EAST COAST RAILWAY

WALTAIR DIVISION

STATION WORKING RULES OF

SHIMILIGUDA STATION

EAST COAST RAILYWAY

WALTAIR DIVISION

INDEX OF CORRECTION SLIPS

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EAST COAST RAILWAY

WALTAIR DIVISION
STATION WORKING RULES OF SHIMILIGUDA [SMLG][BROAD GAUGE]

No.WTP/5/SWR/SMLGDate of Issue:

Date brought in force:

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

(1) STATION WORKING RULE DIAGRAM:

a) Station Working Rule Diagram No:- SI/WRD/23263ALT-'A'
b) CSTE/E.Co.Rly/DRG No:-SI-23263 ALT-'A'
c) Date up to which corrected:

(2) DESCRIPTION OF STATION:

2.1. GENERAL LOCATION:

a)	Name of the station	SHIMILIGUDA (SMLG)
b)	Class of station	'B' class
c)	Section	Kottavalasa-Kirandul
d)	Double Line/Single Line / Multiple Line	Double Line: - SMLG-ARK Section. Single Line: - SMLG-KVLS Section.
e)	Electrified/Non-Electrified	Electrified
f)	Gauge BG/MG/NG	BG
g)	Railway	East Coast Railway
h)	Route	'D'
i)	Situated at	Km 93.123
j)	Reckoned from	Kottavalasa
k)	Operation	Centrally operated with Visual Display Unit (VDU).
l)	Type of Interlocking	Standard II

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

S.No	Adjacent BlockStation	Distance	Direction
1.	ARAKU	11.72km	KRDL end
2.	KARAKAVALASA	9.000km	KTV end
3.	Provision of IBS	Nil	
4.	Automatic signal	Nil	
5.	DK station/Outlaying sidings	Nil	
6.	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
ARK-SMLG DN Direction	The advance block section commences at DN advanced starter signal No.28 of ARK.	Ends at BSLB of SMLG.
SMLG-ARK UP Direction	The rear block section commences at Up advanced	Ends at Facing point No. 31A ARK station.

	starter signal No.25 ofSMLG.	
SMLG-KVLS	The advance block section commences at DN advanced starter signal No.26 of SMLG.	Ends at UP Advanced Starter of KVLS.

2.4. GRADIENTS:

Station towards		Chainage		Inter distance	Gradient
		From	To		
SMLG-ARK	UP	0.000 F/CSB	694.00M	694.00M	1 in 400 Falling
		694.00M	740.00M	46.00M	1 in 1437.5 Raising
		740.00M	1060.00M	320.00M	1 in 100 Falling
		1060.00M	1680.00M	620.00M	1 in 94.5 Falling
		1680.00M	1995.00M	315.00M	1 in 130 Falling
		1995.00M	2065.00M	70.00M	LEVEL
		2065.00M	3255.00M	1190.00M	1 in 110 Falling
		3255.00M	Into section	---	1 in 114 Falling
	DN	Chainage		Inter distance	Gradient
		From	To		
		0.000 F/CSB	727.00M	727.00M	1 in 400 Falling
		727.00M	1702.00M	975.00M	1 in 101.64 Falling
		1702.00M	2127.00M	425.00M	1 in 143 Falling
		2127.00M	5905.00M	3778.00M	1 in 111.36 Falling
		5905.00M	Into section	---	1 in 103 Falling
SMLG-KVLS		Chainage		Inter Distance	Gradient
		From	To		
		0.000 F/CSB	693.00M	693.00M	1 in 400 Raising
		693.00M	2578.00M	1885.00M	1 in 60.52 Falling
		2578.00M	Into section	---	LEVEL

2.5. LAY OUT:

A) RUNNING LINES IN THE MAIN YARD:

S No	Name of the Line	Electrified/Non Electrified	Platforms with Length
1.	Line No.1(Common Line)	Electrified	Rail Level (360Mx6.1M)
2.	Line No.2 (UP Main)	Electrified	--
3.	Line No.3 (UP Loop)	Electrified	High Level (560Mx10M)

B) SIDINGS:

S.No	*Name of the Siding*	*Electrified /Non Electrified*	*Platforms with Length*	*Isolation from Running line*	*Description of Siding*
1.	Hot Axle Siding	Electrified	--	Isolated from Line No.1 by DS with Motor operated.	Hot Axle Siding takes off from Line No.1 towards KVLS end and terminates at Station end. (Details of working of Electrical

					operation of Siding point is given in the Para No.16 (a) of Appendix-B of this SWR).
2.	Sub Station Siding	Electrified	--	Isolated from Line No.3 by DS with Motor operated.	Sub Station Siding takes off from Line No.3 towards KVLS end and terminates at Dead end. (Details of working of Electrical operation of Siding point is given in the Para No.16 (b) of Appendix-B of this SWR).
3.	RGM Siding	Electrified	--	--	RGM Siding takes off from Hot Axle Siding towards KVLS end and terminates at dead end.

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

S.No	Name of the Line	Holding Capacity in CSL	Direction of movements
1.	Line No.1 (Common Line)	757M (STR to STR)	a) Trains coming from KVLS and proceeding towards ARK are UP trains. b) Trains coming from ARK and proceeding towards KVLS are DN trains.
2.	Line No.2 (UP Main)	724M(STR TO SS)	
3.	Line No.3 (UP Loop)	754M(STR TO SS)	

2.5.2. NON-RUNNING LINES AND THEIR CAPACITY IN CSL:

S.No	Name of the Line	Holding Capacity in CSL	Whether Electrified/Non-Electrified
1.	Hot Axle Siding	40M (GJ to GJ)	Electrified
2.	Sub Station Siding	55M (GJ to DE)	Electrified
3.	RGM Siding	277.15M (DE to FM)	Electrified

2.5.3. ANY SPECIAL FEATURES IN THE LAYOUT:

SLIP SIDING:

Due to falling gradient of 1 in 60.52 immediate neighborhood of Station towards KVLS end and 1 in 100 immediate neighborhood of Station towards ARK end Slip sidings are provided in respective ends to protect Block section. The working details are mentioned in the Para No.16 (c)of Appendix-B.

2.6. LEVEL CROSSINGS:

SN	LC Gate No & KM	Class of Gate	Communication with Station	Type of Interlocking	Section
1.	KK-22,	'C' Class	Shimiliguda	Interlocked	SMLG-

	Km.92.414				KVLS

(3) SYSTEM AND MEANS OF WORKING: -

System of Working in force	Absolute Block System of Working.
Double Line/Single Line	Double Line between SMLG-ARK and Single Line between SMLG-KVLS.
Block Instruments	a) SMLG-ARK Section: SGE type Double line Lock and Block Instrument. b) SMLG-KVLSsection: FM DAIDO type Token Less Block Instrument.
Co-operative/Non-Co-operative	a) SMLG-ARK Section: Non-Co-operative. b) SMLG-KVLS Section: Co-operative.
Block Telephones	Attached with Block Instruments.
Staff responsible for custody of key and operations.	SM on duty

(4) SYSTEM OF SIGNALLING AND INTERLOCKING:

1.	*Standard of Interlocking*	Standard-II.
2.	*Type of signaling*	MACLS
3.	*Mode of operating the signals*	Electronic Interlocking (Visual Display Unit)
4.	*Provision of Calling-On signals*	Calling-on signals are provided below Home signals and below Starter Signals(i.e. in both UP & Down directions)as per GR.3.13 (1)(b), (2)(3)(4) & (6) (b).
5.	*Provision of shunt signals*	Shunt back signals SH3(A-C) and SH4(A-C) are provided towards KVLS end of the yard and towards ARK end of the yard respectively.Fixed Shunt Signals SH8 & SH9 are provided towards KVLS end of the yard and towards ARK end of the yard respectively. Dependent Shunt Signal No. SH11, SH13 & SH15 is provided on Line No.3, 2 &1 towards ARKend respectively. Dependent Shunt Signal SH10, SH12 & SH14is provided on Line No.1, 2 & 3 towards KVLS end respectively.
6.	*Emergency Cross-over*	Nil
7.	*Track circuits*	The provision of track circuits is mentioned in Appendix-B Para No.10 of this SWR.
8.	*Axle counters*	Provided High availability Single Section Digital Axle counter (HASSDAC) for last vehicle verification between SMLG-ARKSection on both UP and DN Lines and SMLG-KVLS Section.
9.	*Crank Handles*	When any point fails to operate normally by the Route Setting operation through 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 chapter-2, para-2.18 & 2.19 and Para No. 4.7 of Appendix-B. CH1 : 32. CH2 : 34A/B. CH3 : 36A/B. CH4 : 31. CH5 : 33A/B. CH6 : 35A/B. CH7 : 37A/B. CH8 : 39A/B. CH9 : 41A/B.
10.	*Emergency Point operation*	Emergency point operation facility is provided to operate the point from the VDU in case of failure of point controlling track circuit/Axle Counter. Each operation of emergency point operation shall be recorded in the TSR, station diary and in the register meant for this purpose.**Before resorting to this operation SM on duty shall verify that the point zone is clear of any vehicle occupying the track section and the same is clear of any obstruction.**
11.	*Showing of Veeder Counter*	The counters as mentioned in the Para No.9 of Appendix-'B' are provided in this station for record the Emergency operations. The increment in counter number for each and every such action should be recorded by the SM on duty who shall record the details of the Operation along with the latest counter number in a register.
12.	*Emergency Route Release operation*	This 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 click on the signal cancellation option on the menu (Main/Calling on) of the concerned signal, the signal will immediately go to ON aspect. The precondition for route release is, the route should have been set and the signal has been put back to danger. Click the Left mouse button on concerned Signal, the system would display a popup menu with a list of commands.Select the "**Route Release**" from the menu list.A white light will flash (UP or DN) indicating that the timer is working. After 120 seconds, the white light along with the white strip of light will disappear suggesting the route has been released. In case the route illumination (a white strip of lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised for rectification of fault. Each operation of emergency cancellation of

		route is recorded in the emergency route release counter by registering the next higher number. All such operations and the new number should be recorded in the station diary, train signal register& in the register meant for this purpose.
13.	*Emergency Crank Handle Release operation.*	Emergency crank handle release operation facility is provided to operate the point by using the crank handle in case of Route locked condition. For Emergency crank handle operation the procedure laid down in Para No.5.3 of Appendix-'B' shall be followed. Each operation of emergency crank handle operation shall be recorded in the station diary and in the register meant for this purpose.

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

Custody of Relay room key and procedure for its handover and taking over between SM and S&T staff has to follow the procedure as per JPO issued by COM and CSTE vide No. JPO/02/2012 dated 29.08.2012. 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 SM. The particulars of such transactions shall be entered by the SM in the relay room key register vide OM 2015 Para No.13.16.

4.2. POWER SUPPLY:

The power supply arrangement for this station is described in detailed in the Para No.26& 27of APPENDIX-B.

(5) TELECOMMUNICATIONS:

a) The station is connected to Kottavalasa-KoraputControl Circuit.

b) The station is connected to Kottavalasa-Koraputtraction power control circuit.

c) Railway Auto Telephone provided at the station is connected to Divisional Exchange at WAT through Exchange at ARK.

d) Telephones attached to Double line lock and block Instruments for SMLG-ARK section and Single line block instruments for SMLG-KVLS section.

e) Hot Line Telephone communication is provided between SMLG-ARK and SMLG-KVLS stations.

f) Telephone communication is provided between Station Master on duty and UP& DN CH Locations.

g) Telephone communication is provided between Station Master on duty and Siding Point Location.

h) Telephone communication is provided between Station Master on duty and LC Gate No. KK-22 at Km.92.414F/KTV.

i) 25w VHF set is provided at the station for emergency communication.

j) CUG/Telephone is provided at the station.

5.1. FAILURE OF COMMUNICATION:

a) In the event of total failure of communications between the adjacent block stations SR 6.02.03 shall be observed for double line section and SR 6.02.04 shall be observed for Single line section for working the train.

b) In the event of partial interruption/failure of communications between the adjacent block stations SR 6.02.06 shall be observed for working the train.

(6) SYSTEM OF TRAIN WORKING:

6.1. DUTIES OF TRAIN WORKING STAFF:

The duties of Train working operational staff are detailed in Appendix-'D' of this SWR.

6.1.1. TRAIN WORKING STAFF IN EACH SHIFT:

COMPLEMENT OF STAFF	STAFF IN EACH SHIFT
Station Master	1
Traffic Points Man	1
Traffic Gateman	1

The above staff shall work as per roster issued from time to time by DivisionalRailway Manager (P) and these rosters shall be conspicuouslydisplayed in the Station Master's office.

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 Home Signal and advanced starter signal in each direction.The private number book should be under the custody of SM on duty that is authorized to use it.

Sufficient PN books and ID Sheets in sealed cover shall always be kept in stock by SM under lock and key by mentioned register for this purpose.

6.1.3. ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER:

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

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

The SM (In-Charge) is personally responsible for maintaining the Assurance Register and for obtaining declaration from the staff working under him. The Assurance Register must be maintained in two parts one for Group-'C' staff and other for Group-'D' staff & duplicate copy of the Assurance Register must be maintained and kept in the personal custody by the SM (In-Charge).

Fresh assurance shall be obtained in the Assurance Register when:

1. He joins at the station as a new member.
2. There is any change in the Station Working Rules.
3. He resumes duty at the station after an absence of 15 consecutive days or more.

6.2. CONDITIONS FOR GRANTING LINE CLEAR:

a) The trains are worked under Absolute block system of working with Double line between SMLG-ARK&with Single line betweenSMLG-KVLS and MACLS signaling vide GR 8.03.

b) Adequate distances for reception of trains in this station as follows.

Line No.	Up Trains		DN trains	
	From	To	From	To
Line No.1 (Common Loop)	Starter Signal No.15	The Sand Hump of Slip Siding OR UP Advanced Starter Signal No.25	Starter Signal No.10.	The end of Overrun Line OR DN Advanced Starter Signal No.26
Line No.2 (UP Main)	Main Starter Signal No.13	The Sand Hump of Slip Siding OR UP Advanced Starter Signal No.25	----	----
Line No.3 (UP Loop)	Starter Signal No.11	The Sand Hump OR UP Advanced Starter Signal No.25	----	----

6.2.1. ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING ORDESPACTHING 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 in rear end should immediately be set against the blocked line except when shunting or any other movement is required to be done on that line [Refer SR.3.51.06 (a)].

