute block system:

Trains are worked under Absolute block system in accordance with GR 7.01(1) (a), 8.01(1) (a) &(c), 8.01(2) (b), 8.03(2) (a), (b), (c) (ii), 14.01 to 14.07, 14.08(b) (iv), 14.09 to 14.13 and BWM chapter-IV part I.

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- ii) Block instruments:  
Double line Block instruments are provided for Block section SNM-PVP and SNM-VBL vide GR 14.01(a) and the 'OFF' aspect of the last stop signal is the authority for the Loco pilots of all trains to enter into the block section vide GR 14.08(b) (iv).  
The Station Master on duty is responsible of the Block instruments and the keys of the instruments must be under personal custody of the SM on duty vide GR 5.01(4), 14.12(1) 9A) (1) and GR 5.08.
- iii) Co-operative/Non Co-operative: Non Co-operative.
- iv) Provision of block telephone: Telephone attached to block instrument connecting the adjacent block stations concerned.
- v) Custody of keys of block instrument: Block instrument is provided with double locking. One key will be with SM and other key will be with S&T maintainer.

#### 4.0 SYSTEM OF SIGNALLING AND INTERLOCKING:

- 4.1.0 a) Standard of Interlocking: This Station is provided with Standard-III Electronic Interlocking.
- b) Type of signals: Multiple Aspect Colour Light Signals. The aspects and indications of the MACLS is governed by GR.3.08 (4) (b).
- c) The Station is provided with central Electronic Interlocking (EI) and having no end cabins. All signals and points are electrically operated from the central Panel / VDU provided at SM's Office.
- d) Method of operation: Central Panel/VDU is provided in the Station Master's office to electrically control all signals and points.
- e) Provision of axle counter/Track circuits on running lines:  
Track circuits are provided in the yard as 1AT, 1T<sub>1</sub>, 1T<sub>2</sub>, 14AT, 14T, 21AT, 21BT, 23AT,23BT,25AT,25BT, L1T<sub>1</sub>, L1T<sub>2</sub>, L1T<sub>3</sub>, L2T<sub>1</sub>, L2T<sub>2</sub>, L2T<sub>3</sub>, L3T<sub>1</sub>, L3T<sub>2</sub>, L3T<sub>3</sub>, L4T<sub>1</sub>,L4T<sub>2</sub>,L4T<sub>3</sub>,22AT, 22BT, 24T,26AT,26BT, 13AT, 13T, 4T<sub>1</sub>, 4T<sub>2</sub> and 4AT. Axle counters are provided for SNM-VBL on UP line as UDAXT, DN line as DRAXT and SNM-VBL on UP line as URAXT, DN line as DDAXT. Two detection axle counter provided in rear of S2/C2 towards VBL end due to presence of Girder Bridge. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel/VDU at SM's office. When a signal is cleared the route indication 'Yellow' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.
- f) Calling-on signals/IBS: Calling-on signals are provided below Home signals (i.e. in both Up & Down directions) as per GR.3.13 (1) (b), (2) (3) (4) & (6) (b). IBS is not applicable to this station.
- g) The control Panel is provided with SM's key which shall always remain in the custody of the Station Master on duty for control of points, signals and crank handles control etc in terms of SR 3.36.03(a).
- h) A two position switch is provided on the control panel through which SM on duty can select the mode of operation (i.e. from Panel or VDU). The position of all points, signals and running lines are available in the Panel/VDU. Remainder Block collars are provided for use on push button which shall be placed on the point button and /or route button to prevent operation of the button in case of concerned line is blocked. The VDU is provided with SM's key user name and password which shall always remain with the personal memory of the Station Master on duty.

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i) **CRANK HANDLE**

When any point fails to operate normally by the Route Setting operation through Panel/VDU it is inevitable to operate the points with crank handle. The SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-20.06. CH1 controls 21A/B, CH2 controls 22A/B, CH3 controls 23A/B, 26A/B and CH4 controls 24A/B, 25A/B.

(The details of standby operation from VDU is given under Appendix-'B')

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 not taken 'OFF' and the route is not locked

for whatever reasons. Crank Handle can be released by pressing common 'TRANS' push button 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 the 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 that there is no obstruction. SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency Crank handle register shall be maintained by the SM on duty at the station as per Para 20.06(d) of the Operating Manual. Correct setting, clamping and padlocking of the points devolve on the SM on duty. (Details of use of Crank Handle as per Appendix-'B').

The cases of failure of motor point, it should be promptly reported to the concerned signal maintainer/signal inspector for immediate rectification.

(4.1.1) **TAKING OFF CALLING-ON SIGNAL:**

Miniature colour light Calling-on signal is provided below the Home signals in terms of GR.3.13 (6) (b). A Calling-on signal shows no light in the 'ON' position and Yellow light when taken "OFF". A calling-on signal, will be taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line. Before taking 'OFF' Calling on signal during failure of track circuit the route and clearance of the track over which the train will be admitted must be checked physically by SM on duty. Calling-on signal C-4 can be taken off after 2minutes time delay on occupation of track circuit 4AT or 2AT. Calling-on signal C-2 is released by 4A/B/C or C-4 A/B/C.

(The detailed procedure is given in Appendix-B)

4.1.2 **SHUNT SIGNALS:**

Shunt back signals Sh-3 (A-D) and Sh-6 (A-B) are provided at PVP end and VBL end respectively for back shunting purpose.

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

The Relay room is provided with two independent locks. The key of one lock shall be in the personnel custody of Station Master on duty and the key of other lock shall be in the custody of S&T maintainer. In the event of necessity such as for attending failure, or regular maintenance, on being requisitioned by S&T maintainer SM shall hand over the key to the maintainer. On completion of the work, maintainer shall lock the relay room and shall return the key to the SM. The particulars of such transactions shall be entered by the SM in the relay room key register vide OM 1.14.

4.3 **(A)POWER SUPPLY**

Normal: - Local Supply-230v, 50Hz

Stand by: - Two number of DG sets.

A changeover switch is provided in the Station Master's Office with the two power supplies viz., Local and DG for changing the switch to the required supply position. A luminous indicator above the circuit breaker for each supply indicates the availability of the supply.

- (ii) For IPS system that provides to EI, auto-change over has been provided.
- (iii) There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

**(B)REMOTE MONITORING ASM BOX:** Remote monitoring ASM Box gives alarm to the ASM for the following fault conditions:-

- (a) 50% depth of discharge (DoD) of battery. In this condition audio/visual alarm comes, which can be acknowledged with audio cut-off.
- (b) 60% DOD, which warns for emergency. The alarm for this condition is same as for condition 1.
- (c) 70% DOD, which signals system, shut-down. In this condition signal feed is cut-off and all DC-DC converters continue working. Audio alarm continues till power supply is restored.
- (d) Any of the module fails, which calls for 'call S&T'.
- (e) Whenever there is a failure of power supply in AT or Local the SM shall take prompt action to inform to all concerned for the rectification. The SM himself, during his daily checks, shall test the availability of power supply AT and Local and make an entry in the Station Diary duly initiating action for rectification of failure, if any.

5. **TELECOMMUNICATIONS :**

- (a) Telephone attached to Double line Block Instruments is connected to adjacent stations on either side.
- (b) Telephone communication is provided between adjacent stations i.e., PVP and VBL Stations.
- (c) The station is connected to VZM-Tie line 'B' cabin control Circuit.
- (d) Telephone communication is provided between Station Master on duty to Up CH location.
- (e) The station is connected with BSNL telephone.
- (f) The station is connected to 'C' class LC gate at km 397/1(LC No. RV-290).
- (g) The station is connected to 'A' class LC gate at km 402.288 (LC No. RV-294) at East cabin.

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- (h) The station is connected to 'B' class LC gate at km 403/11-12 (LC No. RV-295).
- (i) 25w VHF set is provided at the station.
- (j) The station is connected to 2AXT zone verification box in the location box provided near S-4.

### **5.1 FAILURE OF COMMUNICATION: -**

- a. In the event of failure of communications between the adjacent block stations SR 6.02.06 shall be observed, for working the train.
- b. In the event of total failure of communications between the adjacent block stations SR 6.02.04 shall be observed, for working the train.

### **6. SYSTEM OF TRAIN WORKING:**

#### **6.1 DUTIES OF TRAIN WORKING STAFF**

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

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

#### **6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:**

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

Station Superintendent	1
Station Master	3
TPM/TP	3
SCLM	1

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

#### **6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINES AND ZONES OF RESPONSIBILITY.**

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

#### **6.1.3 ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER**

Any staff before taking of independent charge of duties connected to train working or any staff who is away from his duty for the period of 15days or more shall sign in the assurance register which is token of having understood the contents. However, in the event of any corrections or modifications in the SWR is involved, the assurance of the staff who even is entrusted the work of train passing duty shall be obtained afresh in the assurance register by the in-charge of the station before they are allowed to work vide SR 5.01.02.

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**6.2 CONDITIONS FOR GRANTING LINE CLEAR:**

- a. The conditions laid in GR 8.03(2)(a) (b) (c) (ii) shall be complied with the SM on duty before line is considered clear and line clear is granted.
- b. Before granting a line clear for a train the SM on duty shall personally ensure that the reception signals pertaining to a train are in the 'ON' position and burning properly vide GR 3.49(4).
- c. Line shall not be considered clear and line clear shall not be granted to an UP train unless:
  - i) Whole of the last preceding UP train has arrived completely.
  - ii) UP Home signal /calling-on signal No. 1A/B and/or C-1A/B is put back to 'ON' and
  - iii) Line is clear up to BSLB.
- d. Line shall not be considered clear and line clear shall not be granted to a DN train unless:
  - i) Whole of the last preceding DN train has arrived completely.
  - ii) DN Home signal /calling-on signal No. 4A/B/C and/or C-4A/B/C is put back to 'ON' and
  - iii) Line is clear up to point No. 22A.

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

Nil

**6.2.1.1 SETTING OF POINTS AGAINST BLOCKED LINE**

When a running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train at the station etc., the points at either end should be immediately set against the blocked line except when shunting or any other movement is required to be done on that line. 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 in that order so that, in case of mishap, the chance of causalities are minimized. In case of all the lines are occupied by passenger train, points should be set for a loop line to negotiate which the speed of incoming train would be reduced which in turn, would minimize the consequences/causalities .

**6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED 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 SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train. [Refer GR 5.09 & SRs there to]

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

Not Applicable

**6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE.**

Not Applicable

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

NIL.

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**6.2.1.6(a) SPECIAL RESTRICTIONS:-**

- (i) Shunting in the face of an approaching train is prohibited at both ends as per the conditions prevailed in terms of SR 8.09.02 (b) (ii) (b).
- (ii) Hand shunting is prohibited at both ends of the yard.
- (iii) Long, loose and fly shunting is prohibited in the running lines.

**(b) SPECIAL INSTRUCTIONS:**

- (i) Entire station yard is track circuited. In case of failure of track circuit the clearance of concerned line should be ensured physically before a train is piloted.
- (ii) Whenever a non-signal movement has taken place over motor operated point whether facing or trailing direction, the SM on duty shall operate the point to normal or reverse setting for the purpose of setting point. After clamping & padlocking, both the facing & trailing points and ensuring the indications are correctly available, further movement may be permitted over the point.
- (iii) In case of failure of Digital Axle counter provided for monitoring Block section at both ends, the resetting should only be initiated for normalizing the Block Instrument after ensuring complete arrival of the train by physical verification of Last Vehicle by SM on duty.
- (iv) Station master shall ensure that over run line/sand hump is clear of any obstruction before admission of any train on the concerned running line even the overrun line/sand hump is in trailing direction.

**6.3 CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:-**

- i) Conditions for taking off approach signals are governed by GR 3.40(1) (a), 3.40(3) (b) and relevant SRs there to.
- ii) calling-on signal may be taken off for the admission of train in the event of failure of Home signal in terms of SR 3.69.02(a) or for the admission of a train on obstructed line in terms of GR 5.09 and SRs thereto.

**a) ADEQUATE DISTANCE: (SIGNAL OVERLAP)**

To take off the Home signals for admission of a train, the adequate distance (overlap) as mentioned below shall be kept clear. [Refer GR.3.40 (3) (b) and SR thereto]

**CLEARANCE OF ADEQUATE DISTANCE (SIGNAL OVERLAP)**

<b>FOR UP TRAINS</b>		
Line Number	From	To
1.	Up common loop starter Signal No.9	Up advanced starter signal No.13 or up to the end of the Sand Hump.
2.	UP Main line starter signal No.11	Up advanced starter signal No.13.

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<b>FOR DOWN TRAINS</b>			
1.	DN loop starter Signal No.8		DN advanced starter signal No.14 or up to the end of the sand hump.
2.	DN Main line starter signal No.12		DN advanced starter signal No.14.
3.	DN common loop starter Signal No.10		DN advanced starter signal No.14 or up to the end of the sand hump.

Remarks: However when a route is set leading to the Main line the overlap beyond the starter in that particular direction shall extend up to the advanced starter of the station in that direction.

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

Station master should ensure that signal is put back to 'ON' after passage of the train as per GR 3.36(2) (B), and SR 4.17.01.

