

NORTH CENTRAL RAILWAY JHANSI DIVISION

Station Working Rule No. 405

Date of issue :

Date into force:

SITHOULI STATION (B.G.)

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

1. STATION WORKING RULE DIAGRAM:

The track accommodation is as shown in the station working rule diagram No. S.I.P-A-2011/P dated 04.02.2015 based on IP No. S.I.P-A-2011/P dated 23.01.2015.

2. DESCRIPTION OF STATION:

2.1 GENERAL (LOCATION):

SITHOULI Station is located on double line electrified Jhansi-Delhi Section at Kms. 1216.270 from CSTM. It is a “B” class station interlocked to STD-III with panel operation of points and signals. There is 2 lever GF (11), and 2 Lever GF (12) for working Ballast Siding No. 2.

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

- | | | | |
|----|---|------------|---------------------------|
| a. | SANDALPUR Station | 07.47 Kms. | Jhansi end via down Line. |
| b. | SANDALPUR Station | 10.61 Kms. | Jhansi end via UP Line. |
| c. | GWALIOR Station | 08.56 Kms | Delhi end. |
| d. | IBS: By providing Axel counter and Double line SGE Block instrument | | |
| | UP IBS – at KMs 1211.157 “B” | (STLI-SLV) | |
| | DN IBS – at KMs 1220/22-24 | (STLI-GWL) | |

NOTE:-There is no ‘D’ Class station on either side of this station.

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2.3 BLOCK SECTION LIMITS ON EITHER SIDE OF STATIONS ON DIFFERENT ROUTES DIRECTIONS:-

Between Stations	The point from which the 'Block Section' Commences	The point at which the 'Block Section' ends
STLI-SLV	i) a. SLV DN Advanced Starter S-7 (In Advanced Position) b. SLV DN IBS No S-5+400 Mts ii) a. STLI UP Advanced S-22 b. STLI UP IBS No S.21+400 Mts	i) a. SLV DN IBS No.S-5+400 Mts b. STLI Outer most facing point No.101 on DN Main line. ii) a. STLI UP IBS No S.21+400 Mts b. SLV Block section limits board on the UP Main line.
STLI-GWL	i) a. STLI DN Advanced Starter S-16 b. STLI DN IBS No S-18+400 Mts ii) a. GWL UP Advanced starter Signal No.S-5 CUM UP Distant of L-Xing 418. b. GWL UP IBS signal CUM UP Distant of STLI No S-10+400 Mts	i) a. STLI DN IBS No.S- 18+400 Mts b. GWL Outer most facing point No. 101 on DN Main line. ii) a. GWL UP IBS signal CUM UP Distant of STLI No S-10+400 Mts b. STLI Block Section Limit Board on UP Main Line

2.4 GRADIENTS IF ANY:-

From End Direction	SLV DN	KM.	Gradient
		From DN inner distant to CH 656.96	1 in 200 Falling
		From CH 656.96 to CH 97.00	1 in 425.2 Falling
		From to CH 97.00 to km 1217.25	Level
		km 1217.25 to Further	1 in 823 Falling
		From Km 1217.88 to CH 97.00	level
		From CH 97.00 to CH 656.96	1 in 425.2 Rising
		From CH 656.96 to Beyond Gate sig 412	1 in 200 Rising
		From Beyond Gate sig 412 to Km 1211.200 C	1 in 263 Rising
		From Km 1211.200 C to Km 1211.485 B	1 in 200 Rising
		From Km 1211.485 B to Further	1 in 486 Rising

2.5 **LAY OUT:** The layout of the yard is as per SWR diagram attached.

2.5.1 RUNNING LINES, DIRECTION OF MOVEMENT AND HOLDING CAPACITY IN CSR.

RUNNING LINES	C.S.R.(In mtrs)	PLATFORMS
i. Down Main line.	688.20	--
ii. Down Loop line.	688.20	Rail level P/F
iii. UP Main line.	679.90	--
iv. UP Loop line.	679.00	Rail level P/F

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2.5.2 NON RUNNING LINES AND THEIR CAPACITY	C.S.R.	PLATFORMS
RUNNING LINES	C.S.R.(In mtrs)	PLATFORMS
i. Up ballast siding no.-1	20 Mtrs	--
ii. Down ballast siding no.-2	77 Mtrs	--.

2.5.3 ANY ABNORMAL SPECIAL FEATURE IN THE LAYOUT: Nil

2.6 LEVEL CROSSINGS:

Gate No. Section	412 (STLI-SLV)	415 JHS END
Location	DN 1212 / 26-28 UP 1212 / 39-41	1215/18-20
Class	"C' Engg	"C'TFC
Normal Position	Open	Open
INT/NI	INT	INT
Leaves/Lifting Barrier	P.O.L.B. with sliding Boom	P.O.L.B. with sliding Boom
Communication	Telephone With SM's Office	Telephone With SM's Office
Operated by	Engg. Gateman	TFC Gateman

NOTE: - For detailed working see Appendix- 'A'.

3. SYSTEM AND MEANS OF WORKING:

Trains are worked on 'Absolute Block System'.

Means of Working

- (i) Non co-operative type SGE three position double line lock and block instrument with Block proving digital Axle counter is installed in SM's office STLI for working trains between STLI UP IBS Signal S-21 and SLV UP Home signal and overlap and SLV DN IBS S-5 and STLI DN Home signal S-2 and overlap on DN line without dual detection.
- (ii) Non co-operative type SGE three position double line lock and block instrument with Block proving digital Axle counter is installed in SM's office STLI for working trains between STLI DN IBS signal S-18 and GWL DN Home signal S-2 and overlap, on DN line and between GWL UP IBS S-10 and STLI UP home signal S-38 and overlap, on UP line.

NOTE: - SM/ASM on duty is responsible for working of trains on Block instruments with Block Proving by axle counter and other safety devices for safe custody of their keys.

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3.1 AXLE COUNTER ARE INSTALLED BLOCK SECTION:

The limits of the Axle counter section are:-

- (i) Axle counter is provided for working trains between UP Advanced starter CUM UP DIST of L-Xing 418 GWL No. S-5 and a point 400 meters beyond GWL UP IBS CUM UP DIST of STLI No. S-10 on UP line.
- (ii) Block Proving by Axle counter is provided between GWL UP IBS CUM UP DIST of STLI No. S-10 and BSLB of STLI on UP line.
- (iii) Axle counter is provided for working trains between DN Advanced starter STLI S-16 and a point 400 meters beyond DN IBS CUM GATE (418) STLI S-18 on DN line.
- (iv) Block Proving by Axle counter is provided between DN IBS CUM GATE (418) STLI S-18 and outermost facing point number 101 GWL on DN line.
- (v) Axle counter is provided for working trains between UP Advanced starter STLI S-22 and a point 400 meters beyond UP IBS S-21 STLI on UP line.
- (vi) Block Proving by Axle counter is provided between UP IBS S-21 STLI and BSLB of SLV on UP line with dual detection.
- (vii) Axle counter is provided for working trains between DN Advanced starter SLV S-7 and a point 400 meters beyond DN IBS SLV S-5 on DN line.
- (viii) Block Proving by Axle counter is provided between DN IBS SLV S-5 and outermost facing point number 101 STLI on DN line.

NOTE:-

- i) The portion between DN Advanced starter signal S-16 STLI and a point of 400 meters beyond DN IBS signal S-18 STLI is provided with Axle counter and is under the control of SM/ASM STLI.
- ii) The portion between UP Advanced starter signal S-22 STLI and a point of 400 meters beyond UP IBS signal S-21 STLI is provided with Axle counter and is under the control of SM/ASM STLI.
- iii) The portion between DN starter signal (Advanced position) S-7 SLV and a point of 400 meters beyond DN IBS signal S-5 SLV is provided with Axle counter and is under the control of SM/ASM SLV.
- iv) The portion between UP Advanced starter signal CUM UP DIST of L-Xing 418 GWL S-5 and a point of 400 meters beyond UP IBS CUM UP DIST of STLI S-10 GWL is provided with Axle counter and is under the control of SM/ASM GWL.
- v) Portions controlled by the Axle Counters between Advanced starter signal to IBS signal are under the control of SM of the Station in rear while the portions between IBS signal to the reception signal of station in advance shall be under the control of the station in advance, but both the sections will be under the joint control of stations on either side of IBS signal when these Axle counter equipments or Block Instruments with Block Proving by Axle counter or their electrical connection fail.

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NOTE: SM on duty is responsible for working of trains on block Instruments and other safety devices for safe custody of their keys.

b) STATION SECTION:-

- i. Axle counter track circuit number 210AXT covers Zone of point 2GF (12) & 2GF (11) both ends and between 210T and 219T track portion on Down loop line.
- ii. Axle counter is provided between Track Circuit 223T to 225T.
- iii. Axle counter track circuit number 249 AXT covers Zone of point number 102 both ends and 103 DLI end and between 252 T and 237 T track portion on Up loop line.
- iv. In parallel to track circuit no 224 T, Axle counter 224 AXT provided for dual detection on DN main line and in parallel to track circuit no 232 T Axle counter 232 AXT provided for dual detection on UP main line towards GWL end.