Safety Point Alarm Unit (SPAU):

A safety Point Alarm is provided on the VDU table with different indications:

1. On complete arrival of a train at the station, the SM has to set the Points immediately against the occupied line.

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

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

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

6.2.1.2. RECEPTION OF A TRAIN ON BLOCKED LINE:

Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2) (a) or if calling signal cannot be taken off, trains are to be piloted in on a written authority on Form T/509 given by SM on duty and delivered by a competent railway servant to the Loco Pilot of the train as per GR 5.09 (2)(C)(3)(4)(5) and SR 5.09.01.

6.2.1.3. RECEPTION OF TRAIN ON NON-SIGNALLED LINE:

--NIL--

6.2.1.4. DESPATCH OF TRAIN FROM NON-SIGNALLED LINE:

--NIL--

6.2.1.5. DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMONSTARTER SIGNAL:

--NIL--

6.2.1.6. ANY SPECIAL CONDITIONS:

a) SPECIAL RESTRICTIONS:

1. Slip Siding point No.31 & 32 are normally set and locked towards siding and these are interlocked with respective Block instruments. Hence there is no individual operation of Slip Siding Points.

2. Slip Siding point No.31 can be set to reverse only when the TLBI between SMLG-KVLS section is in 'Train Going To' or 'Train Coming From' Position and DN Starter Signal or UP Home Signal of Concerned Line is initiated.

3. Slip Siding point No.32 can be set to reverse only when the DLBI between SMLG-ARK section is in 'Line Clear' Position and UP Starter Signal of Concerned Line is initiated.

b) SPECIAL INSTRUCTIONS:

1. Signal No. S10, S11, S15& SS14 are placed 3M from glued joint as per Railway Board Letter No. (i) 2012/SIG/SEM-II/Misc, dated 10.10.2012, and (ii)

2012/Saftey(A&R)/19/5 dated 13.06.2013. Hence Concerned Signal goes to danger after 5 Seconds on occupation of concerned replacement Track circuit.

2. No Load Shall be stabled in Non-Isolated Line without live Locomotive attached. Otherwise, vehicles shall be secured as per Railway board letter No.2012/Safety(A&R)/19/1 dated 04.12.2018.

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

The SM on duty shall nominate a Clear line not only up to the station but also for an adequate distance beyond it for reception of trains. (Refer GR. 3.36, 3.40, 4.17 and SR 3.36.01, 3.36.02, 3.36.04, 3.40.01, 3.40.02, 3.47.01, 4.17.02 and Block Working manual)

6.3.1. RESPONSIBILITY OF STATION MASTER FOR RESTORATION OFSIGNALS 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).

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.3 setting overlaps toSand Hump(UP Loop).	AND	Dispatch of another UP train either from Line No.1 or 2. OR Reception of a DN train on Line No.1.
2.	Reception of a DN train on Line No.1 setting overlaps to overrun line (Common Line).	AND	Reception of an UP Train on Line No.2 or 3.

6.5. COMPLETE ARRIVAL OF TRAINS:

The entire block section between SMLG-ARK on both UP and DN lines and between SMLG-KVLSare provided with High Availability Single Section Digital Axle Counter.

For Section SMLG-ARK:

A Pair of High Availability Single Section Digital axle counter (HASSDAC) is provided between SMLG-ARK one at just beyond UP advanced starter signal no.25 of SMLG and another on 1T2 track circuit of ARK and another pair of High Availability Single Section Digital Axle Counter (HASSDAC) is provided between ARK-SMLG one at just beyond DN Advanced Starter signal No.28 of ARK and another on 2TTrack circuit of SMLG for last vehicle verification.

For Section ARK-SMLG:

A Pair ofHigh Availability Single SectionDigital axle counter (HASSDAC) is provided between SMLG-KVLS one at just beyond DN advanced starter signal no.26 of SMLG and another on 1T track circuit of KVLSfor last vehicle verification.

The position of the Block section whether cleared or occupied is reflected in the axle counter reset box and 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 and IB Home Signals as the case may be cannot be taken off for next train and the concerned instrument shall remain locked in last operated position.

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

6.6. DESPATCH OF TRAINS:

a) Dispatch of trains is governed by the provisions of GR. 3.42 and SRs 3.36.04(b), 3.42.04; 3.42.01(a) and BWM 3.07(5)(a), (e), (f) & (g) and other relevant provisions of G & SR, BWM and SWR.

b) **DESPATCH OF TRAINS FROM NON-SIGNALLED LINE:**

Dispatch of trains from non-signalled line is governed by the provision of GR 5.11 and SR 5.11.01.

c) **ISSUE OF CAUTION ORDERS:**

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

6.7. TRAINS RUNNING THROUGH:

In addition to the procedure detailed in paras ‘‘Reception and Dispatch of trains’’ rules laid down in GR 3.40, 4.17, 4.42 with relevant SRs 3.42.02 (a) (iii) and other relevant provisions of G&SR, BWM, OM shall be followed. (Refer GR 4.1, 4.11(2)).

6.8. WORKING IN CASE OF FAILURE:

Track Circuits	In case of failure of track circuits, the clearance of the concerned line should be ensuredphysically by the SM

	on duty before a train is piloted.
Axle Counters	If the axle counter fails between the block sections, resetting procedure should be adopted as per Para 6.1 of SWR (APP-B). If the axle counter indication does not appear 'GREEN & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal Maintainer /JE/SE (signal) for their rectification.
Block Instruments	In the event of failure of block instrument, the concerned block instrument shall be suspended till its rectification and trains shall work as per GR (Refer SR 6.02.03, 6.02.04& 6.02.06) and BWM 5.43 & 6.22.
Reception of a train on obstructed line	Trains are to be admitted on a blocked line, by taking off calling-on signal as per GR 5.09(2)(a) or if calling signal cannot be taken off, trains are to be piloted as per GR 5.09(2)(C)(3)(4) (5) and SR 5.09.01.
Reception of a train on non-signalled line	NIL
Defective Signals	Whenever signals become defective, the procedure laid down in GR 3.68 to 3.71 and SR 3.68.01 (c) shall be followed. In case of disconnection of signal and interlocking for repairs and maintenance procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, station master on duty shall before giving line clear initiate action in accordance with the procedure laid down in GR and the relevant SRs (Refer 3.49 (4), 3.68, 3.69, 3.70, 3.71, 3.74 & 3.76.
Defective Interlocking	When interlocking becomes defective the SM on duty shall be responsible for correct setting, clamping, padlocking of points for admission of train. [Refer SR 3.69.03 (c) & 3.69.01].
Defective/Damaged Points	When any point fails to operate normally by the route setting operation or individually through 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 the use of crank handle (GR 3.77).

6.9. PROVISIONSFOR WORKING OF TROLLIES/ MOTOR TROLLIES/MATERIALLORRIES ETC":

a) The section where Axle Counters are provided in Lieu of track Circuits, trolleys, Motor trolleys, Lorries etc., which are not insulated shall not be allowed to run except on Line clear.

b) Motor trolleys shall be worked as per GR 15.25 and SR thereto, BWM 5.39, 5.40, 5.41, 6.11 (1) & (2), 6.12, 6.13, 6.14(2) and circulars and orders issued from time to time.

c) Material Lorries shall be worked as per GR 15.27 and SRs thereto and in accordance with the provisions of Block Working Manual.

d) Tower Wagon/OHE cars shall be worked as per GR 17.08 and SR thereto and BWM 6.11.

(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. 'Line Block' is to be activated on VDU by SM on duty following procedure laid in para-No.5.4.1 & 5.4.2 of Appendix-B. 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. [GR 5.23 and SR 5.23.01]

(8) SHUNTING:

8.1. GENERAL PRECAUTIONS:

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13,5.14,5.16 to 5.23, 8.05,8.06, 8.14 and 8.15 with relevant SR's and BWM 5.37, 5.38 for single line & 6.15 for Double line shall be followed.

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

8.2. SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in face of an approaching train is prohibited on both ends vide GR 8.09.02 (ii) (a).

8.3. PROHIBITION OF SHUNTING, 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).
iii) Engine to be attached towards falling side of gradient.

8.4. SHUNTING ON SINGLE LINE:

i) Within station section: Shunting within station may be carried on within the station section up to Advanced starter, provided the necessary Reception Signals are kept at ON vide GR 8.10 (1). But this shall be done only when there is no approaching train since shunting in the face of an approaching train is prohibited at this station.

ii) Beyond Station Section: Governed by GR 8.12and BWM 3.15, 5.36 & 5.37.

iii) Beyond Opposite first stop signal: Unless the line is blocked back, the line outside the first stop signal shall not be obstructed vide GR 8.13and BWM 3.15 & 5.38.

iv) During failure of Block Instrument: Block back messages shall be exchanged between Station Master at either end of the section with is intended to be obstructed supported by private number. Both the Station Masters shall fix line block collars on respective Block Instruments and shall continue shunting provided the Block Section is clear.

8.5. SHUNTING ON DOUBLE LINE:

a)	*Block back*	The procedure of Block Back given in BWM 3.21 & 6.15 shall be followed.
b)	*Block Forward*	GR 8.05& SRs there to and BWM 3.21 & 6.15 shall be followed.
c)	*During failure of Block Instrument*	Shunting in the block section in advance/in rear shall not be performed unless the section is clear of all obstructions and the block section is Blocked back/Blocked forward as the case may be. SM shall fix the line block collars on respective Block Instrument.

8.6. SHUNTING IN THE SIDING TAKING OFF FROM THE STATION YARD:

1. ***Hot Axle Siding:*** EKT Key controlled by 37 is provided for operation of electrical operation of Point No.37A/B towards KVLS end & EKT Key controlled by 39 is provided for operation of electrical operation point No.39A/B towards Station end and the authority shall be on form T/806. The procedure of Electrical operation of point No.37A/B and 39A/B is given in Para No.16 (a) of Appendix-'B'.

2. ***Sub Station Siding:***EKT Key controlled by 41 is provided for operation of electrical operation of Point No.41A/B and the authority shall be on form T/806. The procedure of Electrical operation of point No.41A/B is given in Para No.16 (a) of Appendix-'B'.

3. ***RGM Siding:***the authority shall be on form T/806. The procedure of Electrical operation of point No.41A/B is given in Para No.16 (a) of Appendix-'B'.

(9) ABNORMAL CONDITION: -

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

i) During partial interruption/failure of electrical communication instruments SR 6.02.06 shall be followed.

ii) The authority to proceed in the occupied block section in case of obstruction of line or accident etc is T/A-602 and SR 6.02.05 shall be followed.

iii) Trains delayed in the block section: GR 6.04 and relevant SRs shall be followed.

iv) Failure/ passing of IBS signed in ON position: Not Applicable.

v) Failure of Axle Counter Block/BPAC: As per Appendix-'B'.

vi) Failure of MTRC: Not applicable.

b) PROCEDURE FOR EMERGENCY OPERATION OF POINTS BY CRANK HANDLE: -

(i) The detailed Procedure for emergency operation of points by Crank Handle of motor operated points is mentioned in Para No.5.3, 5.3.1 and 5.3.2 of Appendix-'B' of this SWR.

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/electricalengine 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 TRACK CIRCUIT/AXLE COUNTER FAILURE AND EMERGENCY ROUTE RELEASE:

The detailed Procedure for emergency operation of points in case of failure of Point Zone track section is mentioned in Para No.5.2, 5.2.1 and 5.2.2 of Appendix-'B' of this SWR.

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

c) CERTIFICATION OF CLEARANCE OF TRACK BEFORE CALLING-ON SIGNAL OPERATION IS 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: -

(i) 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.

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

9.1. TOTAL FAILURE OF COMMUNICATION:

a) In the event of total failure of communication on double line, trains shall run on the authority to proceed without line clear in terms of SR 6.02.03 on Double line section and SR 6.02.04 on Single line section.

b) During partial interruption of communication, the rules laid in SR 6.02.06 shall be followed.

9.2. TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:

In the event Single line working on double line section when one line is obstructed the trains shall work as per the provision laid down in 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 communication, trains shall run on the authority to proceed without line clear in terms of SR 6.02.03 on Double Line section and SR 6.02.04 on Single Line Section.

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 signals lights of UP Starter Signal No.15 and DN Starter Signal No.10 of Line No.1 are earmarked 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:

(i) During thick, foggy or tempestuous weather impairing visibility of the Signals the SM on duty shall initiate action to depute Fog signal man with detonators vide GR 3.61 in order to indicate the location of the station approach signals to the Loco pilot of an approaching train.

(ii) The fog signal man shall be proceeding to the 1st stop signal of the station and place one detonator at a distance of 270M from the 1st approaching stop signal towards the approaching train and another detonator at a distance of 10M from the 1st one and he shall stand 45M away from the detonator.

(iii) The fog signal man shall be permanent employee, no temporary or casual labour shall be deployed as fog signal man.

(iv) The assurance of fog signal man available at the station (including engineering branch if available) shall be obtained in the fog signal register every year in the month of "OCTOBER".

(v) Details of supply of detonators available stock, use and testing etc., shall be maintained in the fog signal register of the station as per GR 3.64 and SRs there to.

Note: Names of fog signal man available at the station shall be exhibited in SM's office.

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

APPENDIX-G : RULES FOR WORKING OF TRAINS IN ELECTRIFIEDSECTIONS.