### **6.4 SIMULTANEOUS RECEPTION/DESPACTH,CROSSING AND PRECEDANCE OF TRAINS:**

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

1.	Reception of an Up train on line No.4 setting overlap to Sand Hump.	AND	Dispatch of another UP train from line No.3
2.	Reception of a DN train on line No. 4 setting overlap to sand hump.	AND	Dispatch of another DN train either from line No.1 or 2.
3	Reception of a DN train on line No.1 setting overlap to sand hump.	AND	a) Dispatch of another DN train either from line No.2 or 4.

### **6.5 COMPLETE ARRIVAL OF TRAINS:**

The entire block section between SNM-PVP and SNM-VBL on both Up and Down Lines are monitored by axle counter system and the position of the block section whether 'Occupied' or 'Clear' is indicated on Panel/VDU at SM's office. As soon as train enters in to that block section the RED indication appears on Panel/VDU. After whole train clears the block section GREEN indication appears on the Panel/VDU. This confirms the complete arrival of train and the SM on duty shall give 'Train out of Block Section' report on seeing the section clear indication GREEN on the Panel/VDU.

If a train passes through the station without conforming the last vehicle indicator, the Station Master on duty shall advise the station in advance to stop the train for last vehicle verification and he need not to withhold closing of block section in rear. He shall obtain confirmation under exchange of

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private number about the complete arrival of the train with its last vehicle from the station in advance and subsequent trains may be dispatched.

In case of failure of Axle counter the SM on duty shall obtain Complete Arrival Certificate from the guard of the train in the Complete Arrival Register (T/1410) maintained at the station for stopping train. For through passing train the SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide SR 4.16.05 that the train arrived complete.

In case a train passes incomplete, action shall be taken as per SR.4.17.02, the "Train out of Block Section" report shall be withheld to the station in rear until complete arrival Certificate is received from the station in advance supported by a private number.

#### **6.6 DESPATCH OF TRAINS:**

- a) To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy him self by observing the visual indication on the Panel Board/VDU. He shall suspend all non-isolated shunting and then shall take "OFF" the concerned route starter and advanced starter signal. The 'OFF' aspect of the advanced starter is the authority to proceed into the block section. As soon as the train passes the advanced starter signal, the SM will then send the train entering given section signal to the station in advance.

[Refer GR 3.38, 3.42, SR 3.36.04(b), 3.42.04 and BWM 2.07.5(a)]

#### **b) ISSUE OF CAUTION ORDERS:**

Whenever in consequent of the line being under repairs or for any other reasons special precautions are necessary, a caution order detailing the kilometer and speed at which train should run with reasons for taking such precautions shall be handed over to the Guard and Loco pilot in terms of GR 4.09 and SRs thereto.

#### **6.7 TRAINS RUNNING THROUGH:**

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

He shall also depute the TPM on duty to the other side, for passing the train. The TPM on duty shall wave Green hand signal horizontally. He shall show danger hand signal if he notices anything is wrong and reports the same to the SM on duty.

The Station Master on duty is responsible to see that a train passes complete with its last vehicle indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. [Ref GR 3.42, 4.17 4.42, & SR 4.42.02 (b) (i), (ii), (iii), c & (d)]

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

In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.

**b. DEFECTIVE POINTS:**

Procedure prescribed in GR3.77 and relevant SRs shall be followed.

**b. FAILURE OF SIGNALS AND INTERLOCKING:**

In the event of failure of approach stop signals, GR 3.70 and SRs thereto shall be followed.

**d. AXLE COUNTER:**

If the axle counter fails between the block sections, resetting procedure will be adopted as per Para 14.0 of SWR (APP-B) if the axle counter indication does not appear 'GREEN' & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal Maintainer /JE/SE (signal) for rectification.

If the 2AXT axle counter fails towards VBL end, resetting procedure will be adopted as detailed in Appendix-B.

**6.9 PROVISIONS FOR WORKING OF TROLRIES/ MOTOR TROLRIES/MATERIAL LORRIES ETC"**

Motor trolleys are to run in accordance with rules laid down in SRs. Material Lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 5.11(2), 5.12, 5.13 of BWM]

i) Trolleys, Motor Trolleys, Lorries which are not insulated shall not be allowed to run except on Line clear.

ii) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly.

iii) In all other respects the Working of a light motor trolley shall confirm 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.

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

**7. BLOCKING OF THE LINES:**

Whenever a running line is blocked either by loose vehicles or by stabling train or by a train which is to cross or give precedence to another train, the points at either end should immediately be set against the blocked line except during shunting movement. A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained.

The stable load or loose vehicles are to be secured to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01]

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- A. **SECURING OF VEHICLES: -**  
As far as practicable, loose vehicle shall not be allowed to stand on the running line. However under unavoidable circumstances, if it is necessary to detach vehicle from a train or to stable a train and leave them standing on the running line, the SS on duty at Platform shall be responsible to secure the vehicle/stable loads to prevent rolling down of vehicles and arrest obstruction and fouling.
- NOTE**  
Special care should be taken to secure special type vehicles fitted with roller bearing while standing in siding or in running lines. [Refer GR 5.23 & SR 5.23.01]
- B. **USE OF REMINDER BLOCK COLLARS :-**  
Whenever any running line is blocked or when a train is stopped to cross another train or detained for any other reason, even for a short while or during shunting operations, reminder collars shall be used by the SM on duty on the push buttons concerned.

## **8.0 SHUNTING**

### **8.1 GENERAL PRECAUTIONS.**

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block working Manual [Refer GR 3.46, 3.52 to 3.56, 5.13,5.14,5.16 to 5.23, 8.05,8.06, 8.14 and 8.15] with relevant SRs and OM 7.01, 7.07, 7.08, 5.1(2) (B) shall be followed.

#### **NOTE**

For any non signaled movement physical verification of the clearance of the crossover points shall be ensured by the Guard/SM on duty for supervising shunting operations.

### **8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:**

Shunting in the face of an approach train is strictly prohibited vide GR 8.09 and SR thereto.

### **8.3 PROHIBITION OF SHUNTING ANY SPECIAL FEATURES IF ANY:**

(i) Hand shunting is prohibited at both ends of the yard vide GR 5.20.

(ii) Fly shunting is prohibited at both ends of the yard vide SR 5.21.01 (c).

### **8.4 SHUNTING ON SINGLE LINE:**

Not applicable.

### **8.5 SHUNTING ON DOUBLE LINE:**

**SHUNTING OUT SIDE THE HOME SIGNAL:**

The procedure of block back/block forward given in BWM 5.15(1) (b) shall be followed. When line clear has been given, no shunting shall be permitted in the block section in rear. Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and it blocked back vide GR 8.06.

Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and block forward vide GR 8.06(3).

### **8.6 SHUNTING IN THE SIDING TAKING OFF FROM THE STATION YARD :**

Not applicable to this station

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**9.0 ABNORMAL CONDITION:****(a) RULES TO BE OBSERVED IN THE EVENT OF ABNORMAL CONDITION:**

(i) during partial interruption of communication between the adjacent block station, SR 6.02.06 shall be observed.

(ii) In the event of occupation of block section due to accident or obstruction SR 6.02.05 shall be observed.

(iii) In the event of trains delayed in the block section, GR 6.04 and relevant SRs shall be followed.

(iv) Failure/passing of Intermediate block stop signal at 'ON' position:  
Not applicable.

(iv) Failure of Axle counter block/BPAC: Procedure to be followed vide GR 14.13 & 14.14.

(v) Failure of MTRC: Not applicable.

**b) i. Procedure for emergency operation of points by Crank Handle.-**

The detailed Procedure for emergency operation of points by Crank Handle of motor operated points shall be followed.

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'TRANS' push button and concerned Crank handle control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor trolley or light Diesel/electrical engine or tower wagon, indicating the occupancy of the track. It is necessary that SM on duty satisfies himself that the said vehicle has cleared point zone track circuits by observing the track indications of the track on either side of the cross over by positively checking the entrance and exit track circuits are showing occupancy and clearance in accordance with the train movement.

**ii. Procedure for emergency operation of points with point zone axle counter/Track circuits failure and emergency route release:**

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL or REVERSE. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose. Each such emergency operation of points is registered by next higher number in the counter provided for this purpose. SM shall ensure sealing of Emergency point operation button after completion of each such operation by S&T staff.

Rules regarding locking of points and damaged points vide GR 3.39 and GR 3.77 to be followed.

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c) **Certification of clearance of track before Calling –On Signal operation in initiated:-**

Before taking off Calling –On signal during failure of track circuit/axle Counter, the route and the clearance of the track over which train would pass to be verified by SM on duty.

d) **Reporting of failure of points, Track circuits/axle counter and interlocking:-**

Whenever there is a failure of points, Track circuits/axle counter or any interlocking gear at station, the failure should be reported by SM on duty to the concerned Signaling Maintenance Staff on duty responsible for attending to the failure and only after receipt of the written memo from the Signaling Maintainer for rectification of the fault, SM should restore the normal working.

The entries in failure register to be done with message to the section controller.

**9.1 TOTAL FAILURE OF COMMUNICATION:**

Rules and regulations for working of trains during total interruption of communication on single line section shall be followed vide SR 6.02.04 and instructions laid down in BWM.

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

In the event of failure of single line working on a double line section when communication is available, the provision laid down in SR 6.02.01 shall be followed.

Last stop signal of the station shall not be taken off but an authority to pass the last stop signal at 'ON' shall be issued on T/369 (3b) noting the private number & the identification number received from the block station in advance on form T/D/602 vide SR 6.02.01.

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

(i) In the event of total failure of communications, trains shall run on the authority to proceed without line clear in terms of SR 6.02.03.

(ii) In the event of necessity to send a train to assist the crippled trains, SR 6.02.05 shall be followed.

**10. VISIBILITY TEST OBJECT:**

The signal lights of UP common loop starter signal No.9 of line No.4 and DN common loop starter signal No.10 of Line No.4 are ear marked to serve as visibility test object during day and night vide GR 3.61.2(b)(iii)

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

(Details are given in Appendix-'E')

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

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

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

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**12.1 STATION DETONATOR REGISTER (OPT/124)**

A Register regarding detonator is maintained at the station.

**12.2 INSTRUCTIONS:**

This register contains the following parts.

- Part. - I: Particulars of fog signal men posted at the station from time to time.
- Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.
- Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.
- Part – IV: Particulars of issue and testing of fog signals at the station.
- a. In charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects.
- b. Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

**APPENDICES:**

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

**CERTIFICATE**

“ NOTHING IN THESE RULES SHALL BE READ AS CANCELLING AMENDED OR MODIFYING ANY GENERAL AND SUBSIDIARY RULES, BLOCK WORKING MANUAL RULES AND OPERATING MANUAL. THESE RULES CANCEL ALL PREVIOUS STATION WORKING RULES”.

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**EAST COAST RAILWAY**  
**WALTAIR DIVISION**  
**APPENDIX 'A'**

**WORKING OF LEVEL CROSSING GATES AT SITANAGARAM**  
**STATION :**

**GATE WORKING RULES:**

Working rule for 'A' Class interlocked level crossing gate situated at KM 402.288 at East cabin.

**1. GENERAL**

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

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

- |     |  |                                       |
|-----|--|---------------------------------------|
| 1.  | Number of Level Crossing Gate:                           | <b><u>RV 294</u></b>                  |
| 2.  | Engineering or Traffic Gate:                             | <b><u>Traffic Gate.</u></b>           |
| 3.  | Under control of Station Master/Senior Section Engineer: | <b><u>SS/SNM</u></b>                  |
| 4.  | Location at KM:  | 402.288                               |
| 5.  | At Station:  | SITANAGARAM                           |
| 6.  | In between stations                                      | ----                                  |
| 7.  | BG/MG/NG:  | <b><u>BG</u></b>                      |
| 8.  | Single line/Double line/Multiple line:                   | <b><u>Double Line</u></b>             |
| 9.  | Normal Position:   | <b><u>Open for Road Traffic</u></b>   |
| 10. | Interlocked/non-interlocked:                             | <b><u>Interlocked</u></b>             |
| 11. | Means of Interlocking                                    | <b><u>MACLS</u></b>                   |
| 12. | Provisions of Gate signal at Kms.                        |                                       |
|     | Up Line  | <b><u>Station Signals</u></b>         |
|     | Dn Line  | <b><u>Station Signals.</u></b>        |
| 13. | Signalling arrangements                                  |                                       |
| 14. | Means of Communication – Telephone/Bell etc:             | <b><u>Telephone</u></b>               |
| 15. | Width of level crossing gate                             | <b><u>11 Mtrs</u></b>                 |
| 16. | Type of Road (NH/SH/Others)                              | <b><u>Others</u></b>                  |
| 17. | Name of Road   | <b><u>Panchayat Road</u></b>          |
| 18. | Metalled/non-metalled                                    | Metalled                              |
| 19. | Approach road  | Metalled                              |
| 20. | Width of the road  | <b><u>9 M.</u></b>                    |
| 21. | Angle of road crossing (In case of skew gates)           | ---                                   |
| 22. | Road gradient (if any)                                   |                                       |
|     | i. North/East side                                       | <b><u>Level.</u></b>                  |
|     | ii. South/West side                                      | <b><u>Level.</u></b>                  |
| 23. | Road alignment (straight/curve)                          |                                       |
|     | i). North/East side                                      | <b><u>Straight</u></b>                |
|     | ii). South/West side                                     | <b><u>Straight</u></b>                |
| 24. | Provision of height gauges                               | <b><u>Not Applicable.</u></b>         |
| 25. | Type of Barriers   | <b><u>Coupled Lifting Barrier</u></b> |
| 26. | Length of Check Rails                                    | <b><u>13 Mtrs</u></b>                 |
| 27. | Road Surface in between L – Xing gates:                  | CC blocks                             |
| 28. | Length of Rumble strip/speed breakers                    | <b><u>9 Mtrs</u></b>                  |
| 29. | Road signs   | <b><u>Available</u></b>               |