Note:

- i. For detailed working and resetting of Axle counter in case failure is given in Appendix B’.
- ii. SM/ASM on duty is responsible for operation and keeping their keys in his personal custody.

4. SYSTEM OF SIGNALLING AND INTERLOCKING:

4.1 -A)

- (a) SITHOULI Station is Equipped with Manually Operated Multiple aspect Colour Light Signalling.
- (b) It is a ‘B’ Class Station Interlocked to Standard-III.
- (c) Crossover point No.101 and 113 are the emergency crossover.
- (d) Track circuit have been provided at this station as per diagram attached.
- (e) Point indicators stop boards are provided as per SWRD diagram attached.
- (f) Panel interlocking is provided at this station. Panel is provided in SM’s Office.
- (g) Calling ‘ON’ Signals are provided below DN Home signal No.S-2 and UP Home Signal No.S-38.
- (h) Axle Counter is provided on Down Loop Line between end of 210 T, 219 T, point zone portion 2GF (11) & 2GF (12).
- (i) Shunt Signals have also been provided for controlling the Shunting movement in the Yard.
- (j) Crank Handle has been provided in the SM’s office for manual operation of motor points. The Crank Handle shall be kept in the case specially provided for this purpose. The key of the case shall be in personal custody of the SM on duty and the case shall be kept locked. The details of operation are given in Appendix-’B’.

NOTE: - Detailed Working of signals and interlocking is given in Appendix ‘B’

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4.1-B) THE FOLLOWING TRAPS ARE PROVIDED:-

- a) The Sand Hump siding taking off from the Up Loop Line at JHS end is the trap for the protection of the Up Main line.
- b) Derailing Switch No. 112 on Up loop line at DLI end is the trap for the protection of the Up Main line.
- c) Derailing Switch No. 102 in ballast siding no.-1 is the trap for the protection of the Up Loop line.
- d) Derailing Switch No.2 GF (11) in ballast siding no.-2 is the trap for the protection of down loop line.
- e) Derailing Switch No. 2 GF (12) in ballast siding no.-2 is the trap for the protection of down loop line.
- f) The Sand Hump siding taking off from the DN Loop Line at DLI end is the traps for the protection of the Down Main line.
- g) Derailing Switch No. 104 on down loop line at JHS end is the trap for the protection of the down main line.

NOTE:

- a) Sand hump at JHS end and DLI end are not to be used for loading and unloading and stabling of wagons.
- b) Ballast siding no.-1 & 2 may be used for loading, unloading and stabling vehicles inside the derailing switches only.

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

The Relay Room is provided with double lock. The key of one lock will remain in the custody of SM/ASM on duty while the key of other lock will remain in the custody of ESM. The SM/ASM on duty will handover the key to the maintainer on demand whenever he visits for maintenance. ASM on duty will ensure that the key is returned to him after maintenance.

A register to record the transaction of Key on proper perform will be maintained by the ASM/SM on duty as given in Appendix "B"

4.3 POWER SUPPLY:

- 1) Power supply for signaling system of this station is provided through auxiliary transformers connected to UP & DN Main Line OHE supply. The availability of power for each AT is indicated on the change over panel by illumination, which indicates the availability of power for the particular AT supply.

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Normally One AT is connected to signaling load which is indicated by an illuminated indication on the Auto Changeover panel whenever this AT supply fails signaling load will be switched over to 2nd AT automatically which is indicated by an illuminated indication on the Auto Changeover panel.

PROCEDURE TO BE ADOPTED IN CASE OF FAILURE OF NORMAL POWER SUPPLY BY THE SM/ASM ON DUTY:

The arrangements in the automatic Change over Panel provided in the ASM/SM room at this station. In case Supply is not available and automatic change over not taken place One switch provided on Auto change over in panel to change manually by turning the Switch on S1 or S2 position the SM/ ASM should turn Switch, whichever Supply is available.

The indications of UP & DN AT supply are provided in the panel and SM/ASM on duty shall take action to inform OHE staff in case any of the indication is not there. In the event of failure of UP & DN AT supplies a bell provided in panel will ring continuously which pressing button provided near AT supply indication on the panel can silence.

The SM/ASM on duty will advise TPC and concerned OHE staff and concerned SSE/SE/JE-SIG whenever catenary supply fails.

A Register will be maintained by SM/ASM on duty indicating the time of failure of catenary supply, the time OHE authorities informed on TPC or otherwise, the time ESM/SE/JE was advised, the time OHE staff/attended and restored the normal supply.

When the normal catenary supply & stand by Supply does not appears, the ASM/SM on duty shall check up the signal indications and or the signal aspects from the station. In case, there is no signal indication at the Station and no light on the signals. The SM/ASM on duty will treat the signals as defective arrange to receive and/or dispatch the trains in accordance with GR: 3.68, 3.69, 3.70, 3.71, 3.75 and SRs there under of G & SR.

2) POWER SUPPLY SYSTEM AT IBH:

Power supply for signaling system of STLI UP/DN IBH is provided through auxiliary transformers connected to UP & DN Main Line OHE supply.

Normally, one AT is connected to signaling load which is indicated by an illuminated indication on the Auto Changeover at IBH, whenever this AT supply fails signaling load will be switched over to 2nd AT automatically which is indicated by an illuminated indication on the Auto Changeover panel. The arrangements will be in the automatic Change over Panel provided in the IBH. The availability of any one of AT supply at IBH is indicated by a 'Yellow' LED indication provided at STLI station.

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In case of both AT supply failure 'Yellow' LED is not lit at STLI station, the SM/ASM on duty must immediately take action and will advise TPC and concerned OHE staff and concerned SSE/SE/JE-SIG. In case, there is no signal indication at the IBH and no light on the signals. The SM/ASM on duty will treat the signal as defective and arrange to receive and /or dispatch the trains in accordance with GR: 3.68, 3.69, 3.70, 3.71, 3.75, and SR's there under .G & SR.

5. TELECOMMUNICATION:

The following telephones and telecommunication facilities have been provided at this station:

S.N.	Type of Communications	Location
1	Block phone in S'Ms office	Separate Block telephone attached with SGE block instruments with Block proving Axle Counters are provided for working trains between STLI-SLV & STLI-GWL section.
	Control Telephone of JHS-DHO control	In SM's Office
	TPC phone	In SM's Office
	Test phone	In SM's Office
2.	Auto/DOT Telephones	
	Railway administrative Phone no. 44693	In SM's office
	BSNL phone 0751-2433276.	In SM's office
3.	Magneto Telephone/Group Telephone with the cabin/gates	-
	L.C. – 412 (STLI-SLV)	Between SM's Office and gateman
	L.C.- 415 & Location box of GF-11 & GF-12/ Axle counter verification location BOX. (Station section)	Between SM's Office and gateman and GF's
4.	Telephone with IBS	
	Signal post Talk back Communication DN IBS (STLI-GWL).at Km 1220/22-24	In SM's office
	Signal post Talk back Communication UP IBS (STLI-SLV). at Km 1211.157'B'	In SM's office .
5.	Telephone with Axle Counter reset boxes	--
6.	Telephone for yard communication	--
7.	VHF Communication 25 W VHF base station	Between SM's Office and Loco Pilot & Guards of running train and in emergency with adjacent stations
8.	Mobile Train Radio Communication (MTRC)	Provided

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6. TRAIN WORKING:

6.1 DUTIES OF TRAIN WORKING STAFF:

See Appendix 'D' for the duties of the staff.

6.1.1 TRAIN WORKING STAFF IN EACH SHIFT:

- | | | | |
|------|------------|---|---------------|
| i) | SM/ASM. | 1 | as per roster |
| ii) | Points man | 2 | ----- do ---- |
| iii) | Gateman | 1 | ----- do ---- |

NOTE: - For Duties and Responsibilities see Appendix 'D'.

6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINE AND ZONES OF RESPONSIBILITY: [SR 1.02(52)/1]

- a) 'Line Admission Book' is not in force at this station.
- b) SM/ASM on duty is responsible for ascertaining clearance of all lines through panel indication when working otherwise physically.

6.1.3 ASSURANCE OF STAFF IN THE ASSURANCE REGISTER :

Every train passing staff posted newly at the station or leave reserve staff at the station or regular staff who has resumed his duties after more than 15 days absence must go through Station Working Rules in force and give assurance in the prescribed Assurance Register i.e. 'SWR Acknowledgement Register'.

6.2 CONDITIONS FOR GRANTING LINE CLEAR: [GR 8.03]

Line shall not be considered clear and line clear shall not be given unless:-

- a) The whole of the last preceding train has arrived complete.
- b) All necessary signals have been put back to 'ON' behind the said train and.
- c) The line is clear
 - i) For Down train up to outer most facing Point No.101 on down line as per G.R 8.03 (1) of G & SR.
 - ii) For an Up train up to Block Section Limit Board on the Up line as per G.R 8.03 (1) of G & SR.