APPENDIX 'A'

WORKING OF LEVEL CROSSING GATES AT SHIMILIGUDASTATION

LC GATE No.KK-22

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 :	KK-22
2.	Engineering or Traffic Gate :	Traffic gate ('C' class)
3.	Under control of Station Master / Permanent Way Inspector:	SM/SMLG
4.	Location at KM:	92.414
5.	At Station:	Shimiliguda
6.	In between stations:	SMLG-KVLS
7.	BG / MG / NG :	BG
8.	Single line / Double line / Multiple line:	Single Line
9.	Normal Position:	Open to Road Traffic.
10.	Interlocked / Non-Interlocked:	Inter locked.
11.	Means of Interlocking	Interlocked with station signals.
12.	Provision of Gate signal at Kms.	Station Signals
13.	Signaling arrangements:	MACLS
14.	Means of Communication – Telephone / Bell etc	Telephone connection with SM/SMLG.
15.	Width of level crossing gate:	7.5 M.
16.	Type of road (NH / SH / Others) :	Others.
17.	Name of Road :	Village Road
18.	Metalled / non-metalled:	Metalled.
19.	Approach road:	Metalled.
20.	Width of the road:	7.5 M
21.	Angle of road crossing (in case of the skew gates):	90^0
22.	Road gradient (if any)	(i) North /East side: 1 in 45. (ii)South/West side: 1 in 30.
23.	Road alignment (straight/curve)	i) North/East side: Straight ii)South/West side:Straight
24.	Provision of height gauges:	Provided
25.	Type of Barriers:	Lifting Barrier/Sliding Boom Barriers.
26.	Length of Check rails:	9.50M
27.	Road surface in between L-Xing gates:	Provided with CC Blocks.
28.	Length of Rumble strip/speed breakers:	4.5M
29.	Road signs:	Provided
30.	Speed breaker indication board:	Provided
31.	TVU:	2893 of 01/2022.
32.	Census next due on:	01/2025.
33.	Demarcation for placement of Detonators:	Provided
34.	No. of Gatemen working:	2 (Two)
35.	Nearest Railway Medical Assistance	Araku
36.	Nearest Private Medical Assistance available (if any):	Araku
37.	List of equipment available Yes / No:	Yes

1.2. EQUIPMENTS:

S N	DESCRIPTION	REQUIREMENT	TO BE USED AS
1.	LED based flashing Tri colour hand signal lamps	Two	One for use and another for spare.
2.	Green hand signal flag	One flag mounted on sticks	To hold in furled condition while passing train.
3.	Red hand signal flag	Two flags mounted on sticks	One to hold in furled condition and another for spare.
4.	Red banner flag mounted with sticks	Double Line–2	In case of obstruction, one flag is to be displayed on each line except on single line it is to be placed on either side of the line.
5.	Spare chains with padlocks	2 chains with 2 padlocks with Stop Marker	For securing gate against road traffic in case of gate boom cannot be closed.
6.	Stop boards	2 retro reflective stop boards	To display towards road traffic when gate is secured by gate chains due to failure of booms.
7.	Padlock	One	To lock the door of the gate lodge in case of necessity.
8.	Detonators	Ten in a tin case	For use in case of obstruction of track.
9.	Tommy bar	One	For leveling the soil surface or to clean the channels of rails.
10.	Bucket	One	To keep water.
11.	Whistle	One	For alerting road users on approach of train and LP/Train Manager to call their attention.
12.	Wall clock	One	To note down the timings in PN/Log book
13.	A small chain for use in case of	Two	For securing boom in closed condition in case of failure of boom lock.

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 of Competency 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:

1. **COMPETENCY:** Gatemen working at this Gate should have competency certificate applicable to perform duty at this gate issued by the Ch.DTI/SUP or SS(I/C)/SMLG.

2. **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.

3. **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 night time, gateman shall hold lighted hand signal lamp with white light facing the track.

iv) He shall keep the whistle slung around his neck from a cord.

4. **ROUTINE DUTIES OF GATEMAN**:

a) 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.

b) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously form sunset to sunrise.

c) 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.

d) 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.

e) 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 any other situation endangering safe running of trains.

f) Gateman shall also be prepared to repeat any signal which Train Manager may give to Loco pilot on Walkie-talkie or in other way.

g) If lifting barrier 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.

h) 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.

i) 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.

j) At the gate whose signal have become defective, the Gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the Loco pilot to report the defect at the next station.

k) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.

l) Gateman shall ensure that his having competency certificate in his possession while on duty.

m) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.

n) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.

o) Gateman shall see that the channel for the flange of the wheel is kept clear.

p) Gateman shall keep the road surface well-watered and rammed in case of unhealed roads.

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

r) 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.

s) Gateman shall prevent trespassing by persons or cattle to the maximum extent.

t) Locking arrangement should be checked daily.

u) Gateman shall ensure that no road vehicle is trapped in between line while closing LC Gate.

5. ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:

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

a) He shall take prompt action to warn the Loco pilot/Train Manager of the passing train by showing red flag by day and red light by night.

b) He shall simultaneously try to draw the attention of the Loco pilot/Train Manager by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.

c) If Loco pilot/Train Manager fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

d) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.

e) He shall endeavour to attract the attention of the Loco pilot/Train Manager by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.

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

6. 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 by telephone, regarding the defects/obstructions at the gate, under exchange of private number.

iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

A. On SingleLine Section:

i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.

ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.

iii) Gateman shall then proceed to protect the gate along with detonators, fuses and red flag by day and red hand signal lamp by night.

iv) Gateman shall proceed to exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.

v) Thereafter, he shall proceed on the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.

vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the Loco pilot of the approaching train.

vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

viii) Thereafter, he shall light up and fix the fusee to warn the LP and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

B. Other action to be taken by Gateman:

a) 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.

b) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.

c) He shall note down the particulars of the road vehicle, vehicle number, name of the Driver, owner and relay these details to the nearest Station Master or Permanent Way Inspector regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

C. Accidental Rolling down of trains:

When Gateman sees that a train is rolling down or immediately after receipt of the information about the accidental rolling down of the train/vehicle the Gateman shall

a) First close the gate.
b) Then immediately inform the SM on duty.
c) He shall not open the gate till he ensured that the train has completely cleared the gate.

D. On Electrified Section:

On noticing that, the whole or Part of the OHE or Feeder or cable falling down, the Gateman shall ensure that as far as possible, human beings, animals or vehicles etc. are kept away in order to avoid any contact with live equipment.

As soon as it is noticed that pantograph on electric rolling stock, getting damaged and/or entanglement of the same with the OHE, he shall make every possible effort to stop the train and immediately inform SM on duty and take all necessary measures for the protection of the line.

7. ENGINEERING ITEMS:

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

8. MODE OF OPERATION:

This interlocked L.C. Gate is situated at the KVLSend of the yard in between the Point No.33A and Slip Siding Point No.31at Km 92.414 F/KTV. This gate is interlocked with station stop signals. Telephone communication is provided between the L.C. Gate Lodge and SM on duty of SMLG Station. The level crossing gate is of lifting barrier type and motor operated by means of HAND GENERATOR/MOTOR from the panel provided at the gate lodge. The normal position of the gate is open to road traffic.

a) Before taking off reception/departure signals the SM on duty at SMLG station shall inform the gate man about the train number & directions and advise him to close and lock the gate.

b) The gate man, after satisfying himself that the level crossing is clear of all obstructions shall sound the hooter and close the barriers of the LC gate.

c) For closing the barriers, the gate man on duty shall press the CLOSE push button (i.e AMBER Colour) continuously provided on the Gate panel till the gate is closed and locked against the road traffic.

d) As soon as the barriers reach the closed position AMBER LEDs will glow (provided in panel) and on getting locked, GREEN LEDs will glow indicating that boom has been locked.

e) In case GREEN LED for the connected barrier is not glowing after closing the gate, however, the AMBER LEDs are glowing then the emergency push button can be only pressed for locking the booms for taking of the signals.

f) The emergency locking operation should be done only after physical verification of locking at both the lock posts.

g) After the LC gate is closed and locked against road traffic Gate Slot Switch is turned to reverse at Gate control panel to permit the SM to take off concerned Signals. On doing, so SM on duty will get the Key in 'Yellow' flashing indication and GSRR indication on the VDU.

h) Then SM on duty receives the control by following procedure mentioned in the Para No.4.9 in Appnedix-B and shall take off relevant Signals.

i) After passage of train, on duty SM/SMLG grant permission electrically to the gateman by following procedure mentioned in the Para No.4.9 in Appnedix-B. After doing so by SM on duty the gate man will get red indication which indicates Gate is free for openingafter turning the GS switch to normal position.

j) For opening the LC gate barriers press the OPEN push button (GREEN) continuously till both the barriers start opening and reach to the (fully opened) vertical position from horizontal position. Motors will cut off after the booms achieve the desired vertical angle.

k) In case of emergency gateman will inform SM on duty with private number (PN) exchange, then Key 'L' (chained with Boom Crank Handle) is extracted from EKT-3, Electro-Mechanically free, provided at Gate Lodge (in a locked and sealed red box). The crank handle can be used for manual operation of individual lifting barriers by crank handling in case of emergency.

l) **Extraction of Key 'L' shall put back all the relevant signals at 'ON'.** Switch GS (Gate Slot) is provided in the gate lodge to put back the concerned UP & DN signals to 'ON' by the gateman in case of emergency.

A. ***OPERATION OF ELECTRIC LIFTING BARRIER DURING POWER FAILURE:***(Hand Generator Mode-During Power Failure)

In case of power failure, the barriers cannot be operated from the panel. But the barriers can be operated simultaneously by use of hand generator as mentioned below.

Put the Mode selector switch on the panel to MANUAL position.

i) To ***close*** the barriers, rotate the lever on the main control panel in ***clockwise direction*** till both the barriers reach the horizontal and locking takes place.

ii) To ***open*** the barriers, rotate the lever on the main control panel in ***anti-clockwise direction***. Both the Locks will open first, and the barriers will start rising. Keep cranking till the required position is achieved.

B. ***OPERATION OF ELECTRIC LIFTING BARRIER WHEN POWER SUPPLY AS WELL AS HAND GENERATOR FAILS*:** (During Power Failure and failure of hand generator)

In case of failure of power supply as well as fault in the hand generator system a provision of hand cranking of each barrier has been provided.

1. Insert the crank handle, which can be obtained from the emergency key box RKT 'L', on the slot provided in with the barrier pedestal.
2. Now crank in the ***anticlockwise*** direction to ***open*** the barrier, first the lock will open and then the barrier will start rising.
3. Crank in the ***clockwise*** direction till the barriers are fully ***closed***. Keep cranking till thelocking takes place.

C. *INDICATIONS PROVIDED ON CONTROL PANEL FOR OPERATION OF ELECTRICAL LIFTING BARRIER:*

1. RED colour emergency push button which is to be pushed in case any or both of the booms do not get locked (GREEN indicators do not light up). It will be used only after physical verification of locking at both the lock posts.
2. LED INDICATOR (AMBER) LAMP (At the Top) which glows when power supply is available. NO GLOW will indicate that hand generator has to be used. It glows continuously.
3. SELECTOR SWITCH which allows you to choose operation on Manual or Auto mode.
4. LED INDICATOR (AMBER) LAMP (2No's) - Glows when the plunger of the barriers has been detected. Meaning thereby that the barrier has reached its Horizontal position.
5. AMBER COLOUR push button which has to be kept pressed till the barriers reach the horizontal position.
6. LED INDICATOR LAMP (GREEN) (2 No.s) glows when the barrier has been securely LOCKED. The lamp will turn off as soon as the lock has been opened.
7. GREEN COLOUR push button which has to be kept pressed till the barriers reach the fully open position.
8. Mode Selector Switch provided in Operating panel to be kept either in Auto position or Manual position as per requirement. It is only to be kept in Manual position for using hand generator when power supply fails or else it is to be kept in AUTO position.
9. 'Power' indicator LED will glow continuously if power supply is available.

D. *EMERGENCY GATE RELEASE OPERATION FOR VDU:*

Gate is locked when a signal is taken off. Locking of the gate is released only when the train movement for which signals are taken off is completed. For emergency opening of the LC Gate before completion of train movement or if the route given for a train has not been released, then emergency gate release operation has to be initiated by on duty SM following the procedure mentioned in the Para No.5.5 of Appendix-'B'.

9. Working of Sliding Boom Barrier in case of Failure/Defectiveness of Lifting Barrier:

In the event of Lifting Barrier is failed to operate by any means or damage of Lifting Barrier the Gate man shall inform the SM on duty and seek the permission to operate the Sliding Barrier. This emergency Sliding boom can be used as auxiliary gate without piloting IN and OUT of train.This emergency sliding boom cannot be used during normal working condition of main boom.The Gate man shall adopt the following procedure for closing the Sliding Barrier.

1. Sliding Barrier-1 provided at the gate lodge side has been padlocked with chain in open position and Sliding Barrier-2 at opposite to the gate lodge in open position has been locked by E-type lock.

2. In case of breakage of normal boom or LC gate cannot be closed due to failure, the gate man shall release electro-mechanically free Key 'G1' from "EKT-1" provided in the gate lodge. Extraction of Key 'G1' from the EKT will put back the road signals to danger and the hooter will sound simultaneously.

3. The Gate man shall insert the Key 'G1' in E type lock provided at Sliding Barrier-1 and unlock the Sliding Barrier-1. He will slide the boom against the road traffic and lock it in closed position by pushing the locking plunger. The locking plunger initially in locked condition can be released by unlocking the E-type lock with the key attached to the chain of the boom. This will also release key 'SB1' attached to the lock post. Key 'SB-1' released locks the Sliding Barrier-1.

4. The Sliding Barrier-2 is normally in padlocked condition and the key is in the custody of gateman. The gateman shall unlock the Sliding Barrier-2 by this key and slide it against the road traffic and lock it in closed position by pushing the locking plunger. The locking plunger is initially in locked condition. This can be freed by unlocking the E-type lock with the help of key attached to the chain of the boom and "SB1" concurrently. This will also release key "SB2" attached to the lock post of Sliding Barrier-2. Key SB-2, when extracted locks the Sliding Barrier-2 and key SB-1. This key "SB2" is to be transmitted to SM/SMLG by inserting it in EKT-2 provided in the gate lodge in conjunction with the GS (gate slot) switch provided in the gate lodge to enable the SM on duty to take off concerned signals.

5. In case of any damage to sliding boom when it is in closed condition to road traffic, leading to infringement or obstruction on track, the gateman shall normalize the switch GS to put back the concerned signals to danger.

6. After passage of train, SM on duty shall transmit the gate Key. The gateman shall extract "SB2" key from EKT-2, normalize the switch GS, unlock the Sliding Barrier, and operate the gears in reverse sequence of operation to normalize the sliding boom.

   In the event of failure of reception and dispatch signals or during non-Interlocking working the Traffic Gateman shall be informed and the Train shall be passed in terms of SR 3.69.02, 3.69.03 and 3.70.01 after ensuring correct closing and locking of L.C Gate. During this period the L.C Gate shall be opened only when necessary and safe to do so.