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30.	Speed breaker indication board	<b>Provided</b>
31.	TVU	150008 in 2009
32.	Census next due on	2012
33.	Demarcation for placement of Detonators	<b>Available</b>
34.	No. of Gatemen working	<b>3</b>
35.	Nearest Medical Assistance	VBL
36.	Nearest Private Medical Assistance available (if any): Bobbili	
37.	List of equipment available Yes/No	<b>Yes</b>

**1.2. EQUIPMENT**

<b>ITEMS</b>	<b>QUANTITY/NUMBERS</b>
(1) Hand Signal Lamp Tri Colour	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 Quadruple/Line or twin single line)
(6) Spare chains with padlocks	2 with stop mark.
(7) Detonators	10 in tin case
(8) Fusee	1 (3 on multiple line, double line, parallel lines suburban sections, automatic signalling and ghat sections)
(9) Gate lamps	2
(10) Tommy Bar	1
(11) Mortar Bar	1
(12) Spade/Fowrah	1
(13) Rammer	1 (In case of asphalted road this may not be provided)
(14) Pick Axe	1 (In case of asphalted road this may not be provided)
(15) Tin case for flags	1
(16) Can of oil	1
(17) Water pot/Bucket	1
(18) Canister for Muster Roll	1
(19) Set of spare spectacles for gateman wearing glasses	1
(20) Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
(21) Basket	1
(22) Whistle	1
(23) Wall Clock	1

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

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

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

**1.4 DUTIES OF GATE MAN:****1 ALERTNESS:**

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

**2 POSITION DURING PASSAGE OF TRAINS:**

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

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

**3 ROUTINE DUTIES OF GATE MAN:**

- i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roaster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle/wagon/train/battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or

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- any other situation endangering safe running of trains.
- vi) Gateman shall also be prepared to repeat any signal which guard may give to Loco pilot on Walkie-talkie or in other way.
  - vii) If lifting barrier/leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
  - viii) Gateman shall report to the nearest Station Master, gang mate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
  - ix) 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.
  - x) At the gate whose signal have become defective, the Gateman shall close and lock the lifting barriers/leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the driver to report the defect at the next station.
  - xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
  - xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
  - xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
  - xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
  - xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
  - xvi) Gateman shall keep the road surface well watered and rammed in case of unhealed roads.
  - xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
  - xviii) 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.
  - xix) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

**4) ACTION IN CASE OF UNSUAL OCCURENCE ON TRAINS:**

In case Gateman observes anything unusual with a passing train, he shall take following action.

- i) He shall take prompt action to warn the Loco pilot/guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If Loco pilot/guard fails to take notice, Gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, Gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavor to attract the attention of the driver/guard by whistling continuously, shouting, gesticulating, and by raising both hands vertically above, quickly parting them and bringing them

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together in repeated UP and Down motion as high and low as possible.

- vi) In case the train does not stop, he shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

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

- i) In case of an obstruction at the level crossing gate, Gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master, on duty, if connected on telephone, to take appropriate action, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on the 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) Then he will similarly plant the other red banner flag by day and red light by night 5 meters away from the site of obstruction.
- iv) Gateman shall then proceed to protect the gate along with detonators, fuseses and red flag by day and red hand signal lamp by night.
- v) 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 600meters, on BG and 400 meters on MG/NG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG and 800 meters on MG/NG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediated detonator on his way back.
- vi) 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.
- vii) Having returned to the gate, he must then take steps to remove the obstruction, and warn the driver of the approaching train.
- viii) On those meter gauge sections where trains run at more than 75 kmph. Detonators shall be placed at distance to be specified under Special Instructions by the Administration.
- ix) 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 as he can go.
- x) Thereafter, he shall light up and fix the fuseses to warn the driver and stop the approaching train by waving this red flag by day red hand signal lamp by night repeatedly.

**b) Other action to be taken by Gateman:**

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
- ii) If the gate is broken by a road vehicle, which is fouling the track, or if lifting barriers/leaf gates or any other 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 Loco pilot, owner and relay these details to the nearest Station master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

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APPENDIX 'A' TO STATION WORKING RULES OF SITANAGARAM STATION  
**ANNEXURE-II**

WORKING OF LEVEL CROSSING GATES

**WORKING INSTRUCTIONS FOR TRAFFIC LEVEL CROSSING GATES INTERLOCKED WITH STOP SIGNALS OF THE STATION PROVIDED WITH TELEPHONE, WITH NORMAL POSITION "OPEN TO ROAD TRAFFIC"- IT IS AN 'A' CLASS GATE AT KM 402.288:**

(General Instructions are common for all types of Manned Level Crossing Gates)

**1. MODE OF OPERATION:**

Gate is normally opened to road traffic. As soon as the advice received from SM on duty, the Gate Man after ensuring clearance of road traffic, shall close and lock the gate and transmit the Key 'N' to Panel. Thereafter SM on duty shall take off concerned signals. The detailed mode of operation is given below

1. Key 'M' is obtained after closing the Level crossing gate at East cabin and releases lever no.-2
2. Lever no-2 when reversed Locks the Level crossing Boom and releases Key 'N' and lever no-1.
3. Key 'N' is transmitted electrically to Panel in conjunction with lever no-1 reversed, controls concerned UP and DN signals.
4. Lever no-1 provided in the East cabin to put back the concerned signals to 'ON' in case of Emergency.

On completion of the Train movement SS on duty shall transmit back the Key 'N' through RKT to open the L.C.Gate.

**2. EXCHANGE OF PRIVATE NUMBER:**

- i) Before taking off reception/departure signals Station Master shall inform the Gateman, the number, description and direction of the train.
- ii) The gateman shall close the gate and transfer the key to the Station Master.
- 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 Station Master must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.
- v) If the gate is operated from the cabin itself, Station Master shall ensure that the gate is closed against road traffic, before taking 'OFF' reception/departure signals.
- vi) 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 or 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.

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**3.****FAILURE OF TELEPHONIC COMMUNICATION:**

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

- i) Station Master on duty shall send written advice to the Gateman through the Porter with full details of number, description and direction of the train.
- ii) Gateman after receipt of such advice shall close the gate and transmit the key to the Station Master, which will enable them to take 'OFF' reception/departure signals.
- iii) When sufficient time is not available because of greater frequency of train service, Station Master shall issue written authority to the train Loco Pilot to pass the signal at 'ON' position.
- iv) In addition Station Master shall also issue a caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously.
- v) The train Loco Pilot shall be instructed to pass the gate cautiously, on being hand signaled by the Gateman. If hand signal is not seen, Loco Pilot should be prepared to stop the stop short of the gate and ensure that gate is closed following GR 3.73(2)(b)
- vi) In case of an approaching train, the Station Master Shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- vii) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.
- viii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- ix) Normal working will be resumed only after staff rectifies the telephone and issue reconnection/fit memo for the same.

**4.****FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the Gateman will immediately inform the Station Master on duty, under exchange of private number, end ensure the lifting barriers or leaf gates do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first form 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 Loco Pilot of the approaching train.
- v) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.
- vi) He shall also advice the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching a train in the block section from this end.
- vii) Station Master will advice maintenance staff responsible for maintenance of lifting barriers/leaf gates to repair the defect at the earliest.

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- viii) Normal working will be resumed only after the maintenance staff repairs the barrier/leaf gates to repair the defect at the earliest.

**NOTE:**

- a) In case of failure of lifting barriers/leaf gates worked from the cabin, Station Master will send station porter to secure the gate against road traffic by safety channels and padlocks.  
b) Authority to pass signals at 'ON' position as per rules shall also be issued to the Loco Pilots of both departing and arriving trains.

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

- i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter, then Gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.  
ii) If emergency key is available at the gate lodge the key will be taken out from the sealed box by breaking the seal and open the gate for road traffic. Provision of Emergency key is not available at this gate.  
iii) The record of the data and time of breaking the sealed cover of Emergency key box shall be recorded and signed with reasons.  
iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates should be adopted.  
v) Station Master on duty shall issue a caution order to the Loco Pilot of a departing train.  
vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching the train in the block section from his end.  
vii) Station Master will advise S&T staff responsible for maintenance of winch/gate levers/key transmitter to rectify the defect at the earliest.  
viii) Normal working will be resumed only after S&T staff repairs the winch/gate leaves/key transmitter and issue reconnection/fit memo for the same.  
ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

6. **FAILURE OF GATE KEY WITH THE GATE IN OPEN POSITION:**

- i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter, then Gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.  
ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gate 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 shall issue a caution order to the Loco Pilot of a departing train.

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- v) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco Pilot before dispatching the train in the block section form his end.
- vi) Station Master will advise S&T staff responsible for maintenance of winch/gate levers/key transmitter to rectify the defect at the earliest.
- vii) Normal working will resume only after S&T staff repairs the winch/gate leaves/key transmitter and issue reconnection/fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

**7. OBSTRUCTION AT THE GATE:**

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the Gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gates, for this purpose.
- ii) Immediately after this, the Gateman shall advise the Station Master on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Station Master, on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- 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 Inspection for duties of gateman under Item No. 1.5(5)
- vi) Thereafter he shall protect he gate from the other direction also.
- vii) 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 who shall not start the train unless he has been assured by the Gateman that the road vehicle or the lifting barriers/leaf gates are not fouling the track.
- viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section form 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 accordingly, under exchange of private number.
- x) Station Master shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the reception/departure signal at 'ON' position on green hand signal of the Gateman, if the gate is broken, but is clear of any obstructions.
- xi) 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.
- xii) Station Master shall advice maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest.

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- xiii) Normal working will be resumed after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

**8. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the Gateman, the Gateman and Station Master will adopt the procedure given under Item No.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.

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**APPENDIX 'A'**  
**WORKING OF LEVEL CROSSING GATES AT SITANAGARAM STATION**

**1. GENERAL :**

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

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

- |     |  |   |
|-----|--|---|
| 1.  | Number of Level Crossing Gate:                               | RV-295                                  |
| 2.  | Engineering or Traffic Gate:                                 | Engineering gate ('B'-class)            |
| 3.  | Under control of Station Master/<br>Permanent Way inspector: | SSE [P]/VBL                             |
| 4.  | Location at KM:  | 403/11-12                               |
| 5.  | At Station   | --                                      |
| 6.  | In between station   | SNM-VBL                                 |
| 7.  | BG/MG/NG:  | BG                                      |
| 8.  | Single line/Double line/Multiple line                        | Double Line                             |
| 9.  | Normal Position:   | Open to Road Traffic.                   |
| 10. | Inter Locked/Non-Interlocked:                                | Interlocked.                            |
| 11. | Means of interlocked:  | Gate signals.                           |
| 12. | Provision of Gate signal at KMs:                             | UP: 403/16-17<br>DN: 403/7-8            |
| 13. | Signaling arrangement:                                       | MACLS                                   |
| 14. | Means of communication-<br>Telephone/ Bell etc:              | Telephone connected<br>with SNM station |
| 15. | Width of level crossing gate:                                | 9 Mtrs.                                 |
| 16. | Type of road {NH/SH/Other}:                                  | Others                                  |
| 17. | Name of road:  | Municipal Road                          |
| 18. | Metalled/Non-Metalled:                                       | Non-Metalled                            |
| 19. | Approach road:   | Non-Metalled                            |
| 20. | Width of the road:   | 7.5Mtr.                                 |
| 21. | Angle of road crossing [In case of the skew gates]:          | 90 <sup>0</sup>                         |
| 22. | Road gradients {if any}:North-East side:                     | 1 in 30                                 |
|     | South-West side:   | 1 in 30                                 |
| 23. | Road alignment {Straight/Curve}:                             | curve                                   |
| 24. | Provision of height gauge:                                   | Non RE Area                             |
| 25. | Type of Barriers:  | Lifting Barriers.                       |
| 26. | Length of check rail:  | 11Mtrs.                                 |
| 27. | Road surface in L-Xing gate:                                 | Tar road                                |
| 28. | Length of Rumble strip /speed breakers:                      | 7.5Mtrs.                                |

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29. Road signs: Provided.  
 30. Speed breaker indication board: Provided.  
 31. TVU: 26761 as on 23.12. 2009  
 32. Censes next due on: 22.12.2012  
 33. Demarcation for placement of detonators: Provided.  
 34. No. of Gate men working: TWO  
 35. Nearest Railway Medical Assistance: Rly.Hospital VBL.  
 36. Nearest private Medical Assistance {If Any}: Bobbili  
 37. List of equipment available Yes/No..... Yes.