NOTE:

- (1) Before granting 'Line clear' SM on duty must ensure that the reception signals are lit. If reception signals are not lit, he should advise SM in rear under exchange of private number to issue caution order to the driver after stopping the train.
- (2) Before granting 'Line clear' SM on duty shall satisfy by himself seeing the Block section clear indication GREEN LED (Large) INDICATION appears at Reset box of Digital Axle Counter in both direction provided in panel Room.
(i.e. SGE BLOCK Instrument with BPAC Reset Box/Indication each)
- (3) Before granting line clear to any UP or DN train SM on duty must ensure that all level crossing gate are closed for road traffic.

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

BERTHING OF TRAINS:

- (i) A down train carrying passengers and stopping at the station must ordinarily be received on the Down Loop Line and Up train carrying passengers and stopping at the station on the Up loop line.
- (ii) A down or an up train carrying passengers and stopping at the station, precedes another down or Up train carrying passengers and stopping at the station, the first such Down or Up train must be received on the Loop line and the following train on the Main Line.
- (iii) A down or an Up Goods train stopping at the station should ordinarily, be received on the Down loop line or the Up Loop line respectively, unless these lines are occupied or are required for the admission of a train carrying passengers, in which case a Down Goods train should be received on DN Main line and a Up Goods train on Up Main line respectively.

6.2.1.1 Setting of points against block line:

When running line is blocked the points should be set for a vacant line/less important load line/loop line etc Besides the points of the blocked line must be set clamped and pad locked against the line and keys kept with the SM/ASM as per SR: 5.23-1 of G&SR. The button collars must be placed on the buttons on the panel as when the line is blocked.

6.2.1.2 Reception of train on blocked line: GR 5.09 of G & SR must be followed.

6.2.1.3 Reception of train on non- signaled line:

Not applicable since signals are provided for all lines and in abnormal condition GR 5.10 of G&SR must be followed. The responsibility of personal ensuring the correct setting, clamping and padlocking of points will be of the SM on duty.

6.2.1.4 Despatch of Train from non-sigaled line:

Not applicable since all lines are provided with the departure signal for UP & DN direction. However in emergency GR 5.11 of G & SR must be followed.

6.2.1.5 Despatch of train from line provided with common starter signal: Not applicable.

6.2.1.6 Any other special condition should be mentioned giving reference to the G & SR:
Nil

Note: SM on duty shall personally verify the clearance (fouling protection) of DN loop line after movement into/from ballast siding no-2. The responsibility of personally ensuring the correct setting clamping and pad Locking of the points will be of the SM on duty.

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6.3(A) CONDITIONS FOR TAKING 'OFF' APPROACH SIGNAL: - (GR 3.40)

Before the home signal is authorized to be taken 'OFF' by the station Master on duty for the reception of a train, the following conditions must be complied with:-

i. UP TRAIN TO BE RECEIVED ON THE UP MAIN LINE :-

The line must be clear upto L/Xing Gate no.415 (Gate no. 415 need not to be closed against Rd Tfc) as per para no. 10.05 (i) of BWM.

ii. UP TRAIN TO BE RECEIVED ON THE UP LOOP LINE :-

When a train is to be received on UP loop line, to give precedence to another train or to dispatch other train from the main line in the same direction or to be stabled the points at the far end of the loop line should be set connect the sand hump. Except the above conditions, far end points should be set to connect with the main line and the line must clear up to the level crossing gate no 415.

iii. DOWN TRAINS TO BE RECEIVED ON THE DOWN MAIN LINE :-

The line must be clear upto the DN advance starter signal.

iv. DOWN TRAINS TO BE RECEIVED ON THE DOWN LOOP LINE :-

When a train is to be received on DN loop line, to give precedence to another train or to dispatch other train from the main line in the same direction the points at the far end of the loop line should be set connect the sand hump. Except the above conditions, far end points should be set to connect with the main line and the line must clear up to the DN advance starter signal.

Note:- While receiving any train on DN loop line ground frame Nos. 2 GF (11)& 2 GF(12) to be kept normal in locked condition.

6.3 (B) RECEPTIONS OF TRAINS:-

- i) On receipt of 'Is Line Clear' signal for a train to approach from the station in rear the SM/ASM on duty, will grant the same supported by a private Number provided the conditions as laid down in 6.2 above are complied with.
- ii) The SM will then select a vacant line for the admission of the train and set and locked the points of the selected line in accordance with para No.6.3(A)(i) to (iv) above as the case may be, After the route has been set and locked correctly, the SM/ASM will take 'Off' the correct Home signals for the reception of the train on the selected line and verify the indications on the panel.
- iii) Immediately after the train has passed the distant and Home Signals completely, the SM on duty will ensure that the signals taken 'OFF' for the train are restored to 'ON' position as per para 8.03 of BWM.

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO 'ON': As per Para 8.03 of BWM, SM on duty will ensure that signal/signals taken off for reception/dispatch of a train must be put back to ON position after passing of train from the respective signal/signals.

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

The station is situated on double line section where receptions of trains from either direction are permitted on each line separately. However an UP or DN train can be received in UP or DN loop line by setting point to sand hump and simultaneously an UP or DN train can be dispatched from UP or DN main line in same direction.

6.5 COMPLETE ARRIVAL OF TRAINS: (SR: 4.56-1 and GR 14.10)

The SM/ASM is responsible for giving 'Train out of Section' signal by seeing clear indication on block proving by axle counter panel when however if complete arrival of train cannot be ascertained by personal observation/clear indication on the block proving by digital axle counter, the SM/ASM on duty must ascertain the complete arrival of the train in the manner indicated in SR 4.56-1 of G&SR.

NOTE:-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 arrival of a train at the station etc the points should be immediately set against the blocked time except when shunting or any other movement is required to be done immediately in that direction on that line (GR 3.38(2) of G&SR.

6.6(A) DESPATCH OF DOWN TRAIN:

The section between STLI & GWL (DN Line) is divided into two parts as under:

- i) Between DN Advanced Starter signal No. S-16 STLI & a point 400 mtrs. Beyond DN IBS signal cum G-418 Inner distant S-18 STLI. This section is controlled by the Axle Counters.
- ii) Between DN IBS signal cum G 418 Inner distant S-18 STLI to DN Home signal of GWL including its overlap, this section is controlled by SGE three position Double line lock and block instrument with Block proving by Axle counter, equipment provided at STLI Station and GWL Station for working trains between DN IBS signal cum G 418 Inner distant S-18 STLI & DN Home signal including its overlap, of GWL Station.
- iii) If the section between DN Advanced starter signal S-16 STLI up to a point 400 mtrs. Beyond DN IBS signal cum G 418 Inner distant S-18 STLI and the Block section between DN IBS signal cum G 418 Inn. Dist. S-18 STLI and up to DN Home signal S-2 including its overlap of GWL station are clear of trains, the SM on duty STLI will obtain Line Clear from GWL.
- iv) The SM on duty STLI will then set & lock the route to take 'OFF' the DN IBS signal cum G 418 Inner distant S-18 STLI and DN Advanced starter signal S-16, he will then take 'OFF' the concerned Starter signal for the train to start. The starter signal shall assume the 'OFF' aspect only with the assumption of 'OFF' aspect by DN Advanced starter signal.
- v) If the block section between DN IBS signal cum G 418 Inn. Dist. S-18 STLI and DN Home signal S-2 and its overlap of GWL is occupied by a train but the section between DN Advanced starter signal S-16 STLI and a point 400 mtrs.

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Beyond the DN IBS signal cum G 418 Inner distant S-18 STLI is clear, the Station Master on duty, after ensuring that Axle Counter section between DN Advanced starter signal and a point 400 meters beyond DN IBS signal cum G 418 Inner distant S-18 STLI is clear, by seeing visual indication; he will then take 'OFF' the DN Advanced starter signal and then the concerned starter signal to proceed the train up to DN IBS signal cum G 418 Inner distant S-18 STLI.

- vi) As soon as the "Train Out of Section" signal is received for the previous train Which was in the block section between DN IBS cum G 418 Inn. Dist. S-18 STLI and GWL station, the SM on duty STLI will obtain 'Line clear' from GWL for the following train. Which had been dispatched in the manner indicated above (to proceed up to DN IBS cum G 418 Inner distant S-18 STLI, after satisfying by himself seeing the Block section CLEAR indication (GREEN LED (Large) INDICATION) which appears at Reset box of Digital Axle counter in the concerned direction provided near/panel the SGE Block Instrument i.e. Axle Counter section T-3 (STLI-GWL).
- vii) The SM on duty will then take OFF the DN IB signal cum G 418 Inn. Dist. S-18 STLI for the following train to proceed further to GWL.