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

10. <u>Failure of Telephonic Communication:</u>

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

a) Station Master at the dispatching end shall issue a caution order to the Loco pilot before dispatching a train in the block section from his end.

b) The caution order should advise the Loco Pilot to whistle continuously and approach the gate cautiously.

c) The Loco pilot should be instructed to pass the gate cautiously, on being hand signalled by the gateman. If hand signal is not seen, Loco pilot should be

prepared to stop short of the gate and depute his Assistant Loco pilot to see the condition of the gate. If the gate is closed the Assistant Loco pilot give the all right signal, if the gate is not closed the Assistant Loco pilot must close the gate and then give the all right signal. The Loco pilot shall stop clear of the level crossing to pick up the Assistant Loco pilot who will reopen the gate for passage of road traffic. In the absence of the Assistant Loco pilot, the Loco pilot may take the assistance of the Assistant Train Manager / Train Manager.

d) 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.

e) 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.

f) Station Master shall also advise the gateman through gang man / patrolman or Loco pilot of the first train that the telephone has become defective.

g) He should also advise S&T staff responsible for maintenance of the telephone to rectify the defective Telephone at the earliest.

h) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

11. <u>Failure of Gate Key with the Gate is in closed position:</u>

i). In case of failure of Electrical Lifting Barrier when the Gate is in closed position then Gateman must immediately inform the Station Master on duty on telephone, under exchange or private number.

ii). Then the emergency key 'L' (in the Sealed Red Box with glass cover) which is available at the gate lodge, will take it out from the sealed box by breaking the seal and open the gate for road traffic.

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 form 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.

12. <u>Failure of Gate Key with the Gate in open position:</u>

a) In case of failure of Electrical Lifting Barrier when the Gate is in closed position then Gateman must immediately inform the Station Master on duty on telephone, under exchange or private number.

a) 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.

b) Gateman shall secure the gate against road traffic by means of chains and padlocks and pass the trains on hand signals.

c) Station Master on duty shall issue a caution order to the loco pilot of a departing train.

d) 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.

e) Station Master will advise S&T staff responsible for maintenance of winch/gate levers/key transmitter to rectify the defect at the earliest.

f) Normal working will resume only after S&T staff repairs the winch/gate leaves/key transmitter and issue reconnection/fit memo for the same.

13. <u>Obstruction at the Gate:</u>

a) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately fix red banner flag by day and red lamp by night on posts provided at both ends of the gate, for this purpose.

b) Immediately after this, the gateman shall advise the Station Master on duty, regarding the defect / obstruction at the gate, under exchange of private number.

c) Station Master on duty shall be advised to put the reception / departure signals back to 'ON' position, if taken 'OFF' for a train.

d) If there is no response from the Station Master after three attempts, he shall first protect the gate and then inform on phone.

e) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no.1.5(6).

f) Thereafter he shall protect the gate from the other direction also.

g) He shall note down the particulars of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been ensured by the gateman that the road vehicle or the lifting barriers are not fouling the track.

h) 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.

i) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.

j) Station Master shall then issue a caution order to Loco pilot of the gateman, if the gate is broken, but is clear of any obstruction.

k) 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.

l) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.

m) Normal working will be resumed only after maintenance staff rectifies the defective lifting barriers and issue reconnection / fit memo for the same.

14. <u>Obstruction on the Track near Level Crossing:</u>

If there is a rail fracture or obstruction on the track due to falling of tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item no.13 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.

APPENDIX-'B'

APPENDIX 'B'
SYSTEM OF SIGNALLING &INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION

(Detail description of signalling and interlocking installations, instructions for working them normally and in emergencies etc. including power supply arrangements).

1. BRIEF DESCRIPTION OF THE SIGNALLING AND INTERLOCKING INSTALLATIONS:

SHIMILIGUDA is a Class 'B' station provided with Standard-IIElectronic Interlocking of M/s. Medha Servo Drives Pvt. Ltd., make. The station is provided with Route setting type Electronic Interlockingbetween points, signals, track circuits and other signaling gears. The station is equipped with Multiple Aspect Colour Light Signaling. All points and signals are power operated through a central **Visual Display unit (VDU)** installed in the SM's Office.

2. DESCRIPTION OF OPERATOR CONSOLE CUM VISUAL DISPLAY UNIT (VDU):

The Operator Console cum Visual Display Unit (VDU) in dual configuration is provided for operation of Signals, points, Crank handles and controls etc. A mimic yard diagram based on SI plan No. SI/23263 ALT-'A' shall be displayed on the VDU. The VDU is used for controlling and monitoring the station. Indications on the station mimic diagram of VDU will be dynamically updated.

3. SYSTEM OVERVIEW

The PC-based (**operator VDU**) for the operation of Signals, Points, Crank Handles and Siding Controls, etc. The SM of a station required to be familiar on the specific station's SWR (station working rules).

Operator VDUs consist of CPU with a color monitor, keyboard and pointing device (mouse). Through communication media the exchange of control and indication messages takes place with operator VDU. The Software is installed to display the Station Yard Mimic diagram on the operator VDU and it allows access to all functions by selecting menus with a click of mouse on the corresponding function icon. By selecting the menu, the function (Signal clear and cancellation, Route release, Point operation, Gate release etc.,) can be executed.

The operator VDU is used for controlling and monitoring the station. However, indications on the Station yard mimic diagram of operator VDU will be dynamically updated.

3.1. DUAL VDUs – MODE OF SELECTION:

The privilege has been given to the operator for controlling the station through VDU-1 or VDU-2. With Dual VDU concept, we can control either from A-VDU or B-VDU by selection through switch provided on the SM's table.

The operator VDU is having controls to operate the field gears through the Mimic diagram. A Mimic panel diagram displayed on the operator VDU is an exact replica of yard that suits SI plan.

4. CONTROL(S) & INDICATION(S):

4.1. ICONS AND INDICATIONS PROVIDED ON THE VDU:

In addition to mimic yard diagram including signal, points, track circuit, Axle counters, sidings as indicated in the WRD, various other ICONS and indications

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have been provided on the VDU. A brief description of the same are described below.

SN	ICONS	INDICATIONS	FUNCTIONS	REMARKS
1.	PC SM KEY	Green Colour when key is 'IN'	Ensures operation of VDU by authorized person	Protected by pass word
2.	---	Emergency Route release – UP & DN	Flashing indication appears when Emergency route release operation is initiated.	For each operation concerned counter shall register one count higher.
3.	Emergency Point operation key	Green light when key is 'IN'. Yellow light indication appears showing request for Emergency point operation is acknowledged.	Ensures emergency point operation by authorized person	Protected by Pass word. For each operation concerned counter shall register one count higher.
4.	Point failure Ack. Button icon	Red	Flashing indication appears when any point fails. SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement, buzzer stops. After verification at site inform S&T staff immediately if failure persists.
5.	Signal failure Ack. Button icon	Red	Flashing indication appears when any signal fails. SM has to left click on the icon to acknowledge.	Buzzer will sound. On acknowledgement, buzzer stops. Inform S&T staff immediately if failure persists.
6.	CH-1, CH-2, CH-3, CH-4, -------, button icons	Yellow lamp indicates 'KEY IN'. Red lamp indicates'CH LOCKED'	In normal condition yellow lamp will be lit. Whenever the crank handle is locked in route or otherwise red indication will glow.	
7.	SDG CNT-37, 39 & 41 button icons	Yellow lamp indicates 'KEY IN'. Red lamp indicates'SDG LOCKED'	In normal condition yellow lamp will be lit. Whenever the crank handle is locked in route or otherwise red indication will glow.	

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SN	ICONS	INDICATIONS	FUNCTIONS	REMARKS
8.	LC Gate Control-38buttonicon	Yellow lamp indicates 'KEY IN'. Red lamp indicates 'Gate Locked' and another yellow lamp indicates Gate switch is reversed.	When LC Gate is closed and Key transmitted to SM yellow lamp will be lit and Gate switch (GS) is reversed at LC Gate yellow lamp will be lit. Whenever the LC Gate is locked in route or otherwise red indication will glow.	SM shall Right click on the button icon to select menu to Transmit/Receive/Emergency operation of gate as required.
9.	DN Block Release button icon	Yellow –Prepared for Block release.	On getting indication SM shall left click on the button icon which shall release Block Handle.	After complete arrival of train this will be activated
10.	UP train Arrival Ack. Button icon	Yellow – for muting the Arrival buzzer of TLBI instrument	On getting indication SM shall left click on the button icon which shall mute the Arrival buzzer of TLBI instrument.	After complete arrival of train this will be activated
11.	Line Block button icon	Red when blocked	SS/SM shall point the curser on the icons provided on the berthing track and right click. One drop menu will appear indicating line blocked and un-blocked, SS/SM has to select the required menu.	When line block is selected the concerned button on the particular line turns to RED.
12.	Power Block Button icon	Red when blocked	SS/SM shall point the curser on Power Block icons and right click. One drop menu will appear indicating line blocked and un-blocked, SS/SM has to select the required menu.	It is only an indication to remind the SM that the Power Block is given for concerned line.

4.2. PC SM KEY:

SM key is physically provided on VDU change over panel, outside the VDU on SM's Table. This key when inserted in the lock [provided on VDU change over panel] and turned right the VDU becomes operative. The key when inserted in the lock and either turned to left or extracted out from the lock renders the VDU inoperative except for putting back the signals to 'ON' position in case of emergencies. When SM's key is inserted and turned to right a red indication lit above the SM's Key icon on the VDU.

PC Control:

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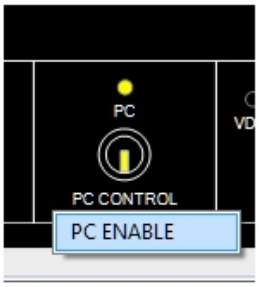
If any one of VDU has shut down for maintenance or in case of failure, after resumed to normal working or rectification, for getting the operations from the VDU, first enable the PC which is virtual SM's Key. To enable the PC, right click on the PC icon which activates the PC enable option.



Then click on the PC enable option which will enable the password window to appear. After the valid entry of user name and password, the PC will be enabled. The user name is ECOR and the password of this station is SMLG.

4.3. ELECTRONIC INTERLOCKING (E.I) SYSTEM INDICATIONS:

a) Vital Interlocking Computer Status:

In EI, two Vital Interlocking Computer cards are available normally. The status ofeach of the VIC is provided on VDU as following.

VIC – A Indications

VIC-A is Active

VIC-A is Stand By

VIC–A is Not Available

VIC –B Indications

VIC–B is Active

VIC–B is Stand by

VIC–B is Not Available

If there is any change in VIC's status, its current status will be displayed along with OK button and a buzzer is turned on to alert the operator. The Buzzer

stops and the indication message disappear when the OK button is pressed by the Operator.

Action by SM: If at least one VIC is available and is in Active State, then EI shall continue to function. On observing this fault, SM shall acknowledge the fault and immediately inform Signal Maintainer for further action.

b) Link Status Indication:

The EI VDU receives the data from EI Equipment through two OFC channels. The Link Status Indication of the same is provided on the VDU.

When Channel – A or Channel – B link is healthy, corresponding Yellow indication will be glowing steadily. When Channel – A or Channel – B link is faulty, corresponding red indication will be shown steady.

Channel –A Link Status is Healthy

Channel – A Link Status is Faulty

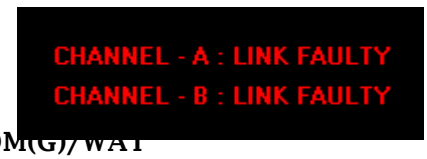
Channel – B Link Status is Healthy

Channel – B Link Status is Faulty

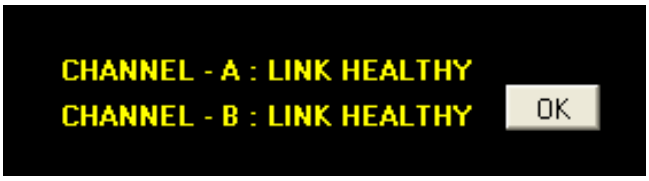
Buzzer and Acknowledgment:

When Channel A link or Channel B Link fails, a Buzzer is turned on automatically to alert the operator. To acknowledge the fault, right click on this control, a pop- up menu is displayed and then click on the Ack menu option. The Buzzer stops when the fault is acknowledged by the Operator.

When any of the channelslink fail, an indication is shown in red color.



When any of the links is recovered, the indication is shown in yellow color along with one OK button. The indication message disappears if OK button is pressed.



Action by SM: If at least one of the Communication Channels is Healthy, EI VDU shall continue to function as usual emanating all indications. On observing any communication channel faulty indication, SM shall acknowledge the fault and immediately inform the Signal Maintainer.

c) EI Equipment Critical Fault:

If EI is shut down due to any critical fault, a message is displayed in red color along with OK button and a buzzer is turned on to alert the operator. The Buzzer stops and the indication message disappear when the Operator presses the OK button.

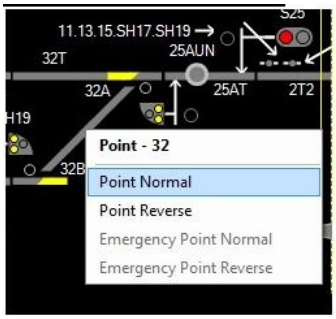
Action by SM: SM shall acknowledge the fault, inform the Signal Maintainer.

4.4. VDU ACTIVE INDICATIONS:

Whenever the VDU is in active condition a RBG sequence will be running in the top right corner of the screen. That is in a flashing sequence in the screen.

4.5. OPERATION AND INDICATION OF POINT:

To Operate the Point the SM needs to track the mouse pointer to concerned Point on the VDU, after clicking by the right button of the mouse a popup menu will appear as shown below.



4.5.1. REVERSE TO NORMAL OPERATION:

To operate the point from reverse to normal after clicking on the concerned point Track the pointer to **POINTNORMAL**in the popup menu and click, a Normal flashing indication

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4.5.2. NORMAL TO REVERSE OPERATION:

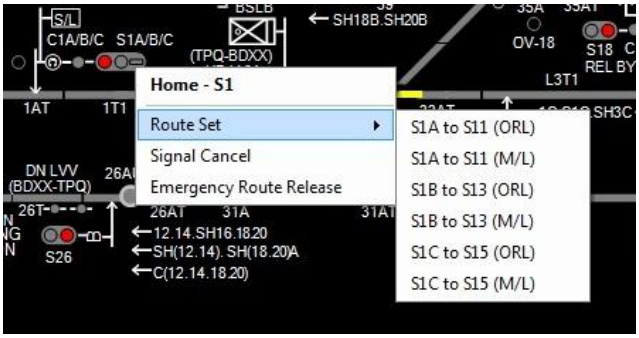
To operate the point from normal to reverse after clicking on the concerned point Track the pointer to **POINT REVERSE** menu and click, a Reverse flashing indication will appear, the indication will be steady after the point is set to Reverse.