**1.2 EQUIPMENTS:**

ITEMS	QUANTITY/NUMBERS
1 Hand Signal Lamp Tri Color.	3 Nos.
2 Hand Signal Flag Green.	1 No with mounted stick
3 Hand Signal Flag Red.	3 Nos.
4 Banner Flag Red.	3 Nos.
5 Posts for exhibiting red banner flag	2 Nos
6. Spare chains with padlocks	2 with stop marker
7. Detonators	10 in each case
8. Fusel	1 Nos.
9. Gate lamps	2 Nos.
10. Tommy Bar	1No
11. Mortar Pan	1No
12. Spade/Fowarh	1No
13. Rammer	1No [in case of asphalted road this may not be provided.]
14. Pick Axe	1No [in case of asphalted rod this may not be provided.]
15. Tin case for flags	1No
16. Can for Oil	1No
17. Water Pot/Bucket	1No
18. Canister for Muster Roll	1No
19. Set of spare spectacles of gate man wearing glasses.	1No
20. Board demarcation protection of level crossing gate diagram in case of obstruction	1No
21 .Bucket	1No
22. Whistle	1No
23. Wall Clock	1 No

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

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

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

**1.4 DUTIES OF GATEMEN:****[i] ALERTNESS:**

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

**[2] POSITION DURING PASSAGE OF TRAINS:**

During passage of trains, gate man will stand in the manner indicated below: -

- [i] Gate man 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 gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.

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[ii] Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.

[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, handing chains, hanging battery, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

[v] Gateman shall also be prepared to repeat any signal which guard may give to driver on walkie-talkie or in any other way.

[vi] If lifting barriers/leaf gates get damages or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

[vii] 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 .

[viii] At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier/leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Driver report the defect at the next station.

[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 this instruction.

[xii] Gateman shall ensure that equipment supplies 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 clean.

[xiv] Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.

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

**[4] ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:**

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

- [i] He shall take prompt action to warn the Loco pilot/guard of the passing train by showing red flags by day and red light by night.
- [ii] He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- [iii] If Loco pilot/guard fails to take notice, gateman shall not stop, immediately inform the station master/switchman/cabin man, if connected on telephone, to take appropriate action under exchange of private number.
- [iv] In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains 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 DN motion as high and as low as possible.
- [vi] In case of trains does not stop, gate man shall immediately inform the station master/switchman/cabin man, if connected on telephone, to take appropriate action under exchange of private number.

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

- [i] In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.
- [ii] Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the station master/switchman/cabin man on duty, if connected on telephone, regarding the defects/obstructions at the gate, under exchange of private number.
- [iii] If there is no response from the station master/switchman/cabin man after two or three attempts, he shall first protect the gate and then inform on phone.

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**The gateman shall protect the line as under:****A] ON DOUBLE LINE SECTION:**

- [i] If the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- [ii] Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.
- [iii] Gateman shall then proceed to protect the gate along with detonators, fusees and red flags by day and red hand signal lamp by night.
- [iv] Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs on BG and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs on BG from the level crossing gate and place 3 detonators on the track 10 Mtrs 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 the detonators as described in Para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- [vi] Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.
- [vii] On those Meter Gauge sections where trains run at more than 75 Km/h, detonators shall be placed at distance to be specified under special instruction by the administration.
- [viii] 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 the distance as far away as he can go.
- [ix] Thereafter, he shall light up and fix the fusee to warn the loco pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

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**[B] OTHER ACTION TO BE TAKEN BY GATE MAN:**

- [i] At night gate man shall light two hand signal lamps and take action to exhibit red light and protect the lines as per described in sub para [A] above.
- [ii] If the gate is broken by the road vehicle which is fouling the track, or if lifting barrier by leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gate man shall take immediate action.
- [iii] He shall note down the particulars of the road vehicle, vehicle number, name of the Loco pilot, owner and relay these details to the nearest Station Master or Permanent way inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

**ENGINEERING ITEMS.**

Please Para 916, 918, 919 of IRPWM for visibility requirement at level crossings, provision of speed breakers on the approach roads of level crossing and senses of traffic at level crossings.

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**APPENDIX 'A'**  
**ANNEXURE – I**

**WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATES INTERLOCKED WITH STOP SIGNALS OF THE STATION PROVIDED WITH TELEPHONE, WITH NORMAL POSITION "OPEN TO ROAD TRAFFIC" – IT IS A "B" CLASS GATE AT KM 403/11-12:**

(General Instructions are common for all types of Manned Level Crossing Gates)

**1. MODE OF OPERATION:**

Detailed mode of operation for opening and closing the level crossing gate shall be provided in the respective Station Working Rules and Gate Working Instructions incorporating local operational requirements. When level crossing gate is required to be opened for passage of road traffic, the gate must first open the gate on the side nearest the approaching road traffic.

Gate shall normally be kept open to road traffic. Whenever it is required to close and transmit the control key to station, the gateman shall have to adopt the following procedure.

1. Key 'G' is obtained after closing the Level crossing gate and releases 1GF.
2. 1 GF when reversed Locks the Level crossing Boom and releases Key 'G1'.
3. Key 'G1' inserted in EKT and turned.
4. Key 'G1' in with switch no. 1GS, 2GS when reversed releases concerned UP gate stop signal 1GS and DN gate stop signal 2GS respectively.

**2. EXCHANGE OR PRIVATE NUMBER:**

- i) Before taking off reception/departure signals Station Master shall inform the Gateman, the number, description and direction of the train.
- ii) The gateman shall close the gate and transfer the key to the Station Master.
- 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 Station Master must ensure that the train is ready for departure in all respects before he advises the gateman for closing the gate.
- v) If the gate is operated from the cabin itself, Station Master shall ensure that the gate is closed against road traffic, before taking 'OFF' reception/departure signals.

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- vi) 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 or
- vii) 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 Telephone Communication falls 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 shall send written advice to the Gateman through the Porter with full details of number, description and direction of the train. Gateman on receipt of such advice shall close the gate and transmit the key to the Station Master, which will enable him to take 'OFF' reception/departure signals.
- ii) When sufficient time is not available because of greater frequency of train service, Station Master issues written authority to the train loco pilot to pass the signal at 'ON' position.
- iii) In addition Station Master shall also issue a caution order advising the loco pilot to whistle continuously and approach the gate cautiously.
- iv) The train loco pilot shall be instructed to pass the gate cautiously, on being hand used by the Gateman. If hand signal is not seen, loco pilot should be prepared to stop short of the gate and ensure that gate is closed vide GR 3.73(2)(b)
- v) In case of an approaching train, the Station Master Shall advise the Station Master at the dispatching end, under exchange of private number, that the telephone at the gate has failed.
- vi) The Station Master at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in to the block section from his end.
- vii) He should also advise S&T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- viii) Normal working will be resumed only after staff rectifies the telephone and issue reconnection/fit memo for the same.

### **4.FAILURE OF LIFTING BARRIERS OR LEAF GATES:**

- i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the Gateman will immediately inform the Station Master on duty, under exchange of private number, and ensure the lifting barriers or leaf gates do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure the gate against road traffic by means of safety chains and padlocks.

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- iv) After securing the gate against road traffic gateman shall show green hand signal flag by day and green light by night to the loco pilot of the approaching train.
- v) Station Master on duty shall issue a caution order to the loco pilot of a departing train.
- vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from this end.
- vii) Station Master will advise maintenance staff responsible for maintenance of lifting barriers gates to repair the defect at the earliest. Normal working will be resumed only after the maintenance staff repairs the barrier gates to repair the defect at the earliest.

**NOTE:**

- a) In case of failure of lifting barriers/leaf gates worked from the cabin, Station Master will send station porter to secure the gate against road traffic by safety chains and padlocks.
- b) Authority to pass signals at 'ON' position as per rules shall also be issued to the loco pilots of both departing and arriving trains.

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

- i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter, then Gateman must immediately inform the Station Master on duty on telephone, under exchange or private number.
- ii) If emergency key is available at the gate lodge, he will take it out from the sealed box by breaking the seal and open the gate for road traffic. Emergency key provision is not available.
- iii) The record of the data and time of breaking the sealed cover of Emergency key box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) Station Master on duty shall issue a caution order to the loco pilot of a departing train.
- vi) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching the train in the block section from his end.
- vii) Station Master will advise S&T staff responsible for maintenance of winch/gate levers/key transmitter to rectify the defect at the earliest.
- viii) Normal working will resume only after S&T staff repairs the winch/gate lever/key transmitter and issue reconnection/fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

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**6. FAILURE OF GATE KEY WITH THE GATE IN OPEN POSITION:**

- i) If the gate key cannot be extracted from the winch, the gate lever or the key transmitter, then Gateman must immediately inform the Station Master on duty on telephone, under exchange or private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception/dispatch of trains as prescribed for non-interlocked gate 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 shall issue a caution order to the loco pilot of a departing train.
- v) He shall also advise the Station Master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching the train in the block section from his end.
- vi) Station Master will advise S&T staff responsible for maintenance of winch/gate levers/key transmitter to rectify the defect at the earliest.
- vii) Normal working will resume only after S&T staff repairs the winch/gate levers/key transmitter and issue reconnection/fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

**7. OBSTRUCTION AT THE GATE:**

- i) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers/leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the Gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gates, for this purpose.
- ii) Immediately after this, the Gateman shall advise the Station Master on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii) Station Master, on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, use 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 Inspection for duties of gateman under Item No. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, vehicle number, name of the driver, owner and relay these details to the Station master who shall not start the train unless he has been assured by the Gateman that the road vehicle or the lifting barriers/leaf gates are not fouling the track.
- viii) The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to

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dispatch any train in 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 accordingly, under exchange of private number.
- x) Station Master shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the reception/departure signal at 'ON' position on green hand signal of the Gateman, if the gate is broken, but is clear of any obstructions.
- xi) 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.
- xii) Station Master shall advice maintenance staff responsible for maintaining the lifting barriers/leaf gates to repair the same at the earliest.
- xiii) Normal working will be resumed after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

**8. OBSTRUCTION ON THE TRACK NEAR LEVEL CROSSING:**

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the Gateman, the Gateman and Station Master will adopt the procedure given under Item No.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.

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**APPENDIX 'A'**  
**WORKING OF LEVEL CROSSING GATES AT SITANAGARAM STATION**

**1. GENERAL :**

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

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

- |     |  |   |
|-----|--|---|
| 1.  | Number of Level Crossing Gate:                               | RV-290                                  |
| 2.  | Engineering or Traffic Gate:                                 | Engineering gate ('C'-class)            |
| 3.  | Under control of Station Master/<br>Permanent Way inspector: | SSE [P]/VBL                             |
| 4.  | Location at KM:  | 397/1                                   |
| 5.  | At Station   | --                                      |
| 6.  | In between station   | SNM-PVP                                 |
| 7.  | BG/MG/NG:  | BG                                      |
| 8.  | Single line/Double line/Multiple line                        | Double Line                             |
| 9.  | Normal Position:   | Closed to Road Traffic.                 |
| 10. | Inter Locked/Non-Interlocked:                                | Non Interlocked.                        |
| 11. | Means of interlocked:  | Non interlocked                         |
| 12. | Provision of Gate signal at KMs:                             | Nil                                     |
| 13. | Signaling arrangement:                                       | Nil                                     |
| 14. | Means of communication-<br>Telephone/ Bell etc:              | Telephone connected<br>with SNM station |
| 15. | Width of level crossing gate:                                | 8.5Mtrs.                                |
| 16. | Type of road {NH/SH/Other}:                                  | Others                                  |
| 17. | Name of road:  | Municipal Road                          |
| 18. | Metalled/Non-Metalled:                                       | Non-Metalled                            |
| 19. | Approach road:   | Non-Metalled                            |
| 20. | Width of the road:   | 4Mtr.                                   |
| 21. | Angle of road crossing [In case of the skew gates]:          | 90 <sup>0</sup>                         |
| 22. | Road gradients {if any}:North-East side:                     | 1 in 30                                 |
|     | South-West side:   | 1 in 30                                 |
| 23. | Road alignment {Straight/Curve}:                             | curve                                   |
| 24. | Provision of height gauge:                                   | Non applicable                          |
| 25. | Type of Barriers:  | Lifting Barriers.                       |
| 26. | Length of check rail:  | 11Mtrs.                                 |
| 27. | Road surface in L-Xing gate:                                 | Tar road                                |
| 28. | Length of Rumble strip /speed breakers:                      | 4Mtrs.                                  |
| 29. | Road signs:  | Provided.                               |
| 30. | Speed breaker indication board:                              | Provided.                               |

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- 32 TVU: 12728 in 2009  
 32. Censes next due on: 2012  
 33. Demarcation for placement of detonators: Provided.  
 34. No. of Gate men working: TWO  
 35. Nearest Railway Medical Assistance: Rly.Hospital VBL.  
 36. Nearest private Medical Assistance {If Any}: Bobbili  
 37. List of equipment available Yes/No..... Yes.

### 1.2 EQUIPMENTS:

ITEMS	QUANTITY/NUMBERS
1 Hand Signal Lamp Tri Color.	3 Nos.
2 Hand Signal Flag Green.	1 No with mounted stick
3 Hand Signal Flag Red.	3 Nos.
4 Banner Flag Red.	3 Nos.
5 Posts for exhibiting red banner flag	2 Nos
6. Spare chains with padlocks	2 with stop marker
7. Detonators	10 in each case
8. Fusel	1 No.
9. Gate lamps	2 Nos.
10. Tommy Bar	1No
11. Mortar Pan	1No
12. Spade/Fowarh	1No
13. Rammer	1No [in case of asphalted road this may not be provided.]
14. Pick Axe	1No [in case of asphalted rod this may not be provided.]
15. Tin case for flags	1No
16. Can for Oil	1No
17. Water Pot/Bucket	1No
18. Canister for Muster Roll	1No
19. Set of spare spectacles of gate man wearing glasses.	1No
20. Board demarcation protection of level crossing gate diagram in case of obstruction	1No
21 .Bucket	1No
22. Whistle	1No
23. Wall Clock	1 No

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

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

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

**1.4 DUTIES OF GATEMEN:****[i] ALERTNESS:**

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

**[2] POSITION DURING PASSAGE OF TRAINS:**

During passage of trains, gate man will stand in the manner indicated below: -

- [i] Gate man 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 gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunshine.
- [ii] Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrive

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and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.