NOTE:

- a) Before taking 'OFF' departure signal for a train to leave, the SM on duty shall ensure that the level crossing gates between STLI & GWL are closed and locked against the road traffic.
- b) As soon as train passes the DN Advanced starter signal S-16 STLI it shall automatically be replaced to ON position and the track clear indication for the track controlled by the Axle counter shall change into track occupied indication and shall display the same till train has cleared not only DN IB signal but 400 mtrs. beyond it.
- c) As soon as the DN train occupies the DN T2 Axle Counter located beyond DN IBS, a continuous buzzer provided by the side of Block Instrument sounds, STLI-GWL track circuit Shows 'occupied' and DN IBS is replaced to 'ON' position and the indication repeated on the panel in SM's office.
The concerned Axle counter section T-3 (STLI-GWL) "CLEAR" Green LED (large) indication is replaced by "Occupied" Red LED (large) indication which glows in concerned direction Axle Counter Reset Box and also SM on duty will give train entering signal (i.e. departure bell code) to GWL on the SGE double line lock and block instrument till the same is acknowledge and upper needle of the Block instrument STLI DN T2 Axle counter, the Axle counter clear indication appear on the control panel in SM's office.
- d) If after dispatch of a train, the Axle counter section between DN Advanced starter signal STLI and DN IB signal cum G 418 Inner distant S-18 STLI or the section between DN IB signal cum G 418 Inner distant S-18 STLI and the DN Home signal of GWL, occupied indication continues to be lit and Axle counter clear indication does not appear on the indication panel provided in the SM's Office.
- e) The SM STLI will give a message to the station in advance enquiring whether the said train has arrived the station completely or not.

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- f) The SM on duty at GWL will acknowledge the same (as per instructions given in paragraph 6.5) and after satisfying himself that the last preceding DN train has arrived completely, will issue a message to the SM on duty at STLI about the complete arrival of the train at GWL supported by a private number.
- g) A common reset push button associated with a counter along with reset buttons for respective Axle counter sections is provided on the indication panel in SM's Office. The reset operation is controlled by the SM's Key, which is in the possession of the SM on duty. In case of failure of section up to DN IBS. S-18 STLI, SM STLI will reset simultaneously in cooperation with SM on duty GWL, on getting co-operation indication from SM GWL, SM STLI will press reset button for concerned side Axle counter (DN Advanced starter signal to DN IBS) after inserting the SM's Key and turning it to the required position, only after ensuring that (a) DN main line between STLI-GWL is free of all trains sent (b) he has received the advice from the SM on duty GWL informing complete arrival of the last train at the station supported by a private number. In case of Block section between DN IBS. S-18 STLI and DN Home signal No. S-2 GWL, the resetting shall be done by GWL in cooperation with SM STLI in the same manner.

For detailed resetting process refer to Appendix 'B'

- h) The SM On duty STLI shall make an entry for every push button operation in a manuscript Register provided for the purpose.
The following particulars shall be recorded in a manuscript Register.
- i) READING ON THE COUNTER BEFORE RESETTING.
 - ii) READING ON THE COUNTER AFTER RESETTING.
 - iii) NUMBER AND DESCRIPTION OF THE LAST TRAIN RUNNING ON STLI-GWL SECTION ON THE DN MAIN LINE.
 - iv) DATE & TIME, THE TRAIN CLEARED THE STLI- GWL SECTION.
 - v) PRIVATE NUMBER RECEIVED FROM THE SM ON DUTY AT GWL ON CONFIRMING COMPLETE ARRIVAL OF THE TRAIN AT GWL AND BLOCK SECTION BETWEEN STLI-GWL THE DN MAIN LINE BEING CLEARED.
 - vi) DATE AND TIME THE AXLE COUNTER EQUIPMENT (ADV TO IBS) IS RESET BY THE SM ON DUTY.
 - vii) SIGNATURE OF THE SM ON DUTY RESETTING THE AXLE COUNTER EQUIPMENT.
- Note:**
- i) Before taking 'off' departure signal for an DN trains the SM on duty shall ensure that the level crossing gates between STLI & GWL are closed and locked against the road traffic.
 - ii) After the complete passage of the train, the signals taken 'Off' will go to 'ON' position automatically and the red indication on panel will get extinguished.

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(B) DESPATCH OF UP TRAINS:-

The section between STLI & SLV (UP Line) is divided into two parts as under:

- i) Between UP Adv. starter signal No.S – 22 STLI & a point 400 mtrs. Beyond UP I.B. stop signal No. S – 21 of STLI. This section is controlled by the Axle Counters.
- ii) Between UP I. B. Stop signal No.S - 21 STLI to UP Home signal No. S-2 of SLV including its overlap. This section is controlled by SGE three position Double line lock and block instrument with Block proving by Axle counter, Equipment provided at STLI SLV station and dual detection provided between UP IBS STLI to SLV UP home signal for working of trains between UP IBS STLI & UP Home signal including its overlap, of SLV Station.
- iii) If the section between UP advance starting signal S-22 STLI up to a point 400 mtrs.beyond UP I.B.stop signal No. 21 STLI and the Block section between UP I. B. stop signal No. 21 STLI up to UP Home signal S-2 including & its overlap of SLV Sandalpur Station are clear of trains, the SM on duty STLI will obtain Line Clear from SLV.
- iv) The SM on duty STLI will then set & lock the route to take 'OFF' the UP IBS and UP Advanced starter signal, he will then taken 'OFF' the concerned Starter signal for the train to start. The starter signal shall assume the 'OFF' aspect only with the assumption of 'OFF' aspect by UP Advanced starter signal. If the block section between UP I.B. stop signal and UP Home signal of Sandalpur is occupied by a train but the section between UP advance starter No. S -22 and a point 400mtrs. beyond the I.B. Stop signal S - 21 is clear, by seeing visual indication on BPAC and panel, he will then take 'OFF' the up Advanced starter signal and then the concerned starter signal to proceed the train up to UP IBS Signal STLI.
- v) As soon as the "Train Out of Section" signal is received for the previous train which was in the block section between UP I.B.Stop signal and Sandalpur station, the SM on duty will obtain 'Line Clear" for the following train which had been dispatched in the manner indicated above.
And also SM on duty shall satisfy by himself seeing the Block section CLEAR indication (GREEN LED (Large) INDICATION) appears at Reset box of Digital Axle counter in the concerned direction is provided near the SGE Block Instrument. I.e. UP BXT (SLV- STLI).
- vi) The SM on duty will then take off the I.B. stop signal for the following train to proceed further to Sandalpur.

NOTE:-

- i. Before taking 'off ' departure signal for an UP train to leave, the SM on duty shall ensure that the level crossing gates between STLI & SLV are closed and locked against the road traffic.
- ii. As soon as train passes the UP Advance starter No.S-22 it shall automatically be replaced to ON position and the track clear indication for the track controlled by the Axle counter shall changes into track occupied indication and shall display the same till train has clear not only I.B.Stop signal but 400 mtrs. beyond it.

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- iii. As soon as the train occupies the track circuit located beyond the UP I.B.S .259T, a continuous buzzer provided by the side of Block Instrument Sounds, STLI - SLV track circuit shows 'Occupied and UP. Intermediate Block Signal is replaced to 'ON' position and the indication repeated on the panel in the SM's office.
The concerned Digital Axle counter UP BXT. (SLV - STLI) "CLEAR" Green LED (large) indication is replaced by "Occupied" Red LED (large) indication glows in the concerned direction digital Axle Counter Reset Box and also SM on duty will give train entering signal (ie. departure bell code) to SLV on the SGE double line lock and block instrument proving by Axle counter till, the same is acknowledged and upper needle of the block instrument turns to TOL position and buzzer stops. As the train passes clear of IBS STLI track, the track circuit clear indication appears on the control panel in SM's office.
- iv. If after dispatch of an UP train, the Axle counter section between UP Advanced starter signal STLI and UP IB signal STLI or the section between UP IB signal STLI and the UP Home signal of SLV, occupied indication continues to be lit and Axle counter clear indication does not appear on the indication panel provided in the SM's Office, the SM STLI will give a message to the SLV station enquiring whether the said UP train has arrived Sandalpur completely or not.
- v. The SM on duty STLI will give a message to the station in advance enquiring whether the said train has arrived the station completely or not.
- vi. A common reset push button associated with a counter along with reset buttons for respective Axle counter sections is provided on the indication panel in SM's Office. The reset operation is controlled by the SM's key, which is in the possession of the SM on duty. SM will do the reset simultaneously on duty at Sithouli and SM on duty Sandalpur. On getting co-operation indication from SM SLV, SM STLI. Will press reset button for Sandalpur Side Axle counter (UP ADV to UP IBS) after inserting the SM's key and turning it to the required position, only after ensuring that (a) UP Main line between STLI & SLV is free of all train send (b) he has received the advice from the SM on duty SLV informing complete arrival of the last train at the station supported by a private number.
After this co-operation procedure is over, the axle counter section occupied indication will disappear and axle counter clear indication will appear on the indication Panel at Sithouli station.
The SM on duty at STLI shall make an entry for every push button operation in a manuscript Register provided for the purpose. The following particulars shall be recorded in a manuscript Register.
1. Reading of the counter before resetting.
 2. Reading of the counter after resetting.
 3. Number and description of the last train running on STLI-SLV section on the Up Main line.
 4. Date and time the train cleared the STLI-SLV section.

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5. Private number received from the ASM on duty at SLV confirming complete arrival of the last train at SLV and the Block Section between STLI-SLV on the Up Main line being clear.
 6. Date and time the axle counter equipment is reset by the SM on duty.
 7. Signature of the SM on duty resetting the axle counter equipment.
- (c) Working and resetting procedure (In case of failure) of SGE Lock & Block proving by Digital Axle counter are provided between either side of UP/DN IBS to Home signal Block section & other Loop Lines/point portions see in Appendix 'B'.