4.5.3. POINT INDICATIONS:

When the point is free a steady yellow strip of light will appear either in the normal portion of point zone (In case of cross over at both ends) or in the reverse portion of point zone depending up on the position of point, indicating that the point is set. When the point is operated from the normal to reverse the strip of light in the normal portion is disappears and starts flashing in the reverse portion and becomes steady when the point is set and detected. Similarly, when the point is operated from the reverse to normal the strip of light in the reverse portion disappears and starts flashing in the normal portion and becomes steady when the point is set and detected. When the point is engaged in a route, a yellow indication will appear near the point and red indication appears in the point lock indication showing that the point is locked and cannot be operated.

4.6. 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 right mouse button a pop-up menu will appear as shown below for route set, signal cancellation and route release operations.



4.6.1. SETTING A ROUTE:

To set a route of a signal, click on a possible route of the signal, after doing, so a RED colour route initiation indication will be flashing and all the Normal/Reverse set indication of the Points in the route will start flashing if it is not available in required position. After setting of points in the route, overlap and isolation in required condition flashing indication will become steady and a complete yellow 'Route set' indication will appear over the route right from replacement track of the signal to the last track of overlap section of the route. Also, the point lock indication will appear through Red indication near the point. Finally, a route locked yellow steady indication will appear immediate to rear of the signal. Now the signal will be taken-off. The yellow route set indication will turn to red when the train occupies the concerned track circuit.

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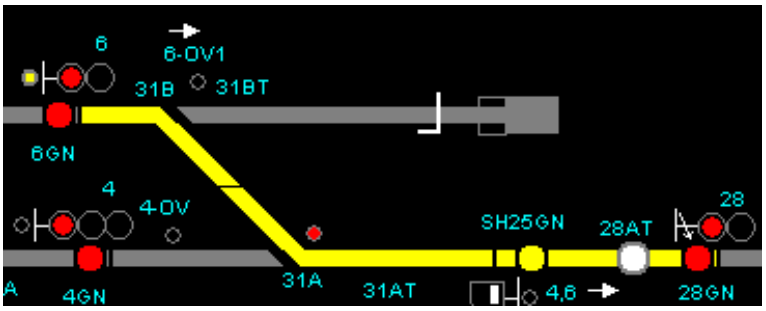


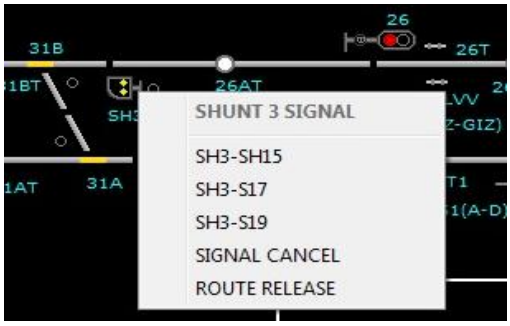
Conditions for setting a route:

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

1. All the Crank handles of the required route related points to be in Key-IN condition.
2. All the related Siding control keys to be in Key-In condition.
3. If any LC Gate are falling under the route that should be closed and locked (Key-In)

4.6.2. SHUNT SIGNAL OPERATION:

For setting the signal route for the shunt signal the same procedure shall be followed as explained in section for Main signal operation. To Take-Off a Shunt Signal with the desired route the SM needs to track the mouse pointer over the concerned shunt Signal on the VDU, after clicking right mouse button a pop-up menu will appear as shown below.



Track the mouse on the 'Route set' sub menu which displays all the possible routes of the Shunt Signal and track the mouse on the desired route and click the left mouse button. After doing so, desired route will be initiated and the Shunt Signal will be taken off.

4.6.3. CALLING ON SIGNAL OPERATION:

Calling-on signal route set operation is like the same procedure as mentioned for the main signal. For calling-on Signal, route is set after a train occupies the approach track section in immediate rear of the stop signal. The calling on Signal is cleared after a lapse of 60 Seconds in case of Home Signal and whereas

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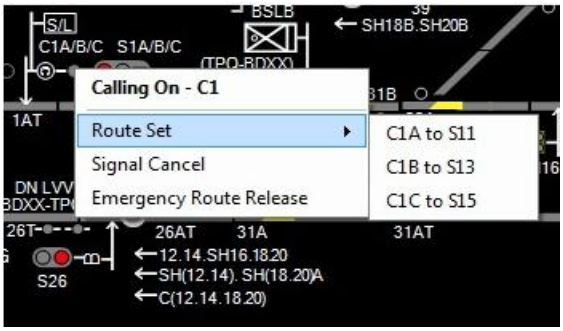
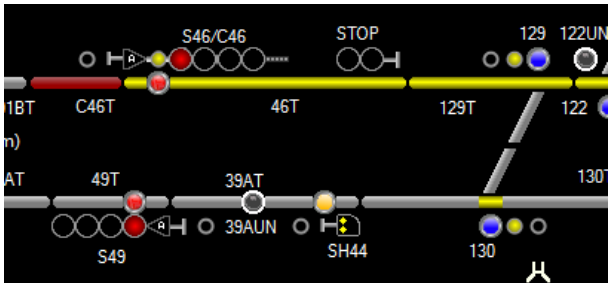
in case of Calling On Signal below Starter Signal is cleared immediately provided other conditions are fulfilled.

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal/Starter Signal (as the case may be), occupying the track section in rear of the signal. When a train occupies the track section a REDlight strip will appear on the VDU.The particular route on which train is intended to be received shall be set by tracking the pointer in VDU on to the signal below which the calling on signal is provided. Right click on the calling-on Signal which will appear a pop-up menu as follows.



Then the SM must drag the pointer and click over the 'Route set' sub menu which displays all possible routes and track the mouse on required route and click the left mouse button as a result of which the calling-on signal will blink for 60 seconds in case of Home Signal and Calling on Signal cleared immediately in case of Starter Signal. For all home signals the time delay is 60 seconds and for all Starter Signal the time delay is zero seconds, the Calling-on signal clears i.e. a yellow light glows at the concerned calling-on signal on the VDU.



This action will be recorded in a respectivecounter of the counter box provided on SM's table. Every such operation shall be recorded by the SS/SM on duty along with the reasons to do so. The calling-on signal route can be released after complete arrival of the train by Signal cancellation only.

4.7. CRANK HANDLE CONTROL OPERATION:

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicting that the Crank Handle is free. To Transmit or Release control of the Crank Handle, right click on the crank handle control button provided like the following button on the VDU.

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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 transmit the control by clicking **TRANS** on menu of the Crank Handle Button.After transmission, the KEY IN indication will start flashing; now the KEY can be extracted from the EKT.After extracting the key from the EKT,the key IN indication will disappear. This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Crank Handle operation along with the latest counter number in a register.

When the Manual point operation is completed, after putting the KEY back in the EKT, corresponding Crank Handle KEY IN flashing indication will appear on the VDU. Now the operator has to Release the control for the steady indication, for that right click on the Crank Handle and select the **RESTORE**in the menu appeared.

A Crank handle locked indication (Red) will appear, when the particular point is locked through the signal route set over it or engaged on route setting in any other way.

4.8. SIDING CONTROL OPERATION:

Normally a 'KEY IN' (Yellow) indication will appear on the VDU indicting that the Crank Handle is free. To Transmit or Release control of the Siding Control, right click on the Siding control button provided like the following button on the VDU.

The appearing pop-up menu gives details of the possible commands on the Siding control button.

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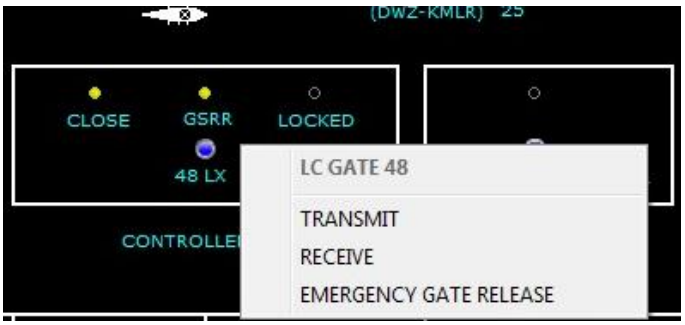
For Transmitting the Siding control KEY to the field personnel, SM has to transmit the control by clicking **TRANS** on menu of the Siding point Button icon.After transmission, the KEY IN indication will start flashing; now the KEY can be extracted from the EKT.After extracting the key from the EKT,the key IN indication will disappear. This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Siding point operation along with the latest counter number in a register.

When the Electrical operation of point from site is completed (detailed procedure for electrical operation from site is given in the Para No.18 of this appendix), after putting the KEY back in the EKT, corresponding Siding control KEY IN flashing indication will appear on the VDU. Now the operator has to Release the control for the steady indication, for that click on the Siding control and select the **RESOTRE**in the menu appeared.

A Siding control locked indication (Red) will appear, when the particular point is locked through the signal route set over it or engaged on route setting in any other way.

4.9. LC GATE OPERATION:

To Transmit or Release control of the LC gate control, right click on the concerned LC gate control button provided like the following button on VDU.



The appearing pop-up menu gives details of the possible commands on the LC gate control.

Normally no indication will be available on the VDU indicating that the gate control key is out and gate is open. When it is required to close the gate, SM on duty shall intimate the gate man to close the gate supported by exchanging PN. Upon instructed by the SM on duty the gate man shall close and lock the gate and after reversing the concerned slot switch (GS) he shall transmit the gate control key to station by inserting and transmitting the key in the RKT. A flashing yellow indication on close indication and steady indication on GSRR indication will appear on the VDU seeing which SM on duty receive the control by clicking on the L.C. Gate control button icon and select 'Receive'. The close flashing indication shall become steady.

When the key is required to be transmitted to the Gate man, SM on duty has to transmit the control by clicking, after transmission the KEY IN indication will starts flashing, now the KEY can be extracted from the RKT.

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

4.10. OVERLAP TIME RELEASE:

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

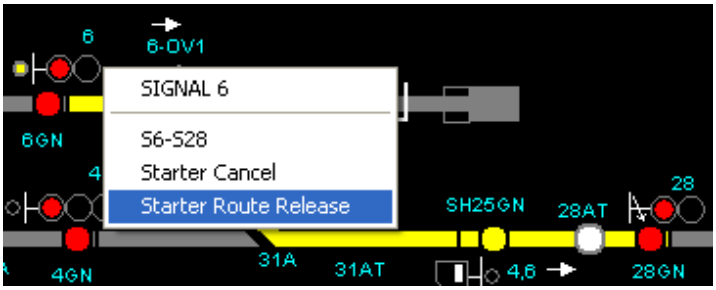
5. EMERGENCY OPERATIONS:

To carry out different emergency operations the following procedures are to be followed.

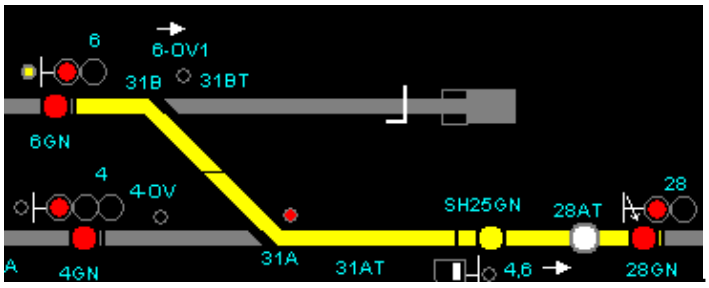
5.1. CANCELLING A ROUTE/ EMERGENCY ROUTE RELEASE:

To cancel a signal route when the route is set and the signal in taken-off, click on the signal cancellation option on the menu (Main/Calling on) of the concerned signal, the signal will immediately go to ON aspect.

The precondition for route release is, the route should have been set and the signal has been put back to danger. If you wish to cancel the route, select the desired signal and click the right mouse button on it. The system would display a popup menu with a list of commands near the control symbol. Select the "**Route Release**" from the menu list.



Since all the Signals at this station are having Dead Approach, A flashing indication on the route lock indication near the control symbol and in the emergency route release indication block UP/DN SIDE indication will appear as shown in the figure below indicating that the route release is in progress. After 120sec the flashing indication stops, UP/DN SIDE indication will disappear and then whole route would be released.



Counter provided on Counter Box for the route release will change to next higher digit. This number should be recorded by the SM on duty who shall

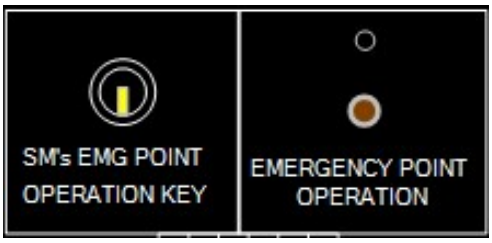
record the details of the Route cancellation along with the latest counter number in a register.

5.2. EMERGENCY POINT OPERATION:

When the point zone track circuits failed without any point lock condition through respective signal route(s), a point can be operated by the Emergency Point operation.

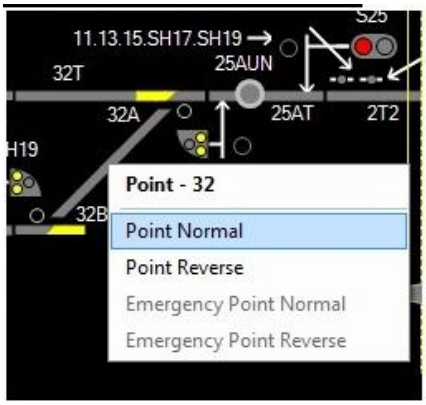
Note: Before resorting to this operation SM on duty shall verify that the point zone is clear of any vehicle occupying the track section and the same is clear of any obstruction.

A physical key for emergency operation of point is provided on the counter box. Before doing emergency operation of point, SM on duty will verify physically there is no vehicle on the concerned point zone then Insert the physical key and turn to right side provided on the counter box. On doing so 'key in' indication will appear on VDU as shown in below. Then point operation can be done to either normal or reverse as per requirement.



5.2.1. EMERGENCY NORMAL OPERATION:

Track the pointer to the corresponding Point which is intended to operate and then right click the mouse button. After doing so, a pop-up menu will appear as shown below.



Then track the pointer on the '**EMERGENCY POINT NORMAL'** and click left mouse button, after doing so point gets operated and 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 will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SM on duty who shall record the details

of the Emergency Point Operation along with the latest counter number in a register.

5.2.2. EMERGENCY REVERSE OPERATION:

Track the pointer to the corresponding Point which is intended to operate and then right click the mouse button. After doing so, a pop-up menu will appear as shown above. Then track the pointer on the '**EMERGENCY POINT REVERSE'** and click left mouse button, after doing so point gets operated and Reverse flashing indication will appear, the indication will be steady after the point is set to Reverse.