[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, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.

[v] Gateman shall also be prepared to repeat any signal which guard may give to driver on walkie-talkie or in any other way.

[vi] If lifting barriers/leaf gates get damages or becomes out of order, the gateman shall use the spare chain with disc and padlock for securing the gate against road traffic. Gate man shall report to the station master, gang mate or permanent way inspector any defect in his gate or apparatus pertaining to it, as soon as possible.

[vii] 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 .

[viii] At the gate whose signal has become defective the Gateman shall close and lock the lifting barrier/leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Driver report the defect at the next station.

[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 this instruction.

[xii] Gateman shall ensure that equipment supplies 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 clean.

[xiv] Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.

[xv] Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.

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[xvi] Gateman on electrified section shall watch that road vehicles/animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.

[xvii] Gateman shall prevent tress passing by persons or cattle to the maximum extent.

**[4] ACTION IN CASE OF UNUSUAL OCCURRENCE ON TRAIN:**

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

[i] He shall take prompt action to warn the Loco pilot/guard of the passing train by showing red flags by day and red light by night.

[ii] He shall simultaneously try to draw the attention of the Loco pilot/guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

[iii] If Loco pilot/guard fails to take notice, gateman shall not stop, immediately inform the station master/switchman/cabin man, if connected on telephone, to take appropriate action under exchange of private number.

[iv] In case of trains parting, gateman shall not show stop hand signal but shall show prescribed signal for trains 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 DN motion as high and as low as possible.

[vi] In case of trains does not stop, gate man shall immediately inform the station master/switchman/cabin man, if connected on telephone, to take appropriate action under exchange of private number.

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

[i] In case of an obstruction at the level crossing gates, Gateman shall maintain the gate signals, if any in the 'ON' position.

[ii] Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the station master/switchman/cabin man on duty, if connected on telephone, regarding the defects/obstructions at the gate, under exchange of private number.

[iii] If there is no response from the station master/switchman/cabin man after two or three attempts, he shall first protect the gate and then inform on phone.

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**The gateman shall protect the line as under:****A] ON DOUBLE LINE SECTION:**

- [i] If the both lines are obstructed The Gateman shall plant a red banner flag by day and the red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
- [ii] Then he will similarly plant the other red banner flag by day and the red light by night 5 meters away from the site of obstruction.
- [iii] Gateman shall then proceed to protect the gate along with detonators, fusees and red flags by day and red hand signal lamp by night.
- [iv] Gateman shall proceed exhibiting red flags by day and red light by night on the line on which a train is expected to arrive first, to a point 600 Mtrs on BG and place one detonator on the line. Thereafter he shall proceed to a distance of 1200 Mtrs on BG from the level crossing gate and place 3 detonators on the track 10 Mtrs 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 the 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] On those Meter Gauge sections where trains run at more than 75 Km/h, detonators shall be placed at distance to be specified under special instruction by the administration.
- [viii] 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 the distance as far away as he can go.
- [ix] Thereafter, he shall light up and fix the fusee to warn the loco pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

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**[B] OTHER ACTION TO BE TAKEN BY GATE MAN:**

- [i] At night gate man shall light two hand signal lamps and take action to exhibit red light and protect the lines as per described in sub para [A] above.
- [ii] If the gate is broken by the road vehicle which is fouling the track, or if lifting barrier by leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gate man shall take immediate action.
- [iii] He shall note down the particulars of the road vehicle, vehicle number, name of the Loco pilot, owner and relay these details to the nearest Station Master or Permanent way inspector regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.

**1.6 ENGINEERING ITEMS.**

Please Para 916, 918, 919 of IRPWM for visibility requirement at level crossings, provision of speed breakers on the approach roads of level crossing and senses of traffic at level crossings.

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**Annexure-V****WORKING INSTRUCTION FOR ENGINEERING LEVEL CROSSING GATES,  
NON-INTERLOCKED, PROVIDED WITH TELEPHONES, WITH NORMAL  
POSITION "CLOSED TO ROAD TRAFFIC"**

(General Instruction is common for all types of Manned Level Crossing Gate)

**1. MODE OF OPERATION:**

When level crossing gate is required to be open for passage of road traffic, the gate man must first open the gate farthest away from approaching road traffic and then open the gate on the side nearest the approaching road traffic after ascertaining the trains positions from the SM on duty.

**2. EXCHANGE OF PRIVATE NUMBER:**

- i] Gate men must seek permission from Station Master/Switch man/Cabin Man for opening the gate.
- ii] SM/Switch man/Cabin man shall ensure that there is no train movement in the block section. There after SM/Switch man/Cabin man shall give his private number to the gate man allowing him to open the gate for the purpose of clearing road traffic.
- iii] Suitable entries shall be made by the Station master/Switch man/Cabinman in the train signal register/Cabin operation register, Private number Book and log book in red ink.
- iv] After passage of road traffic, the gate man shall close the gate and confirm this to Station Master/Switch Man/Cabin man, under exchange of private number.
- v] Before any train is allowed to enter the block section again, the Station Master/Switch man/Cabin man must ensure that private number from the gate man has been received in token of his having closed the gate.
- vi] Gate once closed for road traffic must on no account be open unless this is authorized by the Station Master/Switch Man/Cabin Man, under exchange of private number.

**3. FAILURE OF TELEPHONE COMMUNICATION:**

When Telephone communication fails are it does not get any response from the gate man despite 2 or 3 attempts, the following procedure should be adopted.

- [i] Station Master at the dispatching end shall assure caution order to the loco pilot of the departing train.
- ii] The caution order shall advice the driver to whistle continuously and approach the gate cautiously.

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- iii] The Loco pilot shall be instructed to pass the gate cautiously, on being hand signal by the gate man. If hand signal is not seen, Loco pilot should be prepared to stop short of the gate and depute his assistant Loco pilot to see the condition of the gate. If the gate is closed, the Asst. Loco pilot will give the alright signal and if the gate is not closed he Asst. Loco pilot must close the gate and then give alright signal. In the absence of the Asst. Loco pilot, the Loco pilot may take the assistance of Asst. Guard/Guard.
  - iv] In case of an approaching train, the SM shall advise the SM at the dispatching end, under exchange of private number, that the Telephone at the gate has failed.
  - v] The Station Master at the dispatching end shall then issue a caution order to the Loco pilot before dispatching a train in the block section from his end.
  - vi] Station Master shall also advise the gate man through gang man/Petrol man or the Loco pilot of the first train that the Telephone has become defective
  - vii] He shall also advise S&T staff responsible for maintenance of the Telephone to rectify the same at the earliest.
  - viii] Normal working will be resumed only after S&T staff rectify the Telephone and issue reconnection/fit memo for the same.
4. FAILURE OF LIFTING BARRIARS OR LEAF GATES:
- I] When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman shall immediately inform the Station Master on duty , Cabin Master on duty under exchange of private number, and ensure that lifting barriers or leaf gates do not foul the track.
  - II] He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
  - III] Gate man shall secure the gate against road traffic by means of safety chains and pad locks.
  - IV] After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the Loco pilot of the approaching train.
  - V] Station Master on duty shall Issue caution order to the Loco pilot of a departing train.
  - VI] He shall also advise the Station Master at the dispatching end, under exchange of private number to similarly issue a caution order to the Loco pilot before dispatching a train in the block section.

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- VII] Station Master shall advise maintenance staff responsible for maintaining the lifting barrier/leaf gates to rectify the same at the earliest.
- VIII] Normal working will be resumed only after maintenance staff repair the lifting barrier/leaf gates and issue reconnection/If 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/Leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- II] He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- III] Immediately after this, the gateman shall advise the Station Master/Switch man /Cabin man on duty regarding the defects/obstructions at the gate, under exchange of private number.
- IV] If there is no response from the Station Master /Switchman/Cabin man 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 approaching train and protect the gate as stipulated in General instructions for duties of gateman under item No.1.5 [5].
- VI] Thereafter he shall protect the gate from the other direction also.
- VII] He shall note down the particulars of the road vehicle, name of the Loco pilot owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers/Leaf gates are not fouling the track.
- VIII] The Station Master shall also inform the Station Master at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- IX] After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- X] Station Master shall then issue a caution order to Loco pilots 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.

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- XI] Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- XII] Station Master shall advise maintenance staff responsible for maintaining the lifting barriers/Leaf gates to repair the same at the earliest.
- XIII] Normal working will be resumed only after maintenance staff rectify the defective lifting barriers/leaf gates and issue reconnection/fit memo for the same.

6. OBSTRUCTION ON THE TRACK NEAR LEVEL CRTOSSINGL GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and station master will adopt the procedure given under item no.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.

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**APPENDIX 'B'****DETAILS OF SIGNALLING AND INTERLOCKING INSTALLATION AND COMMUNICATION ARRANGEMENTS AT THE SITANAGARAM STATION****1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALLATION:**

This is a 'B' Class Station with Standard-III interlocking (with isolation) with route setting type panel. The points and signals etc are power operated from a composite miniature 'DOMINO TYPE' full-fledged central panel or VDU installed in the station master's office. This Station is equipped with multi aspect colour light signaling. The SGE type Double Line block instruments are provided in the SM panel room for section SNM-PVP & SNM-VBL.

**1.1. DISCRIPTION OF PANEL:**

The yard layout is depicted on the panel and the panel is fixed parallel to the track so that when the Station Master faces the panel, the yard drawing on the panel corresponds to the actual field lay out. A Visual Display Unit (Computer) is provided in the SM's office as a standby option.

(The description and the function of Visual Display Unit is given in APPENDIX-'B1')

**1.2. POINT PUSH BUTTONS:**

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

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

**1.2.2** When a point is set and locked in REVERSE position, a white steady strip light indication in reverse appears suggesting that the point is in REVERSE position.

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

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

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

**1.2.6** The cause for non setting of the point in the desired position shall be checked up by the Station Master on duty according to GR and SR 3.68.01(C). If there is a

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defect other than an obstruction, this point shall be considered defective and action shall be taken for clamping and Padlocking of these points in the desired position by the Station Master on duty himself for all trains according to SR 3.69.03 (C). In such case both ends of the point shall be clamped and padlocked.

### 1.2.7 DESCRIPTION OF POINT PUSH BUTTON:

SL. NO	POINT BUTTON NO.	COLOUR	DESCRIPTION
1	21 A/B	Black	Emergency Cross over point between UP & DN Main lines at PVP end.
2	22 A/B	Black	Emergency Cross over point between UP & DN Main lines at VBL end.
3	23 A/B	Black	Cross over point between UP Main Line and common loop line at PVP end.
4	24 A/B	Black	Cross over point between DN Main line and DN loop line No.1 at VBL end.
5	25	Black	Cross over point between DN Main line and DN loop line No.1 at PVP end.
6	26	Black	Cross over point between UP Main line and common loop at VBL end.
7	27	Black	Cross over point between common loop and Engineering siding takes off from both the ends.
7	Point Group button (Normal)	Black with Red dot	Common button for normal operation of points
8	Point Group button (Reverse)	Black with Red dot	Common button for reverse operation of points

### 1.2.8 DESCRIPTION OF POINT GROUP BUTTON:

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

### 1.3 SIGNAL PUSH BUTTON:

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

#### 1.3.1 DESCRIPTION OF SIGNAL BUTTONS:

SL NO	BUTTON NO.	COLOUR	DESCRIPTION
1	C1	Red with white dot	UP calling 'ON' signal for Line No. 3& 4.
2	S1	Red	UP Home signal for Line No. 3& 4.
3	C4	Red with white dot	DN calling 'ON' signal for Line No.1, 2 & 4.
4	S4	Red	DN Home signal for Line No. 1, 2 & 4.

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5	SH3	Yellow	Shunt Signal for line no. 1, 2, 3 & 4.
6	SH6	Yellow	Shunt Signal for Line No. 3 & 4.
7	S-8	Red	DN loop starter signal for line no.1
8	S-9	Red	UP common loop starter signal for line no.4
9	S-10	Red	Down common loop starter signal for line no.4
10	S-11	Red	UP Main line starter signal for line no.3
11	S-12	Red	Down main line starter signal on line no.2
12	S-13	Red	UP advanced starter signal
13	S-14	Red	DN advanced starter signal.

### 1.3.2 SIGNAL INDICATION:

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

### 1.4 ROUTE BUTTONS:

1.4.1 Route buttons are provided separately on each running line on the panel for initiation of route. Common route buttons are also provided for taking off starters. An individual route button is provided for taking 'OFF' advanced starter for clearing the signal. It is necessary to operate the signal button and the concerned route button simultaneously for taking OFF concerned signal.