6.7 TRAINS RUNNING THROUGH:-

- i) A train is ordinarily be allowed to run through the Station over the Main Line only.
- ii) If UP or DN Main line is occupied, a non stopping UP & DN train may be passed over the UP & DN Loop Line at a speed not exceeding 30 KMPH provided the points are correctly set and looked and correct signals are taken 'OFF'.
- iii) In case of a run through train over main line or loop line as the case may be, the SM on duty will obtain line clear supported by a Private Number from the station in advance and will set the route and take 'Off' correct signals for the through passage of the train as per SR: 3.42/1of G&SR.(ie Advance starter shall first be take "OFF" and the concerned starter signal should be taken "OFF".)
- iv) If a train passes the station without Tail Lamp/Train Board being visible to the SM, he must send 'Train passed without Tail Lamp/Tail Board' signal to the station in rear but send 'Train passed without Tail Lamp/Tail Board to the station in advance act as per SR 4.17/1(a) & (b) of G & SR.

NOTE:

- i) In case of UP/DN train, if the block section between UP IBS/DN IBS and SLV/GWL is occupied but the section between UP advance starter/DN Advance starter and UP/DN IBS signal of STLI is clear of trains, the train may be allowed to run through up to UP/DN IBS signal and as soon as the section between UP/DN IBS signal and SLV/GWL is clear of train/vehicle, the SM on duty will obtain line clear for the train in block station in advance SLV/GWL and then take off UP/DN IBS signal and allow the UP/DN train to run through further up to SLV/GWL.

6.8 WORKING IN CASE OF FAILURE:

a) FAILURE OF SIGNALS AND INTERLOCKING:

When any signal becomes defective, the procedure laid down in general and subsidiary rules 3.68, 3.69, 3.70, 3.71, 3.75 & 3.76 must be followed if calling on signal also can not be taken 'off'.

T-369/3b for passing defective signal :- Authority T-369/3b for passing defective stop signal at 'ON' position will be issued by SM/ASM after the points protected by the signals are correctly set, clamped and padlocked and duly verifying by SM/ASM as per SM SR 3.68-1, 3.51/1 and 3.68/7 of G & SR must also be followed rigidly.

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b) FAILURE OF POINTS:

When any point is defective and indication is not available on the panel, action as per SR 3.77-1 must be complied with i.e. points should be re-operated and inspected for any obstruction etc. and S&T staff should be advised. No movements should be permitted over the point unless it is correctly set clamped and padlocked under personal supervision of the SM on duty as per SR.3.68 -1 of G&SR SR: 3.51-1 and SR 3.68/7 should also be followed).

c) FAILURE OF SIGNAL LIGHTS :{ 3.69-1(c) (ii)}

“In colour Light signalling territory, in the event of approach signal (s) going blank (no light etc.) due to power failure or otherwise, the Station Master of the Station in rear/nominated station will issue T/409 apart from T/369(1), advising the Loco pilot for the absence of any light on the signal (s) and therefore he should keep a good vigil and look out for the hand signal of Points man /porter at the foot of defective signal and obey it. ..

d) FAILURE OF AXLE COUNTERS/ TRAIN PASSED AT ON:

For detailed working in case of failure of Axle Counter please see App ‘B’.

e) FAILURE OF TRACK CIRCUITS :- In case of failure of track circuits the trains shall be received by taking ‘off’ calling on signal and the SM/ASM will personally verify the clearance of lines and if calling on signals also fail then procedure as detailed in Para 6.8 (a) must be followed.

f) FAILURE OF BLOCK INSTRUMENTS: Para 7.31 of BWM must be followed.

g) FAILURE OF BLOCK PROVING BY AXLE COUNTER:

Para 7.32 of BWM must be followed. In addition to this following instructions must also be followed:-

In case of failure of block instrument, the SM/ASM should advise the station concerned of this fact by telephone under exchange of private no. There after line clear should be obtained on block telephone or station to station fixed telephone or control phone or VHF set in selective calling mode on channel 5 to SLV & on channel 6 to GWL or other authorised means of communication, in accordance with GR 14.13 of G&SR. The record should be mentioned in T/A 1425 or T/B 1425, as the case may be in addition to the Train Signal Register (TSR). The IBS signal will be treated as defective and an authority on form no. T/369(3b) will be issued by the SM/ASM to pass the signal at ‘ON’ position till such time the defect is rectified.

h) PROCEDURE FOR WORKING OVER DAMAGED POINTS:

When the points are damaged/defected the procedure laid down in G & SR GR No. 3.77 must be complied with.

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i) RECEPTION OF TRAINS ON OBSTRUCTED LINES:

The provision of SR 5.09 of G & SR must be followed.

j) RECEPTION OF TRAIN NON-SIGNALLED LINE INCLUDING FAILURE AND OCCUPATION OF LINE BY TROLLEY OR LIGHT ENGINE ETC: Nil**K) FAILURE OF COMMUNICATIONS BETWEEN STATION AND LEVEL CROSSING GATE NO-415/T:**

In case of failure of communications between station and gates the Station Master on duty will communicate the requisite instructions to the gateman regarding reception, dispatch and shunting of the train by a written memo and their acknowledgement obtained prior to compliance.

6.9 PROVISION FOR WORKING OF MOTOR TROLLEYS / MATERIAL LORRIES/ TT MACHINE & TOWERWAG ON ETC:

- i) Provisions of G.R. 15.18 to 15.28 and SR's there under be followed for working of Motor Trolleys /Material Lorries etc.
- ii) When material lorries, motors trolley, T.T. Machine Rail motor Car Tower Wagon (4 wheeler) has to run in the section provided with the SGE double Line Block Instrument proving by Axle counter. These shall be worked on PLC/T-369(3b). The section will be closed after ensuring by private no. and physical verification of the block section which has in fact been cleared. There after the Axle Counter shall be reset to normal by the SM on duty provided Axle Counter not comes to normal.

7. BLOCKING OF LINES:

Whenever it is necessary to block a running line, the station master on duty shall obtain the permission from the section controller & follow the procedure given as under:-

- i) Whenever vehicles/load is stabled on running lines or sidings it must be:-
 - (a) Chained and pad locked.
 - (b) Secured by use of wooden wedges/sprags etc;
 - (c) Coupled with other vehicles.
- ii) Hand brakes of at least six wagons from either end must be fully tightened. From front portion hand brakes of 6 wagons will be tightened by ALP & from rear end side hand brakes of 6 wagons will be tightened by Guard of the train. In case coaching vehicles are stabled, guards hand brakes in SLR/SLRs must be applied by the Guard of train.
- iii) The points must be set, clamped and locked against the blocked line/lines and scotch blocks wherever available should be used to isolate the line/lines and the keys kept with Station Master.
- iv) Stop collars must be placed on relevant signal and points buttons/levers.
- v) Remark to the effect that 'Line No. ___ is blocked be made in TSR/SM diary.

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- vi) After any rake is stabled the station master must inform the section controller under exchange of private number that all laid down precautions for stabling have been taken. the section controller must obtain this assurance from station master before allowing the next train to pass through the station.
- vii) SR 5.19/1 & SR 3.38/1 of G&SR should also be complied with.
- viii) Stabled load on running line will be secured as per SR 5.23/1 & SR 5.23/2 of G&SR.

The button collars must be placed on the buttons on the panel as under when the line is blocked:-

Line occupied.	Button collar to be placed on the Route Buttons.	Point Buttons
UP Main Line	Route Button of UP Main Line	112(R)
UP Loop Line	Route Button of UP Loop Line	112(N)
DN Main Line	Route Button of DN Main Line.	104(R)
DN Loop Line	Route Button of DN Loop Line	104(N).

Note: Button Collars should be removed when the line is cleared.

8. SHUNTING:

8.1 GENERAL PRECAUTIONS:

- (a) All shunting should be done under personal supervision of the Guard of the train or SM/ SM/ person in charge of shunting.
- (b) T.806 must be issued to the Guard & Loco Pilot of the train for shunting operations prior to commencement of shunting.
- (c) Shunt signal must be taken 'OFF' for shunting operations on the concerned line.

NOTE: Block section limit board [BSLB], Stop boards etc provided at location are depicted on control panel and station working rule diagram.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN: [8.05]

When line clear has been granted no obstruction shall be permitted out side the Station Section. However shunting within Station section may be permitted provided the necessary signals are kept at 'ON' as per GR 8.05(2) of G & SR.

When signals have been taken OFF for an approaching train on to a line which is not isolated, no shunting movement shall be carried out on towards the near end and far end points over which the incoming train will pass as per GR 8.05(3) & SR there under.

8.3 PROHIBITION OF SHUNTING/ANY SPECIAL FEATURES IF ANY:

- i) All loose shunting is prohibited.
- ii) Hand shunting that will foul the main line is prohibited at both ends.
- iii) Hand shunting of wagons fitted with roller bearings such as BOXs, BOBS, BRHs etc. is prohibited as per SR 5.20-1 (d) of G&SR.
- iv) Roller bearing stock will be secured in accordance with SR: 5.23-2 irrespective of the gradient at the station and all other vehicles will be secured in accordance with SR:5.23-1 of G&SR.