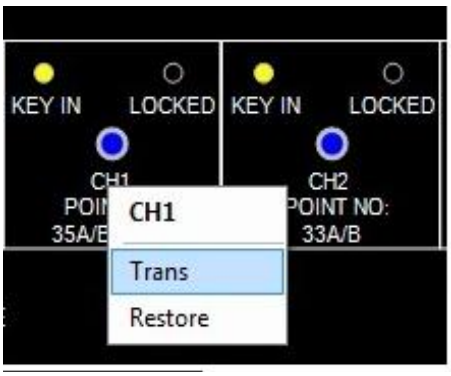
After the Emergency point operation, a specific counter will change to its next higher digit and this number should be recorded in the register provided for this purpose by the SM/ASM on duty who shall record the details of the Emergency Point Operation along with the latest counter number in a register.

After the completion of the Emergency point operation, Emergency Point Operation Key shall be taken out for other operations, and kept in the custody of SM on duty.

Note: *The Emergency Point Normal and Emergency Point Reverse options are normally in disabled mode. These are enabled only when the Emergency Key is in KEY-IN position.*

5.3. EMERGENCY CRANK HANDLE RELEASE OPERATION:

When a crank handle is locked due to earlier set route is not released or otherwise. To Transmit or Release control of the Crank Handle, SM on duty shall cancel the relevant signal first and then track the pointer on the crank handle control button icon provided like the following on the VDU and click the right mouse button. On clicking, the pop-up menu gives details of the possible commands on the Crank Handle.



For Transmitting the Crank Handle KEY to the field personnel SM on duty has to track the pointer on '**TRANS'** menu and click the left mouse button. After transmission the 'KEY LOCKED' (Red) indication will start to flash for 120 seconds & 'KEY IN' remains steady. After this the 'KEY LOCKED' indication will vanish & 'KEY IN' indication will start to flash. After extracting the key from the RKT, the 'KEY IN' indication will disappear. When the Manual point operation is over, after putting the crank handle key in the RKT, flashing 'KEY IN' indication will appear on

the VDU, now the SS/SM on duty shall Release the control for the Steady indication by clicking **'RESTORE'** menu.

This action will be recorded in a respective counter of the counter box provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty who shall record the details of the Emergency Crank Handle Operation along with the latest counter number in a register.

5.3.1. EMERGENCY CRANK HANDLE RELEASE DURING FAILURE OF BOTH THE VDUs (ACTIVE & STAND BY):

When both the VDUs (Active & Stand by) provided for operation of signals & points in EI station cease to work at the same time due to power failure or what so ever the reason, OR both the EI systems fail to operate due to power failure or whatever the reason, in both the cases the SM on duty shall insert the Extreme Emergency external control key and turn to right along with Red ColourPush button provided in the key box fixed on the SM table. By resorting to this, All the signals will go to danger and timer is initiated and flashing indication will appear on the key box fixed on the SM table. Flashing indication will be steady after 120 seconds which results in release of all the crank handles at a time. The SM on duty can set the required point/points through crank handles manually by extracting the key/keys from EKTs provided in the location boxes.

This action will be recorded in a respective veedor counter provided on SM's table. The counter will increment the number for each and every such action and also, this number should be recorded by the SM on duty and shall record the details of the Emergency Crank Handle Operation along with the latest counter number in a register.The signaling staff i.e., JE/SSE/Sig or ESM shall be intimated immediately regarding the failure for rectification of the same.

CRANK HANDLE CONTROLS FOR EMERGENCY OPERATION OF POINTS			
S No	CRANK HANDLE	CONTROL POINTS	PROVIDED IN
1.	CH1	32	DN CH LOC-3, ARK End
2.	CH2	34A/B	DN CH LOC-2, ARK End
3.	CH3	36A/B	DN CH LOC-1, ARK End
4.	CH4	31	UP CH LOC-3, KVLS End
5.	CH5	33A/B	UP CH LOC-1, KVLS End
6.	CH6	35A/B	UP CH LOC-2, KVLS End
7.	CH7	37A/B	SS LOC-1A, KVLS End
8.	CH8	39A/B	SS LOC-2A, KVLS End
9.	CH9	41A/B	SS LOC-3A, KVLS End

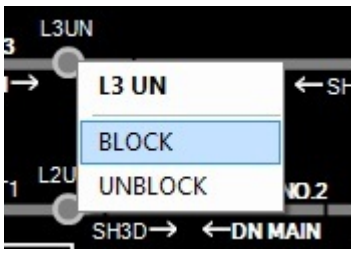
5.4. BLOCK AND UNBLOCK (REMINDER COLLAR) OPERATION:

Block option is used to block the particular line on which SM on-duty is intended not to receive any train for certain period of time for some reason or the other.

5.4.1. BLOCK OPERATION:

APPENDIX-'B'

To block/unblock a particular line, right clicking on the route button on concerned line displays 'BLOCK' and 'UNBLOCK' options on the menu as shown below.



Then select the Line block option. After selecting the Line block option that particular line will be blocked for berthing portion on that particular line. The Line block 'RED' colour indication will be displayed after the successful application of such a blocking process on the VDU, during which no signal will be taken off for that line.

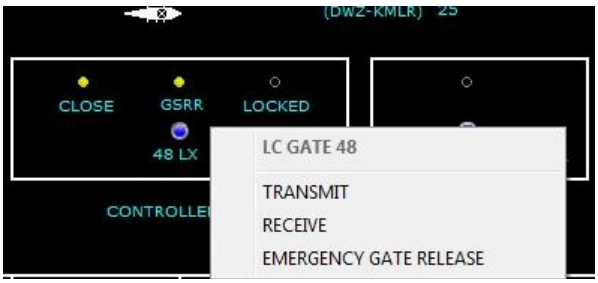
5.4.2. UNBLOCK OPERATION:

To unblock a line, place the mouse pointer over the blocked route button and press the left mouse button. A popup menu with block and unblock options will be displayed near that route button as shown above. Select the "UNBLOCK" menu item from the list and press the left mouse button. After selecting the line unblock option that particular line will be available for the train movement leading to the all-possible track circuit section.

5.5. EMERGENCY GATE RELEASE OPERATION:

In the event of gate locked (Red) indication persists on VDU even after train movement is completed or when it is required to open the gate due to emergency in gate locked condition on VDU the following procedure shall be adopted by both, station master on duty and gate man.

1. Station Master on duty shall first cancel the signal by signal cancellation control of the relevant signal.
2. Station Master on duty then shall click on the 'Emergency gate release control' in the gate popup menu.



3. The 'Emergency Gate release' indication will flash for 120 seconds and after the time has lapsed the Emergency Gate release indication along with Gate locked 'Red' indication will disappear.
4. Station Master on duty then shall transmit 'Gate Control' by clicking Transmit control' (as the case may be). The 'Key In' indication (white) starts flashing suggesting the key is transmitted to Gate man.
5. At gate lodge an indication will appear near RKT suggesting that the key can be released from the RKT for opening of the LC gate.

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6. Seeing the indication gate man on duty shall extract the key from RKT and operate the gate.
7. On release of key from RKT flashing indication will disappear.

Any failure regarding transmission / extraction of gate key shall be intimated to the S&T officials for proper rectification. Till such time the failure is rectified the Station Master on duty shall pass the trains by P/IN or by P/OUT as the case may be.

6. DIGITAL AXLE COUNTER:

Digital Axle Counters are provided as a Last Vehicle Checking Device (LVCD) for Both UP and DN block sections between SMLG-ARK and for block section SMLG-KVLS.

For high reliability, High Availability Digital Axle Counters (HASSDAC) with dual detections are installed in SMLG-ARK and SMLG-KVLS section to ensure the working of at least on system at a time.

High Availability Single Section Digital Axle Counter (HASSDAC) consists of two Single Section Digital Axle Counters (SSDACs) are connected in parallel so that even anyone of the SSDAC fails which will not affect the system. These two Axle counters are named as SSDAC-1 and SSDAC-2. The status of each SSDAC is provided on the Reset box which is provided on the SM table.

S.No	Indication	Automatic action taken by Equipment	Action by SM
1.	Only SSDAC-1 fails after arrival of the train	System resets automatically	NIL
2.	Only SSDAC-2 fails after arrival of the train	System resets automatically	NIL
3.	Both SSDAC-1 & 2 Fails after arrival of the train (or)for any reason	No automatic action	SM to reset the system as procedure laid down in the Para No.8.3, 8.4 & 8.5 as the case may be and make an entry in the axle counter register.
4.	Both SSDAC-1 & 2 Fails even after reset by SMs of both the end	No automatic action	Enter in Signal Failure Register issue failure memo to signal technician. Procedure to be adopted is same as laid down.
5.	Either SSDAC-1 or SSDAC-2 fails continuously for long time	--------	Report to signal staff without entering in signal failure

The position of the Block section whether cleared or occupied are reflected in the 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 into the Block Section, "Block Section Clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

APPENDIX-'B'

After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of a 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 for that section.

In case of failure of both the Digital Axle Counters, the SM on duty should resort to resetting of the same along with the SM on duty of adjacent station after confirming that the whole of the train sent by sending station has been arrived at the receiving station. The resetting of the LVCD shall be initiated as mentioned below at both the stations after exchanging the Private Number vide G&SR 4.17, 4.17.01.

A Reset Box is provided on SM's table for each block section to reset the Axle Counter in case of failure of both the systems i.e HASSDAC and in case of failure of Axle Counter system i.e SSDAC. Reset Box gives the status of the block section i.e. Clear (GREEN), occupied (RED), preparatory reset (Miniature GREEN) and power on indications (WHITE). It also having the Reset Key, push button for resetting the LVCD and a counter is provided to record the operation.

6.1. RESETTING OPERATION FOR LVCD (DIGITAL AXLE COUNTER):

After complete arrival of train, if the LVCD of the section does not clear and Block section clear indication (Green) does not appear in the VDU, the receiving station SM shall apprise the sending station SM through telephone for resetting the Axle Counter giving the details of last train that has arrived complete at his station and the block section is clear.

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

Then the SM on duty shall adopt the following resetting procedure at both the sending and receiving stations individually.

a) On being advised by SM of SHIMILIGUDA Station, SM of KVLS/ARK should perform the following step by step procedure from (b) to (i) for resetting the Digital Axle Counter (HASSDAC).

b) SM of SMLG Station and KVLS/ARKStation shall then Insert SM's reset key and turn right.

c) Press simultaneously both the Push button and the Reset Key which are provided on the Reset Box for at least 5 seconds continuously at SMLG and KVLS/ARKstation.

d) Release SM's Reset Key and Push button.

e) Turn the SM's Reset Key to left and remove it.

f) The system goes to preparatory reset state and preparatory reset miniature indication (Green) glows on the Reset box. The counter reading incremented after a gap of 5 seconds approximately.

g) The counter reading should be recorded in the concerned register by SM on duty.

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h) One train is to be piloted out in the section to make the system normal.

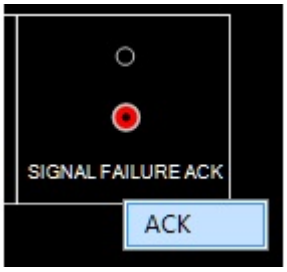
i) The SM on duty shall record it in the Train Signal Register indicating the resetting operations in detail i.e. train number, time, Private Number exchanged with SM of sending station and giving reasons for the resetting operation.

j) If the axle counter works properly, then Block Section cleared indication 'Green' will appear on the Reset box and the concerned Block working will be normalized after arrival of train which is piloted out.

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

7. <u>SIGNAL LAMP FAILURE INDICATION AND BUZZER ACKNOWLEDGMENT</u>:

LED signal lamps have been used for all signals at this station. In case of failure of any LED signal, will be indicated by showing 'RED' flashing light on VDU along with audible buzzer, which can be acknowledged and muted by pressing the 'ACK' button. However, the RED flashing light will continue to glow until the defective LED is replaced by a new LED. For rectification of failure SM on duty should inform the concerned S&T staff.



8. <u>POINT FAILURE INDICATION (RED), POINT FAILURE BUZZER AND POINT FAILURE ACKNOWLEDGEMENT:</u>

Whenever there is a failure of a point due to non-setting, flashing of concerned point indication and flashing of point failure indication (red) appears along with point failure Buzzer. The buzzer stops when acknowledge the respective 'ACK' button, but the flashing of concerned point indication and point failure indication shall continue to glow until the Point failure is rectified and disappear when point failure is rectified.

9. <u>COUNTERS:</u>

The following counters are provided for recording the actions such as emergency point operation, emergency route release etc. as shown in figure below would be displayed in rectangular boxes on the track layout window.

1. Emergency Route Release Counter.
2. Emergency Point Operation Counter.

APPENDIX-'B'

3. Crank Handle Release Counter.
4. Up Calling on Counter.
5. DN Calling on Counter.

In addition to the above counters, a counter is provided on the Reset Box of each Block section LVCD and on TLBI for S1 and S2 operations. The increment in counter number for each and every such action should be recorded by the SS/SM on duty who shall record the details of the operation along with the latest counter number in a register.

10. <u>TRACK CIRCUITS:</u>

UP Main lines, UP Loop & Common loop lines and all the point zones are track circuited as L1T1, L1T2, L1T3, L2T1, L2T2, L2T3, L3T1, L3T2, L3T3,31T, 3AT, 33/35AT, 35BT, 37AT, 37BT, 34/36AT, 36BT, 34BT, 4AT, 32T.

Approach track circuits 1AT & 2AT of 5 Rail length for Calling on Signal are provided in rear of the Up and DN Home signals respectively. In addition, there are short length track circuit 2T in advance of DN Home Signal are also provided. Similarly,1T is provided between UP Home Signal and DN Advanced Starter Signals. From the last trailing point/fouling mark in either side of yard to Advanced Starter Signals are also track Circuited i.e 25AT and 26AT inUP and DN directions respectively.

Indications for the above track circuits are available on VDU. Yellow Strip on VDU indicates Route is set and track is clear and Red strip indicates Track is in occupied condition.

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

11. <u>RELEASE/CANCELLATION OF ROUTE:</u>

Normally when a train is received on or dispatch from any route, the route illumination will disappear automatically after passage of the train suggesting that the route is released. When the route is not released automatically after passage of train over it or when on SM on duty intends to cancel the route set by him shall follow the procedure for cancellation of route described in Para No.5.1 of Appendix-B above. If the route is not released even after resorting to cancellation the SM on duty should inform the Signal Maintainer/JE/SSE for its rectification.