### 1.4.2 DESCRIPTION OF ROUTE BUTTONS:

SL. NO.	BUTTON NO.	COLOUR	DESCRIPTION
1	L1/1 UN	White with Black dot	Common route button for DN Home signal, DN Calling-on signal, shunt signals SH-3 for line No.1 setting overlap on sand hump.
2	L1/2 UN	White	Route button for DN Home signal for line No.1 setting overlap on Main line.
3	L-2 UN	White	Common Route button for DN Home signal, DN Calling-On signal and shunt signal SH-3 for line No. 2 DN Main line.
4	L3 UN	White	Common route button for UP Home signal, UP Calling-On signal and shunt signal SH-3, SH-6 for line No. 3 UP Main line.
5	L4/1 UN	White with Black dot	Common route button for UP & DN Home signal, UP & DN calling on signal, UP & DN shunt signal for line no. 4 setting overlap on sand hump.
6	L4/2 UN	White	Common route button for UP & DN Home signal for line no. 4 setting overlap on DN main line.
7	14A-UN	White	Common route button for DN starters 8, 10, 12.
8	13A-UN	White	Common route button for UP starters 9, 11.
9	14UN	White	Route button for DN advanced starter no.14
10	13UN	White	Route button for UP advanced starter no.13

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**1.5 CRANK HANDLE PUSH BUTTONS**

SL.No	Button No	Color	CONTROL POINTS
1	CH-1	Blue	To be pressed to extract Crank Handle Key for operation of point No 21A/B.
2	CH-2	Blue	To be pressed to extract Crank Handle Key for operation of point No 22A/B.
3	CH-3	Blue	To be pressed to extract Crank Handle Key for operation of point No 23A/B, 26A/B.
4	CH-4	Blue	To be pressed to extract Crank Handle Key for operation of point No 24A/B, 25A/B.

**1.6 MISCELLANEOUS PUSH BUTTONS**

SL. NO	Button No	Colour	Description
1	SM's EMERGENCY POINT OPERATION KEY	---	This key is to be inserted and operated in the event of Emergency point operation
2	SM's PANEL KEY	---	To lock the control panel to prevent unauthorized operation
3	PANEL PC SWITCH	---	To give control of operation from panel to PC and vice versa
4	ACK FOR SYSTEM FAILURE	GREEN WITH RED DOT	To be pressed to silence system failure buzzer
5	GROUP TRANS PUSH BUTTON	WHITE WITH BLACK DOT	To be pressed to initiate slot of crank handle or LC gate operation along with concerned slot/Crank Handle/L.C.Gate button.
6	GROUP RELEASE PUSH BUTTON	WHITE WITH BLACK DOT	To be pressed to withdraw/Normalize the control of slot of crank handle or LC gate operation along with concerned slot/Crank Handle/L.C.Gate push button.
7	POINT GROUP NORMAL PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate 'NORMAL' setting of point along with concerned point push button
8	POINT GROUP REVERSE PUSH BUTTON	BLACK WITH RED DOT	To be pressed to initiate 'REVERSE' setting of point along with concerned point push button
9	EMERGENCY ROUTE RELEASE PUSH BUTTON	WHITE WITH RED DOT	To be pressed for emergency Route Release
10	SIGNAL CANCELLATION PUSH BUTTON	RED	To be pressed for canceling a signal which is already taken 'OFF' or to release a route after passage of a train.

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11	SIGNAL LAMP FAILURE /POINT FAILURE ACKNOWLEDGEMENT	RED WITH WHITE DOT	To be pressed for acknowledging signal lamp/point failure
12	EMERGENCY POINT OPERATION	BLACK WITH RED DOT	To be pressed to operate the point when concerned point zone track circuit failed.
13	BUTTON HELD ACKNOWLEDGEMENT PUSH BUTTON	WHITE WITH RED DOT	To be pressed for silencing button held buzzer in case of any push button remains pressed after the button is released.
14	UP BLOCK RELEASE PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block instrument for section PVP-SNM.
15	DN BLOCK RELEASE PUSH BUTTON	CHOCOLATE WITH WHITE DOT	To be pressed for normalizing the Block instrument for section VBL-SNM.

### 1.7 Power failure indication /Buzzer and power acknowledgement:

Power supply to the signaling installation is through integrated power supply system. The IPS is normally fed through AT supply. The 1<sup>st</sup> standby power supply is Andhra Pradesh state Electricity Board supply and 2<sup>nd</sup> standby is Diesel Generator. The available Local/DG supply is fed to the IPS through auto change over switch provided in IPS.

In the event of failure of the local power supply the SM on duty shall start the Diesel Generator. The power supply of the DG set is fed to the auto change over switch provided in IPS. The IPS system is connected with battery for safe working during transition of power. Remote monitoring ASM console for IPS is provided at SM's office which will give the following instructions.

	Instructions	Condition	LED indication	Remarks
A	Run DG set	50% DOD	Red	Auto/visual alarm. Alarm shall be acknowledged by SM on duty.
B	Emergency start	60% DOD	Red	Auto/visual alarm. Alarm shall be acknowledged by SM on duty.
C	System shut down	70% DOD	Red	Signal feed cut off and all DC-DC converters to work. Audio alarm will continue till Generator is stated.
D	Call staff S&T	Equipment fault	Red	Failure of any module will give the alarm in SM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

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

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

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**1.7.2 VHLC INDICATION:**

A VHLC (Vital Harmonic Logic Controller) indication is provided on the top of the panel for indicating which system of VHLC is working. This EI unit is consisting of two VHLC systems called system 'A' and system 'B'. These two systems status (ON/OFF) will be indicated separately on the panel. If the VHLC indication is ON 'GREEN' indication will appear and if OFF 'RED' indication appears. If any one of the 'ON' line system fails automatically OFF line system will change to ON line with a gap of 180 seconds. A system failure buzzer is provided on the panel board to stop the VHLC unit buzzer. SM on duty has to press the system failure acknowledgement button provided on the top of the panel and intimate the same to ESM/SE/JE in charge for rectification of the failure. Whenever the system changes from A to B or B to A SM on duty has to release all crank handle, L C Gate controls.

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

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

**1.9 EMERGENCY ROUTE RELEASE COUNTER**

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

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

The Electronic interlocking is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally the route is released by the passage of the train over the route.

When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and concerned signal button. After this, first the emergency route release button (White with Red Dot) positioned on the top of the panel to be pressed after breaking seal and subsequently the concerned signal button is to be pressed. A white light will be lit indicating that the timer is working. After a lapse of 120 seconds the white light along with the white strip of light will disappear suggesting that the route has been released. In case the route illumination (white strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to release by rectifying the fault. It is to be ensured that after every emergency route release operation S&T staff shall seal the emergency route release button.

Each operation of emergency cancellation of route should be recorded in the emergency route release counter register by registering the next higher number. SM on duty shall ensure sealing of emergency route release button by S&T staff after completion of the work.

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

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SM on duty, after ensuring that SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button (by breaking the seal) along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL or REVERSE. Each emergency point operation should be recorded in the emergency point operation counter by registering the next higher number. All such operations and the new number should be recorded in the station diary counter register and in the train signal register. SM shall ensure sealing of Emergency point operation button by S&T staff after completion of such operation.

**4.0 BUTTON HELD ACKNOWLEDGEMENT(WHITE WITH RED DOT)**

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

**5.0 OVER LAP TIME RELEASE(WHITE LIGHT)**

Separate indications (white light) for each overlap is provided near the starter signal to indicate the free or locked condition of the overlap. This indication light will glow when overlap is locked by any Home signal route and there will be no light when the overlap is free.

The locked indication starts flashing when the approaching train clears the rear end point zone track and occupies the berthing track. After a time lapse of 120 sec the white flashing light will disappear indicating concerned over lap is free.

**6.0 TRACK CIRCUIT:**

Line No.1 to 4 are track circuited.

In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in both the directions are also provided. For Calling-on signals (7M Rail length) track circuits are also provided in rear of the Home signals in both directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited. Indications for the above track circuits are available on Panel / VDU at SM's office. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel/VDU at SM's office. When a signal is cleared the route indication 'Yellow' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.

**7. AXLE COUNTER:**

Entire Block Section between SNM-PVP and SNM-VBL are provided with Electronic Axle counters.

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For SEC: SNM-PVP: - A pair of digital axle counter is provided between SNM-PVP on DN line, one just beyond DN advanced starter no. 14 of KMX and another one on 2T<sub>2</sub> track circuit of PVP.

FOR SEC:SNM-VBL: A pair of Digital axle counter is provided between SNM-VBL on Up line one just beyond UP Advanced starter signal no.13 of SNM and another on 1T<sub>2</sub> track circuit of VBL.

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

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

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the last vehicle has arrived complete at the receiving station by exchanging Private Number, then resetting to be complied with. (Details of resetting procedure given in APPENDIX-'B').

**NOTE:**

Before taking off reception and dispatch signals for UP or Down directions the SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The indication of track will exhibit Red Light when track is occupied and White light when track is clear. There will be no track indication when any route is not set.

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

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

**9. CRANK HANDLES:**

When any point fails to operate normally by the route setting operation or through the concerned point button through panel, it is inevitable to operate the points with crank handle. Station Master on duty shall personally ensure clamping and padlocking all facing and trailing points enroute. Crank handles are interlocked with signals and interlocking system. The CH push button (Blue) and group button (White with Black dot) is provided at the top of the panel board.

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This button has two indications viz., WHITE and RED. The White indication suggests that the crank handle key is in its interlocked position of the panel. This is called "Crank Handle Key 'IN' indication.

The Red indication suggests that the crank handle key is locked and not free for extraction from RKT. This is called 'Crank handle key locked' indication.

For extracting CH key from RKT SM has to press relevant crank handle push button and group TRANS button simultaneously. The light white light besides the CH button starts flashing. After extraction of CH key from RKT at location box flashing white light disappears. On extraction of CH key from RKT, the points in that particular group cannot be operated from the panel. After completion of point operation, the CH key will be retransmitted to the station electrically by inserting the CH key in RKT in location box and turned. The white flashing indication appears on the Panel board. The flashing will be stopped and steady indication appears on pressing concerned CH button and group release button (White with Black dot).

Crank handle control for operation of points:

SL NO	CRANK HANDLE	CONTROL POINTS
1	CH-1	21 A/B
2	CH-2	22 A/B
3	CH-3	23 A/B, 26A/B
4	CH-4	24 A/B, 25A/B

### 9.1 SETTING OF ROUTE AND TAKING OFF RECEPTION SIGNALS.

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

### 9.2 SETTING OF ROUTE AND TAKING OFF DEPARTURE SIGNALS.

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

To take 'OFF' UP advanced starter signal no.13, UP LV section between SNM-VBL should be clear and Line clear must be obtained from the concerned Block section in advance. Then the concerned advanced starter signal button shall be pressed along with the concerned route button for two or three seconds and released. This will clear the Up advanced starter signal and a white strip of light will appear on the panel.

To take 'OFF' DN advanced starter signal no.14, DN LV section between SNM-PVP should be clear and Line clear must be obtained from the concerned Block section in advance. Then the concerned advanced starter signal button shall be pressed along with the concerned route button for two or three seconds and released. This will clear the DN advanced starter signal and a white strip of light will appear on the panel.

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

### **9.3 TAKING OFF CALLING ON SIGNAL**

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

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit (1AT, 4AT as the case may be) in rear of the Home signal. When a train occupies the track circuit a RED light strip will appear on the Panel/VDU. The particular route on which train is intended to be received shall be set by operating the point push button and group button individually or by signal and route buttons pressing or by crank handling in the event of failure of operation of points through panel/VDU. After the route is set, the Calling On signal button 'C-1(A-B)/ C-4(A-C) (Red with White dot) shall be pressed (as the case may be) simultaneously along with the concerned route button for 2 to 3 seconds and then released. After a lapse of 120 seconds, the Calling-on signal clears i.e. a Yellow light glows at the concerned Calling-on signal on the panel.

### **10. RELEASE/ CANCELLATION OF ROUTE.**

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

NOTE:-

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

### **11. REPLACEMENT OF SIGNALS TO ON:**

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

### **12. INTERLOCKING OF SIGNALS/POINTS**

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

**12.1** Advanced starter signals are interlocked with respective Double line SGE Block instrument in LINE CLEAR position.

**12.2** Home signals are interlocked with respective Double line Block instruments. The Block instruments cannot be made to normal unless the respective Home is put back to 'ON' aspect and the respective block section monitored by axle counter is clear of trains.

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

### **13. PILOTING OF TRAINS IN TO THE STATION YARD**

Whenever Home signal becomes defective, trains can be admitted by taking off calling-on signal. When both home and calling-on failed, then the trains will be piloted 'IN' in terms of SR 3.69.3(a) &(c).

The SM on duty shall nominate a clear line and shall set the nominated route correctly from the panel or shall advise the TPM on duty at station to set the nominate route with the help of crank handle during failure of points. The TPM shall set the facing and trailing points clamp and padlock the same under the super vision of SM on duty at station in both the cases.

Then the SM on duty shall then hand over the written authority (T/369(3b) to the TPM for "piloting IN" the train. While going towards home signal, the TPM shall check that the points have been correctly set, clamped and padlocked. After the train has been brought to a dead stop at the foot of the home signal the TPM shall hand over the PILOT memo to the Loco Pilot board the engine and display proceed hand signal to pass the defective home signal.

**NOTE:**

- 1) The station master on duty shall personally supervise the correct setting, clamping and padlocking of both end points for admission of a train.
- 2) The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled
- 3) The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

#### **13.1 PILOTING OF TRAINS OUT OF STATION YARD:**

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

The SM on duty shall then authorize the TPM on duty to hand over the pilot memo T/369(3b) along with other authorities if any to the Loco Pilot of the train. Thereafter, he shall display proceed hand signal at the foot of the starter signal vide subsidiary rule 3.70.01.