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- v) Starting signals of concerned lines and or shunt signals may be taken 'Off' for shunting purpose where possible.
- vi) T -806 must be issued to the Guard and Loco Pilot of train for all shunting operations prior to commencement of shunting.

8.4 SHUNTING ON SINGLE LINE: Nil

8.5 SHUNTING ON DOUBLE LINE:

- (a) Shunting in block section will be done only after blocking back or blocking forward as the case may be.

(b) SHUNTING BEYOND STATION SECTION:

Shunting or obstruction for any other purpose shall not be permitted in the block section in rear or in advance, unless it is clear as per GR 8.06. The line should be blocked back or blocked forward, shunting or obstruction may be permitted behind the Train traveling away from the station.

(c) SHUNTING UP TO IBS:

Whenever shunting is to be performed beyond advanced starter signal in the IBS section shunting can be performed without Block Forward, up to IBS signal. The SM/ASM will issue T/806 to the loco pilot, quoting his private number in the private number column, and authorize to the Loco Pilot to enter in IBS section for shunting purposes. The Advanced starter signal will be kept at 'ON' position and instructions to pass the Advanced starter signal at 'ON' will be mentioned in T/806.

NOTE :-I) All shunting should be done under personal supervision of the Guard of the train or SM/Person in charge of shunting as per SR 5.14-1(a).

(d) SHUNTING BEYOND IBS: Nil

(e) SHUNTING MAY BE PERFORMED DURING FAILURE OF BLOCK INSTRUMENT:

whenever SGE block instruments fails, shunting in block section will be avoided If it is necessary to perform shunting in block section, block instrument will be kept in line close position and than the SM who intended to perform shunting will advised on telephone attached with block telephone or MTRC or on CTO to the concerned station about his intention to perform shunting than private no for block forward/block back will be exchanged between the concerned SMs. After this shunting will be done in block section be giving T/806 authority to the Loco pilot and private no received from the concerned station will be written on it. After completion of shunting the station master who performed shunting will advise to the concerned station master under exchange of private number regarding cancelation of block forward/block back.

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

When it is intended to perform shunting in Ballast siding no.-1 & 2, it will only be performed under the personal supervision of Guard of the train or SM/ASM/Person in charge of shunting.

NOTE:SM/ASM on duty shall personally verify clearance of fouling mark of Ballast siding No.1 & 2 after each shunting or movement into/ from siding.

8.7 WORKING OF 2 GF(11) AND 2GF(12):BALAST SIDING NO.2

Normally 'Yellow Steady' indication is there on the panel near 2 GF(11) YN and 2 GF (12) YN button indicating the normal condition of slot i.e. not released. The normal position of derailing switch of concerned GF is set in open condition. Whenever it is required to carryout the movements, in the Ballast siding No. 2 requiring reverse setting of the point, the SM/ASM on duty will release slot after pressing YYN and 2 GF(11) YN button for JHS end & 2 GF (12) YN button for DLI end of Ballast siding No. 2 . By the operation of these buttons yellow steady indication will turn into flashing and slot free indication will also appear in the location box near concerned G.F.

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Ground frame point No-2 of concerned GF is provided with hand plunger key lock and can be operated to reverse position when lock of these points is unlocked by means of key extracted from the normal position of control lever No-1 of concerned Ground Frame. The indication on panel will turn to Red from Yellow flashing.

The pointsman on duty authorised by SM/ASM on duty to perform shunting movements on seeing free indication in the location and as per instructions of SM/ASM will normalise the lever No.1 of concerned GF, which is provided with electric lever lock. In the normal position of GF lever No.1 key shall be extracted by points man from the key lock and then operate the GF lever No.2 as per instructions of SM/ASM by unlocking it from the key extracted and reversing the concerned lever.

After the points have been set to reverse position it shall be again locked by hand plunger key lock and key extracted back to operate lever No.1 to its reverse position again. With the above operation Red steady indication will turn to yellow flashing indication and reverse point indication will appear on the panel.

After seeing Yellow flashing indication SM/ASM on duty will take back slot after pressing YRN & Concerned GF YN button. It will turn to steady Yellow, if SM/ASM sets the shunting route leading to concerned line as in route table. For every operation of GF points the above procedure shall be followed and every time points man shall ask the slot from SM/ASM, whenever it is required to operate the lever No.1 to normal from its reverse position irrespective of the setting of GF points lever. This ensures the one slot one train movement principle.

After shunting movement is completed as instructed by SM/ASM the points man will normalise the concerned GF lever No.1 on obtaining the slot from SM/ASM, restore the GF points to normal, set and lock them as per procedure described in above paras, then operate the lever No.1 of concerned GF in its reverse position.

He shall then inform the SM/ASM of the above operation after confirming that the point lever is in normal position and lever No.1 of concerned GF in reverse position. On advice of points man the SM/ASM will receive back the slot by pressing the YN button of concerned GF and YRN Button. By the operation of these buttons Yellow steady indication will appear on the panel, indicating normalisation of slots.

Note: If the slots released by the SM/ASM are to be taken back by him due to any reason before performing shunting movements, he will receive back the slot by pressing the concerned GF button and YRN button, which will cause yellow flashing indication to become steady yellow indication again.

SHUNTING IN BALAST SIDING NO-1:

Point No 102 will be set to reverse position from the panel by SM on duty whenever shunting is required to be done in ballast siding no 1, and shunting will be done under personal supervision of the Guard/shunting incharge.

9. ABNORMAL CONDITIONS:-

(a) The Rules to be observed in the Event of abnormal Conditions:

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

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- (i) During partial interruption /failure of Electrical communication instrument; line clear will be obtained by any means given in Para 1.18 of BWM.
- (ii) The authority to proceed in the occupied Block section in case of obstruction of line or accident; SR.6.05/2 of G&SR must be followed.
- (iii) Trains delayed in Block section GR.6.04 must be followed.
- (iv) Failure/passing of intermediate block stop signal at 'ON' GR 3.75 must be followed Please see in Appendix 'B'.
- (v) Failure of Axle Counter Block/BPAC as per Para 7.31 of BWM. (Details working to please see in Appendix 'B'.
- (vi) Failure of MTRC: - S & T staff will be informed.

**(b) Procedure for emergency operation of points by crank handle:
Manual operation of motor point & custody and use of crank handle**

(A) Custody and use of Crank Handle.

- (1) Crank Handle has been provided at this station in SM office (Panel Room) for manual setting of Motor Operated Points during the failure or maintenance. This shall be kept in a case specially provided for this purpose. This case will be locked and the key shall be kept in the personal custody of SM on duty. The Crank Handle case will be sealed by the ESM of the section in addition to the locking by SM.
- (2) For the purpose of Crank Handle Interlocking, the points have been divided into the following groups:-

Group No. 1.	..	Point No. 101/101.
Group No. 2.	..	Point No. 102/102.
Group No. 3.	..	Point No. 103/103.
Group No. 4.	..	Point No, 104/104.
Group No.11.	..	Point No. 111/111.
Group No.12.	..	Point No. 112/112.
Group No.13.	..	Point No. 113/113.

NOTE:

- i) Key transmitted electrically in SM's Office (Panel Room) for these groups.
- ii) These Crank Handle Keys have been provided for uncovering the flap of point machines of the above groups. The crank handle cannot be inserted in the point machines unless the flap is uncovered by means of relevant Keys.
These Keys are normally held locked in separate key locked relays housed in the box in SM Office/Panel Room and cannot be released, if any one of the concerned routes/overlap is set. Key locked relay box is kept padlocked by SM and sealed by S&T staff.
- iii) Circular white and Red Light indication have been provided on the panel for the each groups, indicating whether the crank handle Key is held locked in the relay box or it has been released for the manual operation of points. For releasing the control of Crank Handle key of the Point, the SM will press the following buttons shown against each group simultaneously and release.

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Group No.	Point No.	Buttons to be operated
1.	101	'CHYN' & Point Button 101
2.	102	'CHYN' & Point Button 102
3.	103	'CHYN' & Point Button 103
4.	104	'CHYN' & Point Button 104
11.	111	'CHYN' & Point Button 111
12.	112	'CHYN' & Point Button 112
13.	113	'CHYN' & Point Button 113

iv] Before releasing the control of the crank handle, the SM will ensure that the Group of points are not engaged in any route. The operation of 'CHYN' & the point button will cause the white indication of the particular group to flash till crank handle key is taken out from the key locked relay. Simultaneously, a 'Red' light indication will appear above the concerned key locked relay, When the crank handle key is taken out from the key lock relay, the white flashing indication will disappear and red circular indication of that group will appear on panel.
After the use, the insertion of crank handle key in the key lock relay and its operation will cause the 'Red' indication of the group to disappear and a flashing white indication of this group will re-appear. Now pressing CHYRN and relevant point button will cause the flashing white indication to become steady and also the 'Red' indication above the key lock relay to disappear.

v] Once the control on the crank handle key has been released, the corresponding signals cannot be cleared.

vi] After releasing the control, if the crank handle key is not extracted, control can be withdrawn by Operating 'CHYRN' Button and point button of the group.

vii] The signal controlling the movement over the point can be cleared after the control to the relevant crank handle key is returned.

viii] Unless the relevant crank handle key is inserted in the lock on the point machine and operated for uncovering the aperture, crank handle cannot be inserted in the point machine.