Note: *UP & DN Calling on Signals and UP & DN Advanced Starter Signals are to be manually cancelled after the passage of the train to release the route. In both the cases after passage of train, cancel the signal to release the route.*

12. <u>REPLACEMENT OF SIGNALS TO 'ON':</u>

Signals are replaced to 'ON' automatically by the passage of a train beyond 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 SM on duty shall follow the Para No.5.1 of Appendix-B.

13. <u>PILOTING OF TRAINS IN TO STATION YARD:</u>

APPENDIX-'B'

Whenever Home signal becomes defective, trains can be admitted by taking off Calling-on signal. Whenever both Home signal and Calling-on signal failed, all trains will be piloted in vide SR. [Refer SR 3.69.06].

If after the operation from the VDU, the approach stop signal fails to take 'off' the SM shall personally ensure from the indications displayed in the VDU that the route is clear, the points indications (including isolation point), crank handle 'IN' indication for the entire route and overlap portion (if any) are lit and remains steady and thereby fulfilling all the requirements of taking off signal. SM's key provided in panel/VDU is to be taken out and after that only reception of trains on defective signal may be arranged without clamping and padlocking of points of concerned route. The loco pilot shall be issued form T/369(3b) or T/369(1) in accordance with GR.3.69. No route cancellation operations of the concerned route are to be initiated till the total completion of the train movement.

Where the point, lock and route indications are fails to appear in the VDU,the SM on duty shall ensure the clearance of the nominated route, proper setting of all points through crank handle operation and get all the points whether facing or trailing clamped and padlocked with the help of TPM.

The SM on duty shall then hand over the written authority (T/369(3b) to the TPM for piloting the train. While going towards Home signal the TPM shall check the points and satisfy himself that the route is correctly set.

After the train has brought to a dead stop at the Home signal the TPM shall hand over the pilot memo to the Loco pilot, board the engine and display proceed hand signal to pass the Home signal.

NOTE:

a) The Station Master on duty shall personally supervise the correct setting, clamping and padlocking of the facing points, if any and ensure clearance on the nominated route vide SR [Ref. SR 3.69.03(c)].

b) The keys of padlock of the clamps put on to the points on the route for piloting In or piloting OUT shall be in the personally custody of the SM on duty or any other authorized operating officials till such time the train / engine / vehicle has utilized the route or alternatively such movement is cancelled.

14. PILOTING OF TRAINS - OUT OF STATION YARD:

When the starter signal has become defective, the Station Master on duty shall follow the procedure laid down in the SR.3.70.03. Then the SM on duty shall hand over the pilot memo T/369(3b) (along with the other authority if necessary) to the on duty TPM. The TPM on duty shall hand over the authority to the Loco pilot of the train and display proceed hand signal at the foot of the starter vide SR. [Refer SR 3.70.01].

In case the advanced starter signal has become defective, such signal shall be passed on the written authority on the form T/369(3b). The TPM shall hand over the pilot memo in form T/369(3b) to the Loco pilot after the train stopped. [Refer SR 3.70.02].

15. SHUNTING:

Shunt back signals SH3(A-C) and SH4(A-C) are provided towards KVLS end of the yard and towards ARK end of the yard respectively. Fixed Shunt Signals SH8 & SH9 are provided towards KVLS end of the yard and towards ARK end of the

yard respectively. Dependent Shunt Signal No. SH11, SH13 & SH15 is provided on Line No.3, 2 & 1 towards ARK end respectively. Dependent Shunt Signal SH10 is provided on Line No.1 towards KVLS end respectively. For taking OFF Shunt signals please refer Para No. 4.6.2 of APPENDIX-B.

16. SIDINGS:

a) HOT AXLE SIDING:

Hot Axle Siding takes off from Line No.1 towards KVLS end and terminates at Station endwith CSL of 40M (GJ to GJ). Hot Axle Siding is isolated from Line No.1 by Motor operated points.

(i) Working of Hot Axle Siding Point No.37A/B:

Electrical operation of Hot Axle Siding control point No.37 is carried out at site from the Siding Point Location. In Siding Point Location there are two EKT's namely EKT-1 & EKT-2, three buttons for normal and reverse operation along with common point button. Point indications for normal & reverse and point lock/free are provided. Working of Electrical operation of Siding Points is as follows:

1. To operate Siding point Key 'P' is required to be inserted in EKT-2.
2. Key 'P' can be extracted from EKT-1 in Siding Point Locationonly when SM extends control from VDU. Extraction of Key 'P' from the EKT-1 will block all signaling movement on Line No.1.
3. Key 'P' when inserted in EKT-2, point free indication appears on the board. Point button and normal or reverse buttons are simultaneously pressed to set the point to normal or reverse as the case may be.
4. After setting of point to reverse key 'P' should be extracted from EKT-2 and kept in the custody of the shunting porter. Removal of key will lock the point.
5. After completion of the movement key 'P' is to be inserted in EKT-2 & siding point 37A/B is to be operated to normal. After ensuring both end of 37A/B in normal setting, Key 'P' is extracted from EKT-2 & inserted in EKT-1 to enable SM to release the control 37 Key 'P' in EKT-1 resume signaling movement over 37A/B in normal position.
6. Crank handle control CH-7 is to be taken out for crank handling the point 37A/B in case of failure of electrical operation.
7. To extract the crank handle CH-7 from RKT provided in the Siding Crank Handle Location, SM on duty should extend the control No.37 same as for electrical operation of siding point.

(ii) Working of Hot Axle Siding Point No.39A/B:

Electrical operation of Hot Axle Siding control point No.39 is carried out at site from the Siding Point Location. In Siding Point Location there are two EKT's namely EKT-1 & EKT-2, three buttons for normal and reverse operation along with common point button. Point indications for normal & reverse and point lock/free are provided. Working of Electrical operation of Siding Points is as follows:

1. To operate Siding point Key 'Q' is required to be inserted in EKT-2.
2. Key 'Q' can be extracted from EKT-1 in Siding Point Locationonly when SM extends control from VDU. Extraction of Key 'Q' from the EKT-1 will block all signaling movement on Line No.1.
3. Key 'Q' when inserted in EKT-2, point free indication appears on the board. Point button and normal or reverse buttons are simultaneously pressed to set the point to normal or reverse as the case may be.

APPENDIX-'B'

4. After setting of point to reverse key 'Q' should be extracted from EKT-2 and kept in the custody of the shunting porter. Removal of key will lock the point.
5. After completion of the movement key 'Q' is to be inserted in EKT-2 & siding point 39A/B is to be operated to normal. After ensuring both end of 39A/B in normal setting, Key 'Q' is extracted from EKT-2 & inserted in EKT-1 to enable SM to release the control 39 Key 'Q' in EKT-1 resume signaling movement over 39A/B in normal position.
6. Crank handle control CH-8 is to be taken out for crank handling the point 39A/B in case of failure of electrical operation.
7. To extract the crank handle CH-8 from RKT provided in the Siding Crank Handle Location, SM on duty should extend the control No.39 same as for electrical operation of siding point.

b) <u>SUB STATION SIDING:</u>

Sub Station Siding takes off from Line No.3 and terminates at dead end with CSL of 55M (GJ to DE). Sub Station Siding is isolated from Line No.3 by Motor operated points.

(i) <u>Working of Sub Station Siding Point No.41A/B:</u>

Electrical operation of Sub Station Siding control point No.41 is carried out at site from the Siding Point Location. In Siding Point Location there are two EKT's namely EKT-1 & EKT-2, three buttons for normal and reverse operation along with common point button. Point indications for normal & reverse and point lock/free are provided. Working of Electrical operation of Siding Points is as follows:

1. To operate Siding point Key 'R' is required to be inserted in EKT-2.
2. Key 'R' can be extracted from EKT-1 in Siding Point Locationonly when SM extends control from VDU. Extraction of Key 'R' from the EKT-1 will block all signaling movement on Line No.3.
3. Key 'R' when inserted in EKT-2, point free indication appears on the board. Point button and normal or reverse buttons are simultaneously pressed to set the point to normal or reverse as the case may be.
4. After setting of point to reverse key 'R' should be extracted from EKT-2 and kept in the custody of the shunting porter. Removal of key will lock the point.
5. After completion of the movement key 'R' is to be inserted in EKT-2 & siding point 41A/B is to be operated to normal. After ensuring both end of 41A/B in normal setting, Key 'R' is extracted from EKT-2 & inserted in EKT-1 to enable SM to release the control 41. Key 'R' in EKT-1 resume signaling movement over 41A/B in normal position.
6. Crank handle control CH-9 is to be taken out for crank handling the point 41A/B in case of failure of electrical operation.
7. To extract the crank handle CH-9 from RKT provided in the Siding Crank Handle Location, SM on duty should extend the control No.41 same as for electrical operation of siding point.

c) <u>SLIP SIDINGPOINT No.31:</u>

1. Due to falling gradient of 1 in 60.52 immediate neighborhood of Station towards KVLS end Slip siding is provided to protect Block section.
2. Slip Siding point No.31 is normally set and locked towards siding and it is interlocked with TLBI between SMLG-KVLS section.

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3. The Slip Siding Point No.31 will be set to reverse only when the TLBI between SMLG-KVLS is in "Train Going To" or "Train Coming From" and DN Starter Signal or UP Home Signal of concerned Line is initiated.
4. Once the train movement on it is completed and the concerned Signal route is released, the Slip Siding Point No.31 is automatically operated to normal i.e towards siding.
5. In case of failure of automatic operation of point No.31 is set to normal after completion of signal movement, a buzzer with an indication on VDU will appear as follows.

6. The buzzer stops once SM on duty, acknowledges the 'ACK' button, but the Point failure indication shall continue to glow until the Slip Siding Point is set to normal and disappears when Slip Siding Point is set to normal.

d) <u>SLIP SIDINGPOINT No.32:</u>

1. Due to falling gradient of 1 in 100 immediate neighborhood of Station towards ARK end Slip siding is provided to protect Block section.
2. Slip Siding point No.32 is normally set and locked towards siding and it is interlocked with DLBI between SMLG-ARK section.
3. The Slip Siding Point No.32 will be set to reverse only when the DLBI between SMLG-ARK is in "Line Clear position" and UP Starter Signal of concerned Line is initiated.
4. Once the train movement on it is completed and the concerned Signal route is released, the Slip Siding Point No.32 is automatically operated to normal i.e towards siding.
5. In case of failure of automatic operation of point No.32 is set to normal after completion of signal movement, a buzzer with an indication on VDU will appear as follows.

6. The buzzer stops once SM on duty, acknowledges the 'ACK' button, but the Point failure indication shall continue to glow until the Slip Siding Point is set to normal and disappears when Slip Siding Point is set to normal.

17. <u>VERIFICATION OF LINE CLEARANCE BY STATION MASTER ON DUTY FOR RECEPTION OF TRAIN INTO STATION YARD</u>:

In the Station yard, a route on the running line comprises entrance, berthing and dispatch portion of the yard shall be kept clear of any obstruction for the

passages of any train or for any other movements. The clearance of the route including overlap must be ensured by the SM on duty personally through VDU indications and/or physical verification of track before any movement of trains are permitted on the concerned route subject to the other conditions such as locking of the point's etc.

18. OBSERVATION OF TRACK CIRCUIT AFTER STABLING OF TRAINS ON RUNNING LINES:

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

19. MAINTENANCE OF S & T INSTALLATION AND ADHERENCE TO MAINTENANCE SCHEDULES:

Regular maintenance of the S&T installations, adherence to schedules of maintenance testing of points, track circuits, associated interlocking apparatus cables and the interlocking functional tests is must for safe and satisfactory working of these installations at this station.

The tests, checks and replacements etc., shall confirm to the schedules of maintenance as indicated in the Signal Engineering Manual as also as per the current and extant instructions/circulars on the subject.

20. RECTIFICATION AND CHECK BEFORE RESUMING NORMAL WORKING:

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

21. PROCEDURE FOR CARRY OUT PLANNED MAINTENANCE WORK:

Whenever any normal maintenance or special works for major renewals etc., are involved, the Signal and Telecom department should pre-plan these works. Field staff and the Inspector of the section should give to the Station master in writing 'Advance Intimation' about this work in terms of G and SR.15.08.01.

22. EMERGENCIES:

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

affected interlocking equipment's according to extant instructions as contained in GR and SR.3.77.

23. <u>PROCEDURE TO BE FOLLOWED IN CASE OF FAILURE OF SIGNAL OR POINTS AND USE OF CRANK HANDLE:</u>

1. Whenever a Signal or a Point becomes defective any movements over the Points on the running lines should be made after clamping and padlocking both the facing and trailing Points by Station Master on duty personally for all trains at the Station.

2. In case of failure of Signal or a Point and in case the Point cannot be operated from the VDU, the Crank Handle which is interlocked with the system has to be extracted and the following procedure has to be observed.

3. One common emergency Crank Handle key is provided for certain group of Motor operated Points. This is mechanically riveted to the Key of RKT. This Key along with Crank Handle can be released from the RKT by pressing the RKT Push Button provided near the RKT. In case of failure of Point Motor, the SM on duty will take out the Crank Handle, set the Point manually by inserting Crank Handle in the Motor.

4. When the Crank Handle key is removed from RKT for operation of the defective Motor Operated Points, the responsibility for its safe custody rests with the SS/SM on duty till it is replaced back in RKT.

5. The failure of Motor Operated Points should be promptly reported to the concerned Signal Inspector/ESM for immediate rectification.

6. Whenever a Crank Handle key is required to be used by a Signal Official for maintenance/attending to failure, the Signal Official will give a disconnection memo to the Station Master on duty and after making necessary entries in the Crank Handle register, the Station Master on duty will obtain acknowledgement of the Signal Official in the Crank Handle Register and then handover to him the Crank Handle key for the Points concerned. All the Points will be treated as defective till the Crank Handle key is returned back to Station Master on duty.

7. Before parting with the Crank Handle either for attending failure or for Maintenance work by Signal Maintenance Officials, the Station Master on duty will ensure that the reception and departure Signals are put back to on position. The Points of all the lines should be treated as Non-interlocked and the Station Master on duty is responsible for introduction of Non-interlocked working and the trains will piloted IN and OUT duly clamping and Padlocking the Points, both in facing and trailing directions over which the train is to pass, as per GR 3.69 and 3.70 with relevant SR's. The Station Master on duty will be personally responsible for setting and locking of Points, for reception and dispatch of all trains.