Incase advanced starter signal becomes defective BWM 3.33 will be followed.

**NOTE:**

- (1)The station master on duty shall personally supervise the correct setting, clamping and padlocking of both end points for dispatching of a train.
- (2) The keys of padlock used for clamps on the points shall be kept in the personal custody of SM on duty till such movement is either completed or alternatively cancelled.

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(3) The SM on duty shall ensure the closure of the interlocked gate supported by a private number from the gateman on duty.

#### **14. SHUNTING**

For back shunting SH-3 & SH- 6 are provided in the yard for shunting back to the station yard in desired direction. The particular route on which it is intended to do shunting is to be set by operating the desired points individually from the panel or by pressing the shunt signal button and required route button simultaneously for 2-3 seconds. When the route is set and locked correctly white strip of lights will appear on the route and concerned shunt signal shall display 'OFF' aspect.

#### **15.0 VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAINS INTO THE YARD**

In the station yard, a route on the running line comprises of entrance, berthing and dispatch portion of the yard and this portion of the yard should be clear of any obstruction for the passage of any train or for any other movements.

The clearance of the route including overlap must be ensured by the Station Master on duty personally through Luminous indications of the track before any movement of trains are permitted on the concerned route subjected to the other conditions such as locking of points etc.

#### **16.0 CRANK HANDLING EMERGENCY OPERATION OF POINTS**

Crank handle operation is interlocked with the signaling and interlocking system at this station. Key of crank handles normally locked inside the RKT instrument at the respective Crank Handles Locations. Crank handle keys can be taken out only when all signals leading over the points are in the Normal position and the route is not locked for whatever reasons. Crank Handle can be released by operating common 'TRANS' push button and concerned Crank handle control push button simultaneously. When this key is taken out, no signal to the concerned point can be taken 'OFF' in the yard. This key can be electrically transmitted at both ends of the yard.

On account of the doubtful operation of any track circuit by a light vehicle including self propelled vehicle such as Motor trolley or light Diesel/electrical engine or tower wagon, indicating the occupancy of the track. It is necessary to satisfy SM on duty that the said vehicle has cleared point zone track circuits by observing the track indications on either side of the cross over.

#### **17.0 EMERGENCY OPERATIONS**

The following are the instructions for emergency operations.

##### **17.1 CANCELLATION BUTTON AND COUNTERS**

17.1.1 For the purpose of the emergency operations there is an emergency Route cancellation button (provided at the top of the panel) and also there is a counter for counting emergency operations involving the concurrent operation of the emergency route cancellation button. The Station Master on duty must press the emergency route button along with concerned signal button for which emergency route releases is desired. A yellow indication will appear below the signal indicating that the timer has started operating and after lapse of 120 seconds the

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desired route will be released provided all other conditions are favorable for the route release.

17.1.2 The counter registers the number of such emergency operations performed for such emergency cancellation and the Station Master on duty shall specify the cause for such usage giving the particulars of cause and the time of operation as related to a particular train etc. in the train signal register. The detailed operation instructions are as follows:

**17.2 EMERGENCY OPERATIOIS CANCELLATION THE LOCKING OF POINTS NOT RELEASED AFTER THE PASSAGE OF THE TRAIN FOR WHAT EVER REASON:**

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

- a) Firstly, it must be ensured that the signal is in the ON position.
- b) Operation as detailed in Para 3.0 to be followed.

**18.0 LOCKING OF RELAY ROOM:**

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

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

**19.1** Regular maintenance of S&T installations and adherence to the schedules of maintenance is also the mandatory schedules of testing of points, track circuits, point machines, level crossing gates, the associated interlocking apparatus i.e., cables and finally the interlocking functional tests is a must for the safe and satisfactory working of those installations at this Station.

19.2 The tests, checks and replacements etc. including overhauling shall confirm to the schedule of maintenance as indicated in the signal engineering manual as also in the current and extent instruction / circulars on the subject.

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

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

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

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

**20.2 RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:**

After receipt of this information, the sectional maintainer shall attend to the failure after giving a disconnection memo. After rectification of the fault the sectional maintainer shall give a reconnection memo detailing rectification. Thereafter the Station Master on duty shall personally check the defective apparatus. After

satisfying himself that the gear is in good and proper working order, he shall resume the normal working of the said defective gear in terms of SR 3.64.04 (c) and (d).

**21.0 PROCEDURE FOR CARRYING OUT PLANNED MAINTANANCE WORK:**

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

**22.0 EMERGENCIES:**

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

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

- 23.1 When crank handle key is removed from RKT for operation of the defective motor operated points, the responsibility for its safe custody rests with the Station Master on duty, till it is replaced back to RKT.
- 23.2 The cases of failure of Motor Operated Points should be promptly reported to the Concerned Signal maintainer /Signal Inspector for immediate rectification.
- 23.3 Whenever an emergency Crank handle is required to be used by a Signal Official for maintenance of work attending to failure, the Signal Official will give a disconnection memo to the Station Master on duty and after making necessary entries in the emergency Crank Handle register, the Station Master on duty; will obtain acknowledgement of the Signal Official in the emergency Crank Handle Register and then handover to him the emergency Crank Handle for the Points concerned. All the concerned Points will be treated as defective till the Emergency Crank Handle is returned back to the Station Master on duty.
- 23.4 Before parting with the emergency crank handle either for attending failure or for Maintenance work by Signal Maintenance Officials, the Station Master on duty will

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ensure that the reception and departure Signals are put back to ON position. The Points for the affected lines shall be treated as Non-interlocked. The Station Master on duty is responsible for introduction of Non-interlocked working and the trains Will be piloted IN and OUT duly clamping and Padlocking the Points, both in facing and trailing directions over which the train is to pass, as per GR 3.69 and 3.70 with relevant SR's. The Station Master on duty will be personally responsible for setting and locking of Points, for reception and dispatch of all trains.

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

#### **24.0 SUSPENSION OF LAST STOP SIGNALS**

24.1 When the Double line SGE Block Instrument is suspended with its handle in 'LINE CLEAR' position for whatever reason, the concerned Last Stop Signals controlled by the Block Instrument must be treated as suspended and trains shall be worked in accordance with the procedure prescribed in BWM 3.33.

24.2 The Station Master on duty shall not grant LINE CLEAR unless he has ensured that the lamps of fixed signals which apply to the trains are glowing. If the Signal Lights are not glowing the Station Master on duty shall before giving LINE CLEAR shall initiate action in accordance with the procedure prescribed in GR 3.68 to 3.71 and relevant SR's vide GR 3.49(4).

#### **25.0 NORMALISATION OF THE BLOCK AXLE COUNTER AND BLOCK WORKING BY RESETTING FEATURE**

**25.1** Axle counters are provided on UP and DN lines between SNM-VBL and SNM-PVP Double line section for Block proving.

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

**25.3** If any Block proving Axle counter section fails, the Last stop signal at the rear station cannot be taken 'OFF' and Block instrument at advance station cannot be turned to "Line Closed" position after arrival of a train and in such case, resetting of last vehicle checking device is to be resorted to in either section.

**25.4** Even after completion of reset operation, LVCD Axle counter will show clear only if next train is passed. The next train is to be piloted.

25.5 No train should be allowed on signal to leave a station in any particular direction unless:-

Track clear indication is available for the relevant axle counter track circuited portion and Last stop signal is not taken 'OFF'.

25.6 A resetting arrangement for the resumption of the track circuit by means of axle counter under failure condition at either end station of the Block section is provided, which should only be resorted to after the train that was lastly sent, arrives fully at the at the receiving station and is certified in this respect by the SM at the receiving station through exchange of Private Number.

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25.7 Reset arrangements are provided in the Reset Box in the SM's office for Sections SNM-VBL and SNM-PVP. The key for the Reset Box should normally be kept with SM. And for every such operation of the resetting the Axle Counter, the SM on duty shall record giving details of the date of use, train number, time, and number registered on the counter and reasons for resetting and initial each such entry.

**26.0 (A) RESETTING OF LVV DIGITAL AXLE COUNTER:**

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

ii) SS/SM at receiving end then sends an operating person to verify that the last vehicle is clear of Block section. After verifying the clearance of last vehicle of concerned block section, the operating person exchanges private number and press the button in the LVV box.

iii) On exchanging private number the SS/SM at both ends will insert the reset key for corresponding section and shall press the nominated reset button. By this operation LVV axle counter will reset and associated counter will change to next higher number at both ends.

iii) SS/SM at both ends shall record the counter number so changer due to reset of axle counter in the reset register and also in the Train signal register mentioning the purpose of reset. After the reset operation is completed preparatory reset indication will appear on reset box at both ends which suggests that the reset operation is successfully completed and the first train has to be piloted out. On arrival of the piloted train the axle counter track cct zone of the section shows clear and normal working shall be resumed. Even after arrival of piloted train, LVV axle counter zone does not show clear indication, S&T staff to be informed for getting rectified the failure of axle counter.

v) It is mandatory that every reset operation of LVV axle counter first train after reset process shall have to be piloted out.

PARA NO. 26 Appendix 'B' will come into force after proper intimation by ASTE/P/VSKP or DSTE/P/VSKP on written authority of Dy CSTE/P/VSKP after commissioning of LVV axle counter for section KMX-DNV and KMX-GPI. Till such time the last vehicle will be verified by the SS/DySS on duty physically as per existing rules in vogue.

**(B) RESETTING OF ANALOGUE AXLE COUNTER:**

In case of failure of Analogue axle counter of 2AXT towards VBL end, resetting can be done after ensuring physical check at site and by pressing Axle counter zone verification button provided at site in location box and also by SM on panel/VDU.

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**27.0 SIGNAL LIGHTS:**

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

**28. CORRECTING TIME IN STATION CLOCK:**

The station Master shall set the time in his clock according to the time signal given by the section controller on duty at 16.00 Hrs every day according to GR and SR 4.01.01 and 4.01.02.

**29.0 TELECOMMUNICATIONS:**

- (a) Telephone attached to Double line Block Instruments is connected to adjacent stations on either side.
- (b) Telephone communication is provided between adjacent stations i.e., PVP and VBL Stations.
- (c) The station is connected to VZM-Tie line 'B' cabin control Circuit.
- (d) Telephone communication is provided between Station Master on duty to Up CH location.
- (e) The station is connected with BSNL telephone.
- (f) The station is connected to 'C' class LC gate at km 397/1(LC No. RV-290).
- (g) The station is connected to 'A' class LC gate at km 402.288 (LC No. RV-294) at East cabin.
- (h) The station is connected to 'B' class LC gate at km 403/11-12 (LC No. RV-295).
- (i) 25w VHF set is provided at the station.
- (j) The station is connected to 2AXT zone verification box in the location box provided near S-4.

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**APPENDIX 'B1' TO STATION WORKING RULES OF SITANAGARAM STATION  
VISUAL DISPLAY UNIT (VDU)**

**NOTE:**

The standby system (VDU) is also provided with the Conventional panel for the operation of Signals, Points, L.C.Gates, Crank Handles, Siding Controls and Resetting of all type of Axle counters.

**SYSTEM OVERVIEW:**

In addition to the panel, an operator console (VDU) consists of a CPU with a high resolution colour monitor, keyboard and pointing device (mouse) are provided. Both the serial ports in the CPU are connected to the Westrace CPU board for exchange of control and indication messages. The Software is installed to display the Station Yard Mimic Panel diagram on the VDU and that it allows access to all functions through pop-up menus. When a particular function is selected, an appropriate Menu will appear on the screen by selecting a required operation clicking by the Left button of the pointing device (mouse) a function (Signal clear and cancellation, Route release, Point operation, Gate release etc.,) can be executed.

The Computer (VDU) or panel any one may be used for controlling and monitoring the station, however indications on the Station yard Mimic diagram of VDU and panel will be dynamically updated.

**SELECTION OF CONTROL:**

This VDU (Computer) is provided as a standby of conventional panel for the operation of signals, points, L.C.Gates, crank handles, siding controls from the Mimic panel diagram. A Mimic panel diagram will be displayed on the VDU, which is an exact replica of operation cum indication panel and suits the yard plan as per SI plan 23082.

One two-position switch (Red coloured) is provided on the conventional panel along with the SM's Key used for selection of Panel or VDU called PANEL/PC Change over switch.

SM of the station can select any of the controls, for the selection of one control to another there are certain procedures to be followed for the control transfer. The procedure to be followed as mentioned below.

**PANEL/PC KEY and PC CONTROL KEY**

To prevent the unauthorised operation by other than on duty SM in VDU this facility is provided on VDU. On duty SM need to track the pointer to the "PC CONTROL KEY" icon and click the KEY OUT menu by the left button of mouse, by this a Password window will appear. SM need to enter the password and press OK button provided on the password window. This will lock all the controls in VDU except the Signal Cancellation of All Cleared Signal routes. The PC CONTROL KEY is nothing but a SM's Key in the conventional panel.

**CHANGE OVER FROM PANEL WORKING TO PC**

Ensure that SM's Key is in ON position.

Ensure that PANEL/PC Change over switch is in PANEL mode.

Click the PANEL/PC key provided in the left top corner of the VDU. (A pop-up menu will appear)



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Click the first Menu – PC REQUEST. (A password required window will appear in the centre of the screen).

Enter the proper USER NAME and PASSWORD in the required text boxes by selecting with mouse, after entering so, click the OK button.