(B) USE OF CRANK HANDLE DURING MAINTENANCE.

- i) Whenever, it becomes necessary for the crank handle to be used for general maintenance and repairs, a member of S&T Staff not below the rank of ESM will issue a Disconnection memo with an endorsement on top '**Crank Handle required**' for the concerned points and obtain the key from the SM to open the lock. The seal of the crank handle case will then be broken by the S&T staff in the presence of SM on duty. Before crank handle is removed, an entry shall be made in the crank handle register provided for this purpose. The Register will have the following columns:-
- i) Serial Number.
 - ii) Name and Designation of the persons who requires to use the crank handle and the concerned crank handle key.
 - iii) Time and Date of removal of Crank Handle & the crank handle keys.
 - iv) Whether for normal maintenance or failure.

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- iv) Disconnection Memo Number, if given.
- vi) Initials of the person who removes the crank handle.
- vii) Initials of the SM on duty.
- viii) Time and Date of return of Crank Handle & the Crank handle keys.
- ix) Details of use made of crank handle.
- x) Reconnection Memo Number, if given.
- xi) Initials of the person who return the crank handle.
- xii) Trains passed over disconnected/defective points giving Private Number against each train.
- xiii) Initials of the SM on duty.

- ii) After the purpose for which the Crank Handle was taken from the case is over, that will be replaced in the case by the S&T staff. The Crank Handle case will then be locked and sealed as laid down in clause (1) above. The particulars required in the crank handle register will then be posted against the relevant entry and will be signed by the S&T staff and SM on duty.

NOTE: In case a disconnection Memo is issued for a point, but Crank Handle is not required, an endorsement that **Crank Handle not required** must be made on top of the disconnection memo.

- iii) During the period from the issue of Disconnection Memo by the S&T staff and the issue of Crank Handle to them to the time of its return by them and issue of reconnection Memo, if traffic has to be passed on the disconnected point, procedure detailed in Sub-Para 9.B shall be followed.
- iv) Whenever it becomes necessary for the Crank Handle to be removed to pass the traffic during Point Failure, the Dy SS/SM on duty will do so only after making relevant entries in the Register in a manner indicated in clause 9.B (i) above. He will immediately advise ESM on duty about the failure and record the failure in the S&T Failure Register.

(C) WORKING OF TRAINS DURING FAILURES

Passage of trains when Motor Points are defective:

- i) When an electrically operated Motor Point fails to respond to the Button operation, the SM on duty will first re-set the point to the last operated position and deposes the Pointsman to find out if any obstruction is lying in between the tongue and stock rails at both ends of the cross over.
- ii) The Pointsman on arrival at the Point will look for any obstruction between the stock and Switch rails, remove the same if found any and display an 'alright signal' to SM on duty for setting the Point. In case, obstruction is found, the Pointsman will display hand danger signal.
- iii) On receipt of an 'alright signal' from the Pointsman, the SM on duty will set the Points to the required position. If the Point still fails to respond or on receipt of Hand Danger Signal from the Pointsman, the SM on duty will remove the Crank Handle and the relevant crank handle key,

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proceed to the site of defective point after locking the Control Panel and retaining the key in his personal custody. On reaching the defective point, he will set the point manually in the required position (both the ends in case of cross over points), clamp and padlock it and will come back to panel room and unlock the panel. He will operate point button along with point group button, so that point indication on the panel will be corresponding to that at site and then authorise the move.

NOTE: While setting the crossover point from 'Normal' to 'Reverse' care should be taken to set marked 'A' first and then set the other end marked 'B'. Similarly, while setting from 'Reverse' to 'Normal' end marked 'B' should be set first and then the end marked 'A'. In case, after setting the Point manually and the relevant 'N' or 'R' indication is available on the panel and the requisite signal can be cleared for the move, clamping and padlocking of points is not necessary provided there is no damage to the machine & roddings connected.

iv) If the ESM is available, he will assist the SM in manual setting of Points.

(D) Passage of trains when points are disconnected:

- i) While the S&T Staff are attending to disconnected/defective points and traffic has to be passed over them. SM on duty will proceed to the concerned points with the object of getting the points set by the S&T Staff as per SR 3.51-2 of G & SR
- ii) He will take with him a special Register opened for this purpose in which an entry of the move will be made and the signature of the S&T Staff attending to the points will be obtained against that entry as an assurance that the S&T Staff has agreed to the move. The SM will also sign against the entry. After the points have been set for the contemplated move, SM will clamp and padlock the points, & retain the keys and crank handle in his personal custody and return to the station for undertaking the move. After the passage of traffic, the SM will return the Crank Handle, Crank handle key and the padlock keys to the S&T Staff for continuing their work on points.

(E) Additional Precaution to be observed:

Button Collars shall be placed on the button of defective/ disconnected point and the relevant route button. The Button Collars shall not be removed except under the following circumstances :-

- [a] When the disconnected point is re-connected and a Reconnection Memo to this effect is received or
- [b] When the defective point has been put right and a Reconnection Memo is received.
- [c] When the Operating staff at the site authorises the SM to undertake the movement over the points and exchange Private Numbers in token of this.

NOTE : Manual setting of points by Crank Handle for passing traffic should not be carried out by the S&T staff unless the Operating staff not below the rank of ASM is present at site.

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(c) Certification Of Clearance Of Track Before Calling On Signal Operation Is initiated:

The calling on signals provided below the DN Home signal, UP Home signal can be taken 'off' during the failure of track circuits; provided the requisite points have been set to the required position in the route and isolation points are set to required position. Before clearing the 'Calling ON' signal under the track circuit failure condition, SM /ASM on duty must personally ensure that concern track is clear of any vehicle/obstruction or not and also when track immediately in rear to signal is occupied, and he will set the requisite route on panel by pressing concerned buttons.

Then he will press COGGN button, keeping the signal button press and press concerned route button and release them. This will cause flashing white indication to appear on the right side of the signal on the panel. The 'Calling ON' signals will clear after a lapse of two minutes when the flashing white indication on the panel will become steady and will disappear

on clearance of Calling ON signal. The Calling ON signal, once cleared may not restore to 'ON' position automatically even after passes of the train, and therefore the SM/ASM, after passes of the train for which the Calling ON signal was cleared, shall immediately restore the Calling ON signal to 'ON' position by pressing the concerned signal button and Emergency signal Cancellation button (ERN) simultaneously and releasing every clearing of 'Calling ON' signal will be recorded on COGGN Counter.

Whenever in case of Main signal failed, Calling on Signal should be taken "OFF" the care should be taken the through signal (Starter Signal) must not be taken "OFF" otherwise Calling on Signal will not 'Clear'.

(d) Working of trains during the failure of track circuits when the 'Calling ON' signal has also failed.

- i] The SM on duty will check up regarding the failure of track circuit and the latter will proceed to the affected track circuit along with a pointsman. The SM after verifying the clearance of the defective track Circuit will set the requisite route, place reminder collar on the signal button and then issue 'T/369(3b)' to the Loco Pilot to pass defective signal at 'ON', provided the requisite point is set and locked indications are available on the illuminated Diagram and the track circuits other than the failed track circuit, are clear. The route for which T/369(3b) is issued should not be cancelled until the entire route including the overlap is cleared by the train except in the case of trains which are likely to be detained on Platform lines in which case the route may be cancelled after the complete arrival, clear of track circuits controlling the points in rear.
- ii] Movement affected by the track circuit failure should not be done simultaneously over the crossover. Simultaneous movements are permitted only on the Straight routes under these circumstances.
- iii] Whenever any non-signalled move has taken place over a point operated by electric point machine, either in the facing or trailing direction, the SM on duty shall operate the point to the normal/reverse settings for the purpose of setting the point. After the SM has ensured that indication regarding the normal/reverse settings is correctly available, further movements may be permitted over the point.

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NOTE: In the case of disconnected/defective points, the setting of the other end or ends where the work is/are not carried out will be done by the SM on duty.

- (d) Reporting Failure of Points, Track Circuit/Axle Counter and Interlocking.**
GR 3.85 of G & SR must be followed.

9.1 TOTAL FAILURE OF COMMUNICATIONS:[1.18 BWM] [SR 6.02-3]

In the event of total interruption of communication i.e. when line clear cannot be obtained by any of the following means namely.

- i) SGE Block Instrument (BPAC).
- ii) Telephone attached to Axle Counter/ SGE block Instrument.
- iii) Station to station fixed telephones wherever available,
- iv) Fixed telephones such as railway, auto phones and BSNL phones,
- v) Control telephones.
- vi) VHF sets.

The trains shall be worked as under:

All trains are to be stopped at the station, Guard and Loco Pilot of the train should be advised of the circumstances.