8. The Crank Handle Register is to be maintained in the following pro-forma by the Station Master on duty wherein the particulars of usage of the Crank Handle must be recorded:

    a. Date:
    b. Point Number which failed or required to be tested:
    c. Time failure:
    d. Disconnection memo number received from S&T Staff:
    e. Signature of SM/Signal Official to whom the Emergency Crank Handle is handed over:

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f. Time Emergency Crank Handle is sent out:
g. Individual Point numbers, and Line number nominated for admission of dispatch for which Points are set, Clamped and Padlocked:
h. Train number to be admitted or dispatched:
i. Signature of the Station Master on duty to ensure correct setting, Clamping and Padlocking of the Points:
j. Date and Time fault rectified.
k. Time of Emergency Crank Handle received back by SM on duty:
l. Signature and Designation of the Signal Official who rectified the fault:

24. INTERLOCKING OF SIGNALS WITH BLOCK INSTRUMENTS:

24.1. INTERLOCKING WITH HOME SIGNALS:

TheDNHOME Signal is Electrically interlocked with the respective DLBI so that the handle of the DLBI Instrument cannot be turned from TRAIN ON LINE position to LINE CLOSED position of DOWN direction unless the respective Home Signals is put back to NORMAL position and the respective Block Section monitored by Axle Counter is clear of trains.

TheUPHOME Signal is Electrically interlocked with the respective TLBI so that the handle of the TLBI Instrument cannot be turned from TRAIN COMING FROM position to LINE CLOSED position of UP direction unless the respective Home Signals is put back to NORMAL position and the respective Block Section monitored by Axle Counter is clear of trains.

24.2. INTERLOCKING WITH ADVANCED STARTER SIGNALS:

The UP Advanced Starter Signals No.25 is electrically interlocked with respective DLBI of section SMLG-ARK so that this Signal cannot be taken OFF until the Handle of the concerned Block Instrument is in' LINE CLEAR' position.

The DN advanced starter signal No.26 is interlocked with TLBI of section SMLG-KVLS so that this Signal cannot be taken OFF until the Handle of the concerned Block Instrument is in 'TRAIN GOING TO' position.

24.3. SUSPENSION OF LAST STOP SIGNALS:

When the Double line block instrument for section SMLG-ARKis suspended with its handle in any position for whatever reason the concerned Last Stop Signals controlled by the DLBI must be treated as suspended and trains shall be Piloted Out.

When the Token less block instrument for section SMLG-KVLSis suspended with its handle in any position for whatever reason the concerned Last Stop Signals controlled by the TLBI must be treated as suspended and trains shall be Piloted Out.

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

1. High availability Digital Axle Counters (HASSDAC) are provided on Up and Down Block Sections between SMLG-ARKand for block section between SMLG-KVLS.

2. The occupation and clearance of the axle counter section are indicated on the VDU by 'RED' and 'GREEN' light.

3. If any Block proving Axle Counter [LVCD] 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.

4. No train shall be allowed on signal to leave a station in any particular direction unless:

   Block Section clear indication is available for the relevant Axle Counter section portion and Last Stop Signal is taken OFF. [Refer Para No: 6.1 of appendix 'B' for procedure of resetting of LVCD Axle counter].

26. POWER SUPPLY ARRANGEMENT FOR SIGNALLING INSTALLATIONS:

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

a) Normal supply from UP AT/ DN AT connected to OHE traction distribution [230V 50HZ].

b) Stand by supply: Andhra Pradesh State Electricity Board Supply.

Normal power supply [Single-phase 230V-50 HZ] to the signalling and interlocking installation at the station is drawn from the traction power sources through ATs. Whenever traction power supply fails the SM on duty shall operate the changeover switch provided in the SM's office connecting the power supply from the healthy sources to the installation in case the knob is not in Auto mode.

The SM on duty however maintain the record of power failures either of the traction supply or local supply and he must promptly report the failure of any one or both the power sources immediately through the section controller and to the concerned Elect. Staff and S&T maintenance staff.

i). An Auto change over switch is provided in the SM's office with the three power supplies viz., UP AT, DN AT and local for the changing the switch automatically to the available supply. The availability of the supply is indicated by luminous indicator above the circuit breaker for each supply.

ii). Normally the switch will be kept in Auto Mode. If the Switch kept towards UP AT/DN AT position, whenever power block is to be given on the line the on-duty SM on duty must ascertain that power is available on the other AT and change over the switch to the desired position.

NOTE: If power block is to be given on the UP line DN AT must be available and vice versa.

iii). In case of failure of one of the AT supply without any power block the on-duty SM has to check whether the circuit breaker has tripped [Three circuit breakers are provided in the changeover switch board, one for each supply and their normal position is down and when tripped it goes UP].

In case of failure of both AT supplies without any power block the local supply shall be utilized by operating the changeover switch. If the circuit breaker is tripping even after resetting, no attempt shall be made to hold it by any means and a message shall be given to concerned SSE [Elect.] and SSE/PSI [OHE] for prompt rectification.

iv). Whenever there is failure of power supply in one AT the SM on duty shall take prompt action to inform to all concerned for rectification.

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The on-duty SM himself during each shift shall check & test the availability of power supply on both ATs and make an entry in the station dairy duly initiating for rectification of failure if any.

v). For IPS system which provides supply to EI, a manual changeover switch is provided at SM's Office with the power supply viz., selected supply from CLS panel.

vi). Normally manual changeover switch is kept in selected supply from CLS panel position, if in case any emergency, changeover switch is changed to middle position by on duty SM to cut off the power supply to IPS.

vii). There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

27. <u>WORKING OF INTEGRATED POWER SUPPLY [IPS, INDICATIONS & ACTION TO BE TAKEN BY SM ON DUTY:</u>

Power supply to the signalling installation is fed through Integrated Power Supply System [IPS] installed in the S&T power supply room. For IPS system which provides supply to EI, a manual changeover switch is provided at SM's Office with the power supply viz., selected supply from CLS panel.Normally manual changeover switch is kept in selected supply from CLS panel position, if in case any emergency, changeover switch is changed to middle position by on duty SM to cut off the power supply to IPS.There is a remote monitoring ASM box provided at the station to monitor the health of IPS.

The IPS system is connected with battery as a backup power source for safe working during transition of power and in case no 230 AC supply is available due to any reason.

In the event of failures of all the sources of 230V 50HZ AC supply, the signalling system shall be fed by backup battery bank connected to IPS for a limited power of 8 to 10 hours. The health of the battery bank is monitored through one IPS Monitoring Panel provided in the SM's room which shall display the voltage of 110V DC battery bank provided as backup source of power supply. Depending up on the health of the battery bank and the system the following indications/alarm will appear on the remote monitoring panel. The indications/alarm, their implications and action to be taken by SM on duty is tabulated below:

SN	Instruction	Health of Battery Bank/ Equipment.	Visual Indication	Audio Indication	Action to be taken by SM on duty
A	-	50% DOD	Red	Alarm	Alarm shall be acknowledged by SM on duty.
B	-	60% DOD	Red	Alarm	-do-
C	System shutdown	70% DOD	Red	Alarm	Signal feed cut off and all DC-DC converters to Work. Audio alarm will continue till power Supply is restored.
D	Call S&T staff.	Equipment fault.	Red	Alarm	Failure of any module will give the alarm in

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SN	Instruction	Health of Battery Bank/ Equipment.	Visual Indication	Audio Indication	Action to be taken by SM on duty
					ASM's panel. Alarm shall be acknowledged by SM on duty for audio cut off.

On duty SM in each shift shall check and record the readings, indications, etc. in the station dairy duly initiating rectification of failures of IPS System, if any. In the event of failure of Remote monitoring ASM console due to any reason when both traction power and local power failed the SM on duty shall inform concerned Electrical staff immediately. In case 'call S&T staff 'or 'system shut down 'indication appear on the remote monitoring panel of IPS and/ or mal functioning of the remote monitoring panel SM on duty shall inform the same to concerned S&T staff immediately.

NOTE: [i] DOD indicates depth of discharge of battery bank of IPS [ii] In case of failure of all AC supply sources, IPS battery bank can provide power supply maximum up to 3 to 4 hours before system shut down indication of APS.

28. WORKING OF AUTOMATIC FIRE ALARM DETECTION SYSTEM:

- In case of any alarm in any particular area due to fire or dust-Zone number on the LCD display can be seen.
- Note down the zone No. and panel display name, by referring display chart.
- Once you find the zone number rush to that particular area where the detector gives alarm.
- The moment the smoke detector deteARK any smoke particles, the RED LED will blink along with the alarm.
- Once you reach the area where the detector is giving the alarm, check whether the alarm is due to the fire or for any other reason.
- To alert the people in case of emergency press "*" sign of the fire which is present inside the key pad together for few seconds. This will enable you to hear the panel alarm.
- To reset the panel press "OFF" button and enter the code 1111 (1 digit four times).
- The control panel will get reset and siren muted.
- If the power fails on this will enable us to see the red indicator on the panel.
- In case of failure in power and if the battery is fully charged, the panel can function effectively as long as the charge in the battery is present.

AUTO DIALLING:

If you hear alarm from the panel, this system will dial the telephone/mobile number you fed. The prerecorded messages will be heard on the phone. If you want to make two-way communications, press "6" on your mobile. You can have this communication for 50 seconds. If you want to talk more, press again "6" before completion of 50 seconds for another 50 seconds or you can acknowledge the receipt of call by pressing "2" on SSE/Signal mobile, in case

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number "2" is not pressed the system will dial again the same telephone number as per the programmed dial attempt and still if acknowledgement not come from 1st number then panel will dial 2nd number till the time acknowledgement comes it will keep on dialing.

APPENDIX-'C'

APPENDIX 'C' TO STATION WORKING RULES OF SHIMILIGUDASTATION

ANTI COLLISION DEVICE [[RAKSHA KAVACH]:

-NIL-

APPENDIX-'D'

APPENDIX 'D' TO STATION WORKING RULES OF SHIMILIGUDA STATION

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

1. STATION SUPERINTENDENT/STATION MASTER (IN CHARGE):

i) He is responsible for trains passing during his shift.

ii) He is responsible for the general and satisfactory working of the station and for the efficient discharge of duties by staff working under him.

iii) He shall keep all Rule books, Registers, Files and documents neat and up to date.

iv) He shall ensure that all equipment, apparatus, and instruments including signaling and interlocking gears and fittings are kept clean and oiled by S&T officials.

v) His special attention is drawn to Chapter-II of G&SR and GR 5.01 to 5.08 with relevant SRs and O.M. Chapter-2.

vi) He shall follow the instructions laid down in SR.3.68.01 (c) and (d) and SR 14.07.01 and B.W.M.2.09 (e).

vii) He shall promptly attend to accidents and report them.

viii) He shall supervise the work of safe working staff and conduct night inspections and report lapses of staff working under him.

ix) He shall ensure that fire fighting equipment at stations such as fire extinguisher, fire buckets etc., are in good condition and ready for use.

x) He shall see that TSR, SM's Diary, inspection books and other station records is properly maintained and properly preserved as desired in operating manual.

xi) He shall ensure that correction slip of manuals and SWR are posted and changes and made in respective pages.

xii) He shall ensure that the essential safety equipment at his station in good condition and if there is any deficiencies if should be made good without any delay.

2. STATION MASTER:

a) He is responsible for trains passing during his shift.

b) He shall promptly bring to the notice of SM in-charge all irregularities and accidents in course of his shift duties.

c) During the absence of SM I/C, the duties of the Station Master will devolve on him.

d) He shall follow SR 3.68.01(c) and (d) SR 14.07.l and OM Chapter-2.

e) His special attention is drawn to Chapter-2 of G&SR 1976 and GR 5.01 to 5.08 with relevant SRs.

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f) As an assistant to SM I/C, he shall carry out the instructions given from time to time.

g) He shall keep the keys of block instruments/Control panel in his personal custody when he is required to leave his office even for a short duration.

h) He shall not consider himself relieved of duty unless he has complete transaction of trains for which he has given/obtained line clear till the complete arrival of such trains.

3. TRAFFIC POINTSMAN:

i) He shall work under the orders SM on duty.

ii) He shall couple and uncouple vehicles under the supervision of SM.

iii) He shall watch and guard the packages and other Railway property lying in the Station premises.

iv) He shall report any irregularities coming to his notice.

v) He shall do loading and unloading of parcels, smalls and Guard's boxes. He shall do piloting IN and OUT.

vi) He shall deliver any official message to the proper person/office. He shall carry out any other duties entrusted to him by the SM on duty.

vii) He shall follow OM Chapter-2.

viii) He shall be in proper and clean uniform while on duty.

ix) He shall not leave his duty unless properly relieved or authorized by his superiors.

4. TRAFFIC GATEMAN:

a) He is responsible for proper operation of the gate as per SWR for the passage of train.

b) He should be in proper neat and clean uniform and follow the duty rosters.

c) He shall promptly report any abnormality to SM on duty.

d) He shall remain alert on duty till properly relieved, whenever he is required to leave the gate in emergency, he shall close and lock the gate boom against the road traffic before leaving.

e) He shall ensure that the equipment at L-Xing are complete and in working orders.

f) He shall produce the public complaint book when required, by public for lodging complaints and to the railway officials for inspection.

g) He shall ensure that the road traffic is not unnecessarily help up at the gate.

h) He shall follow OM Chapter-2(9).

i) He shall keep the surrounding of his gate lodge clean and tidy.

j) He shall protect the gate when required as given in gate working rule.

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APPENDIX-'E'

APPENDIX 'E' TO STATION WORKING RULES OF SHIMILIGUDA STATION:

ESSENTIAL EQUIPMENT:

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

Sl. No	Description	Quantity
(i)	Detonators	20
(ii)	LED based Tri Colour flashing torch.	3(1 Spare)
(iii)	Hand Signal Flags	3(1 Spare)
(iv)	Safety chains with Pad locks	6
(v)	Clamps with Padlocks	8
(vi)	Skids	6
(vii)	Wedges	4
(viii)	Fire & Sand buckets	6
(ix)	Fire Extinguishers	2
(x)	Engineering block boards	2
(xi)	Motor trolley on line board	2
(xii)	Block suspension board	2
(xiii)	Power block boards	2
(xiv)	First-Aid Box	1
(xv)	Blanket	1

APPENDIX-'F'

APPENDIX 'F' TO STATION WORKING RULES OF SHIMILIGUDA

--NIL--

APPENDIX-'G'

APPENDIX- 'G'

SHIMILIGUDA STATION

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS:

DETAILS OF WORKING RULES OF 25KV AC TRACTION.