Now both the PANEL and PC indications will start Flashing.

Change the PANEL/PC changeover switch to PC mode in the conventional panel.

Now the PC indication will steady and Panel indication will disappear.

Click the PC CONTROL KEY and click the KEY IN menu. (A password required window will appear in the centre of the screen).

Enter the USER NAME and PASSWORD and click the OK button.

Now the Overall control is transferred to VDU.

The entire operation can be possible from the VDU.

**CHANGE OVER FROM PC WORKING TO PANEL**

Turn the PANEL/PC changeover switch to PANEL mode.

Now both the PANEL and PC indications will start Flashing.

Click the PANEL/PC key provided in the left top corner of the VDU. (A pop-up menu will appear)

Click the second Menu – PANEL ACKNOWLEDGE. (A password required window will appear in the centre of the screen).

Enter the proper USER NAME and PASSWORD in the required text boxes by selecting with mouse, after entering so click the OK button.

Now the PANEL indication will be steady and the PC indication will disappear.

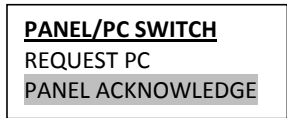
Now the Overall control is transferred to PANEL, The entire operation can be possible from the PANEL.

**OPERATIONAL PROCEDURE:**

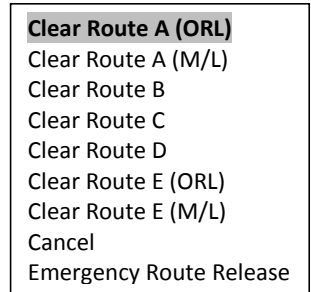
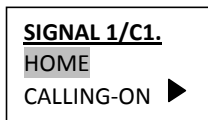
**VDU INDICATIONS:**

**MICROLOK II (SSI) INDICATIONS:**

In Panel/PC there are two system indication, Green indication mentioning the On-line system and the RED indication mentioning the Off-line system. In addition there are two indications mentioning status of communication and panel processor.



**SIGNAL OPERATION:**



To Take-Off a Signal with the desired route the SM needs to track the mouse pointer over the concerned Signal on the VDU, after clicking by the left button on the mouse a popup menu will appear as below:

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**SETTING A ROUTE:**

To set a route of a signal, click on a possible route of the signal, after done so the route initiated Red indication will appear on the replacement track of the signal. And all the relevant points Normal/Reverse set indications will start flashing if it is not available in the required position. After setting of point in the route required condition (Flashing indication will be steady) a complete yellow route set indication will appear from the Replacement Track of the signal to the last track of overlap of the route also the points will be locked (A Point locked can be ensured from the Red Steady indication will appear near the point). Finally a Route locked Yellow Steady indication will appear on the just below the signal. The signal will be Taken-Off now. The yellow route set indication will turn to Red when the train occupies the track circuit.

**CONDITIONS FOR SETTING A ROUTE:**

The following condition to be ensured before setting the route by the SM.

All the Crank handles of the required route related points to be in Key in condition.

All the related siding control keys to be in Key in condition.

If any Level Crossing gates are falling under the route that should be locked (KEY IN) and signal slot lever of the gate to be in reverse position (Can be ensured from the Yellow steady indication just near the LC Gate control).

All the related siding points should be in normal position (can be ensured from Yellow steady indication at the siding point on the route).

**CANCELLING A ROUTE/ EMERGENCY ROUTE RELEASE:**

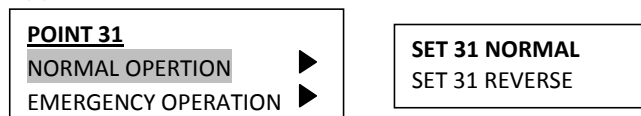
To Cancel a signal route when the route is set and the signal is taken-off, click on the signal cancellation menu (Main/Calling on) of the concerned signal, the signal will immediately go to ON aspect, after doing so click on the Route release menu the route locked indication will starts flashing for 120sec. After the completion of 120sec the locked route will be released and counter provided for the route release in the conventional panel will changeover to next higher digit which should be recorded by SM.

**SHUNT SIGNAL OPERATION:**

To setting and Cancelling the signal route for the shunt signal the same procedure shall be followed as explained in Signal Operation.

**POINT OPERATION:**

To Operate the Point the SM needs to track the mouse pointer to concerned point's normal/reverse indications on the VDU, after clicking by the left button on the mouse a popup menu will appear as below:

**REVERSE TO NORMAL OPERATION:**

Track the pointer to NORMAL menu and click, a Normal flashing indication will appear, the indication will be steady after the point is set to Normal.

**NORMAL TO REVERSE OPERATION:**

Track the pointer to REVERSE menu and click, a Reverse flashing indication will appear, the indication will be steady after the point is set to reverse.

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**EMERGENCY NORMAL OPERATION:**

When the Point zone track circuits/ Axle counters failed without any Point lock condition by any signal routes, a point can be operated by the Emergency Point operation.

Before doing the emergency operation A Emergency Point Operation Key to be KEY IN by clicking the KEY IN menu, after the completion of the Emergency point operation, the key to be KEY OUT by clicking KEY OUT menu.

Track the pointer to EMERGENCY NORMAL menu and click, a Normal flashing indication will appear, the indication will be steady after the point is set to NORMAL.

After the Emergency point operation a specific counter provided in the Domino panel board will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SM.

**EMERGENCY REVERSE OPERATION:**

When the Point zone Track circuits/ Axle counters failed without any Point lock condition by any signal routes, a point can be operated by the Emergency Point operation.

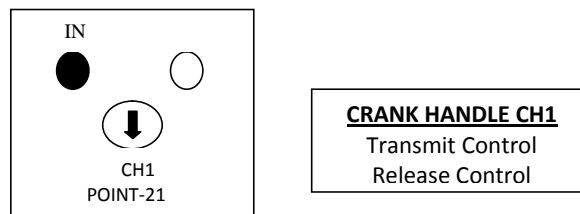
Before doing the emergency operation A Emergency Point Operation Key to be KEY IN by clicking the KEY IN menu, after the completion of the Emergency point operation the key to be KEY OUT by clicking KEY OUT menu.

Track the pointer to EMERGENCY REVERSE menu and click, a Reverse flashing indication will appear, the indication will be steady after the point is set to reverse.

After the Emergency point operation a specific counter provided in the Domino panel board will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SM.

**CRANK HANDLE & SIDING CONTROL OPERATION:**

To Transmit or Release control of the Crank Handle, click on the crank handle/ Siding control button provided like the following button on the VDU.



The appearing pop-up menu gives details of the possible commands on the Crank Handle.

For Transmitting the Crank Handle KEY to the field personnel SM has to click transmit control menu. After transmission the KEY IN indication will starts flashing, now the KEY can be extracted from the RKT. After extracting the key from the RKT, the KEY IN indication will disappear.

When the Manual point operation is over, after putting the KEY in the RKT, A KEY IN flashing indication will appear on the panel. Now the SM has to release the control for the Steady indication by clicking release control menu.

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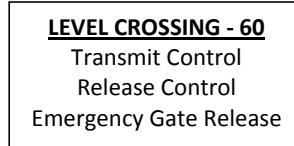
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A Crank handle locked indication will appear when the particular point has locked by any of the possible signal routes.

**LEVEL CROSSING GATE OPERATION:**

To Transmit or Release control of the Level crossing gate, click on the Level crossing control button provided like the following button on the VDU. The appearing pop-up menu gives details of the possible commands on the Level crossing gate.



For transmitting the LC Key to the Gate man, SM has to transmit the control by clicking, after transmission the CLOSED indication will starts flashing, now the KEY can be extracted from the RKT. When the gate has been closed, locked & slot lever is in reverse position, after putting the key in the RKT, a closed flashing indication will appear on the panel. Now the SM has to release the control for the Steady indication.

The locked indication will appear when the LC Gate has locked by any of the possible signal routes.

**EMERGENCY GATE OPERATION:**

If the LC Gate has locked by any of the signal route, for releasing the gate by the Emergency operation the SM has to cancel the signal by signal cancellation control of the relevant signal. Then he has to click the Emergency Gate Release Control in the Gate pop-up menu. This will take 120sec of time to release the gate. After the time lapsed, the Key can be extracted from the RKT at Gate Lodge and concerned counter provided on the panel board will change to next higher digit number, which should be recorded in the register provided for this purpose.

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**APPENDIX 'C' TO STATION WORKING RULES OF DONKINAVALASA STATION**

**ANTI COLLISION DEVICE [[RAKSHA KAVACH]**

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DEN/N/WAT

(M.A.HAQUE)

Sr. DOM/G/WAT

**APPENDIX 'D'****DUTIES TO BE PERFORMED BY THE STAFF AT KOMATIPALLI STATION.****1) STATION SUPERINTENDENT:**

He is the 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 permanent or temporary according to Station Working Rules, Manuals & safe working Instructions. He shall get himself well conversant with the detailed working of Station and panel, points and signals etc.,

He shall conduct surprise night inspection and safety meetings/fire drills etc. as per instructions issued from time to time. He shall see that all the staff under his control working safely according to the rules in force.

He shall see that all signals, points, level crossing gates and the whole machinery at the station are in proper working order. He shall report all the defects to the concerned officials.

He shall satisfy himself that the staff employed under him are well conversant with Station Working Rules and perform their duties correctly. He is responsible for maintaining SWR, other Rule books and Assurance Register up to date.

He shall see that all safety records are maintained properly and all rules prescribed in G & SR, Block Working Manual, Operating Manual and other relevant directions issued from time to time by competent authorities are followed rigidly by all concerned and any irregularities if noticed are reported promptly to the authorities concerned.

He shall see that all accidents are promptly reported, attended to and GA-3 along with accident message is submitted to the concerned officers in time. He shall see that the staff is civil and helpful to all users of railway.

He is responsible for booking all group 'C' and group 'D' staff for PME and Refresher Course / Safety camp in their due time. His Special attention is drawn out to chapter II of General and Subsidiary Rules and GR 5.01 to 5.08 with relevant Subsidiary Rules, Chapter – XXII of Operating Manual.

**2. SM/ASM**

He is responsible for train passing during his shift. He shall promptly bring to the notice of SS all irregularities and accidents in course of his shift duties. During the absence of SS the duties of Station Superintendent will devolve on him. He shall follow GR 3.49, SR 3.68.01 (c) & (d), SR 14.07.01. His special attention is drawn to chapter II of G & SR 1976 and SR 5.01 to 5.08 with relevant SRs. He shall carry out the instructions given to him by the SS. He should have thorough knowledge in PC operation.

**3. TRAFFIC POINTSMAN/TOKEN PORTERS:**

(D.K.M.YADAV)

(M.N.S.RAMESH)

(M.A.HAQUE)

Dy. CSTE/Proj/VSKP

DEN/N/WAT

Sr. DOM/G/WAT

He shall work under the orders of SS/SM on duty. He shall couple and un couple vehicles under the supervision of SS/SM/Guard. He shall operate ground lever/levers and clamp and pad lock the necessary points for shunting

operations and during piloting of trains. He shall watch and guard the packages and Rly property lying in the station premises. He shall be thorough with the correct usage of displaying hand signals. He shall report to SM on duty any irregularities coming to his notice. He shall do loading and un loading of parcels, smalls and Guard boxes. He shall carry out any other duties entrusted to him.

**4. SAFAIWALA-CUM LAMP MAN:**

He shall attend to sanitation of Railway premises including SM's office, platforms, staff quarters, and latrines and cleaning of drainages etc., He shall carry out any work instructed to him by SS/SM on duty.

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

(D.K.M.YADAV)

Dy. CSTE/Proj/VSKP

(M.N.S.RAMESH)

DEN/N/WAT

(M.A.HAQUE)

Sr. DOM/G/WAT

**APPENDIX 'E' TO STATION WORKING RULES OF KOMATIPALLI STATION****ESSENTIAL EQUIPMENT**

A list of essential equipment's is given below which shall be maintained in good Working order.

<b>Sl. No</b>	<b>Description</b>	<b>Station</b>
1	Detonators	20
2	Battery operated LED based flashing Hand Signal lamps	3(1 spare)
3	Hand Signal Flags	3(1spare)sets
4	Safety chains with Pad locks	6
5	Clamps with Padlocks	8
6	Reminder collars	6
7	Fire Extinguishers DCPT	1
8	Fire & Sand buckets	5
9	First Aid Box	1
10	Stretcher	1
11	Blanket	1
12	Iron skids	2

(D.K.M.YADAV)

Dy. CSTE/Proj/VSKP

(M.N.S.RAMESH)

DEN/N/WAT

(M.A.HAQUE)

Sr. DOM/G/WAT

**APPENDIX 'F' TO STATION WORKING RULES OF DONKINAVALASA STATION]**

WORKING OF D.K.STATIONS, HALTS, IBS AND OUTLYING SIDINGS:

---NIL----

(D.K.M.YADAV)

Dy. CSTE/Proj/VSKP

(M.N.S.RAMESH)

DEN/N/WAT

(M.A.HAQUE)

Sr. DOM/G/WAT

**APPENDIX- 'G'**

**DONKINAVALASA STATION**

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS:

NOT APPLICABLE TO THIS STATION .

(D.K.M.YADAV)

Dy. CSTE/Proj/VSKP

(M.N.S.RAMESH)

DEN/N/WAT

(M.A.HAQUE)

Sr. DOM/G/WAT