- a) The Station Master shall give following authority to Loco Pilot of each train for working of trains during total interruption of communication on double line section: (T/C-602) in which following is included-
 - i) An Authority to proceed without line clear.
 - ii) An Authority to pass last stop signal in the 'ON' position.
 - iii) A caution order restricting the speed to 25 kmph over the straight line and 10 kmph when approaching or passing any portion of the line where the view ahead is not clear due to curve, obstruction, rain, fog are any other cause and speed restriction enforced in the block section in advance, if any will also be mentioned.
- b) Provision of SR -6.02-3 must also be complied with.
- c) The train should follow with an interval of 30 minutes. (UP/DN STLI- SLV / STLI -GWL) shall be treated as one section.

**9.2 TEMPORARY SINGLE LINE WORKING ON A DOUBLE LINE SECTION:
[SR 6.02-1]**

- (a) Whenever an accident to a train or track or other obstruction precludes the use of one of the lines between STLI-SLV or STLI-GWL, the traffic may temporarily be worked over single line in accordance with the provisions of SR 6.02-1 of G & SR. Temporary single line working will be established between STLI-SLV or STLI-GWL, Station. In case of single line working between STLI-SLV on UP/DN main line and STLI-GWL, the IBS shall be treated as closed and the STLI-SLV & STLI-GWL section treated as one section with IBS closed.
- (b) All the trains to be stopped at the Station. Guard and Loco pilot of the train should be advised of the circumstances and Temporary single line working should be introduced on getting reliable information. Trains shall be worked on authority T/D 602 on receipt of Line Clear on Telephone.

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- (c) Speed of first train will be restricted to 25 KMPH and subsequent trains on booked speed.
- (d) When trains proceeding on right line, last stop Signal may be passed at 'ON' on T-369-(3b) other Signals may be taken "OFF". Treating the block section on either side of IBS as one block section.
- (e) When a train is proceeding on wrong line:
 - i) Train shall be piloted out of the station,
 - ii) Train shall be piloted into the Station from the stop signal whichever the Loco Pilot encounters first.
- (f) All crossover points both ends over which the train shall proceed while the temporary single line working is in force shall be clamped and pad locked (3.51/1).

9.3 DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITH OUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:

Whenever it is necessary to send a train to assist the crippled train into the block section on 'Authority to proceed without line clear', the station master will:-

- i) Inform the SM at the other end of the affected section.
- ii) Advise Guard and Loco Pilot of the assisting train of the circumstances.
- iii) Handover the following authority (T/A 602) to the Loco Pilot of assisting train.
- iv) Provision of SR 6.05/2 of G & SR must be complied with.

10. VISIBILITY TEST OBJECT:

- a) Down main starter signal S-4 is nominated as visibility test object at this station.

b) WORKING OF TRAINS IN THICK AND FOGGY WEATHER:

Whenever on account of fog, dust storm or rains, the nominated UP/DN starting Signal is not visible from opposite of the SM's office, the SM on duty follow the provisions of SR. 3.61/1 of the G & SR.

11 ESSENTIAL EQUIPMENTS AT THE STATION:

See Appendix 'E' for essential equipments at the station.

12 FOG SIGNALMEN NOMINATED TO BE CALLED IN CASE OF FOG: Not applicable, Due to double distant signal territory.

LIST OF APPENDIX:

- Appendix 'A'** - Working of Level Crossing Gates.
- Appendix 'B'** - System of Signalling & interlocking and Communication arrangements at the station.
- Appendix 'C'** - Anti-Collision Device (Raksha Kavach)
- Appendix 'D'** - Duties of Train passing Staff and Staff in each shift.
- Appendix 'E'** - List of Essential Equipments provided at the station.
- Appendix 'F'** - Rules for working of 'DK' Stations, Halts, IBH, IBS, and Outlying sidings
- Appendix 'G'** - Rules for working of trains in Electrified sections.

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APPENDIX – “A”

1. GENERAL.

1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

S.N.	DESCRIPTION	REMARKS.
1	Number of Level crossing Gate.	412
2	Engineering or Traffic Gate/Classification	Engineering ‘C’ Class
3	Under Control of Station Master / P. W. Inspector	SSE/ P. Way DBA
4	Location at Kms.	1212/26-28
5	At Station	--
6	In Between Station	SLV-STLI
7	BG/MG/NG	BG
8	Single Line/ Double Line/Multiple Line	Double Line
9	Normal Position.	Open
10	Interlocked/ Non-Interlocked.	Interlocked.
11	Means of Interlocking.	Interlocked with gate signals on DN line and with UP line
12	Provision of Signal at Kms.	UP Direction KM 1213/1-3 DN Direction KM 1212/20-22
13	Signalling arrangement	Protected by Gate signals
14	Means of communication-Telephone/ Bell etc.	Telephone communication with SM STLI
15	Width of Level crossing Gate	5.50 M
16	Type of Road (NH/SH/Others)	Other
17	Name of Road	Badori-Sheetala Road
18	Metalled/ Non-Metalled	Kuchha
19	Approach Road	Kuchha
20	Width of the Road	5.80 M
21	Angle of the Road crossing (Incase of skew Gate)	90 Degree
22	Road Gradient (if any) (i) North/East Side (ii) South/West side.	1:100 1:100
23	Road Alignment(Straight/Curve)(i) North/East Side (ii) South/West Side	Straight Straight
24	Provision of Height Gauges	Yes
25	Type of Barriers.	P.O.L.B. with Sliding Boom
26	Length of check rail.	7.50 M
27	Road surface in between Level crossing Gates	Paccka
28	Length of rumble strip/ Speed breakers	Available (1.0 M)
29	Road signs	Available
30	Speed Breaker Indication Board.	Available
31	TVU.	88504 on 25-03-2018
32	Census next due on.	25-03-2021
33	Demarcation for placement of Detonators	Provided
34	No. of Gateman working.	2
35	Nearest Railway Medical Assistance.	STLI/GWL
36	Nearest private Medical Assistance available(if any)	GWL
37	List of Equipment available Yes/No.	Yes

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1.2 EQUIPMENT KEPT AT GATE LODGE:

S.N.	Items	Quantity/Number
01	Hand Signal Lamp Tri Colour	3
02	Hand Signal Flag Green	1 mounted on stick
03	Hand Signal Flag Red	3 mounted on sticks
04	Banner Flag Red	3
05	Posts for exhibiting red banner flag	2
06	Spare chains with padlocks	2 with stop mark
07	Detonators	10 in plastic case
08	Gate lamps	2
09	Tommy Bar	1
10	Mortar pan	1
11	Spade/Fowrah	1
12	Hammer	1
13	Pick Axe	1
14	Tin case for flags	1
15	Can for Oil	1
16	Water pot/Bucket	1
17	Canister For muster Roll	1
18	Set of spare spectacles of gateman wearing glasses	1
19	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20	Basket	1
21	Whistle	1
22	Wall clock	1

1.3 RECORDS 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) Gateman Rule Book in Hindi/English.
- (3) List for tools and books.
- (4) Duty Roster.
- (5) Certificate for working as gateman
- (6) Bio-data particulars of Gatemen, including date of passing vision test, Initial/ refresher course, safety clamp, etc.
- (7) Accident Register.
- (8) Record of last census of road traffic at level crossing gate.
- (9) Public complaint book
- (10) Inspection Book
- (11) S&T Register in case of Interlocked Engineering Gate.

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1.4 MODE OF OPERATION: Detailed working given in “working instruction “ (1).

1.5 DUTIES OF GATEMAN:-

- (1) **ALERTNESS:**The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.
- (2) **POSITION DURING PASSAGE OF TRAIN:**
During passage of trains, concerned staff shall stand in a manner indicated below:
- (i) Gateman will stand attentively in front of the gate lodge facing the approaching train.
 - (ii) In day time, Gateman will hold red and green flags furled up on separate sticks in right and left hands respectively.
 - (iii) In night time, Gateman will hold lighted hand signal lamp with white light facing the track.
 - (iv) He shall keep the whistle slung around his neck from a cord.
- (3) **ROUTINE DUTIES OF GATEMAN:**
- i. Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition at Non-Interlocked Level crossing and during emergency of obstruction on track at other type of gate.
 - ii. Gateman shall ensure that gate lamps and all lamps are lighted and kept burning continuously from sunset to sunrise.
 - iii. Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, if it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
 - iv. Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
 - v. Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, any vehicle/wagons/trains/battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
 - vi. Gate man shall also be prepared to repeat any signal which guard may give to loco pilot on walkie-talkie or in any other way.
 - vii. If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
 - viii. Gateman shall report to the nearest Station Master, Gang mat or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
 - ix. In the event of gate signal becoming defective the gate man shall maintain the signal in the ‘ON’ position even by the disconnecting the signal or the wire if necessary.
 - x. At the gate, 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.
 - xi. Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.

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- xii. Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xiii. Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiv. Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xv. Gateman shall see that the channel for the flange of the wheel is kept clear.
- xvi. Gateman shall keep the road surface well-watered and rammed in case of unmetalled roads.
- xvii. Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xviii. Gateman on electrified section shall watch that Road vehicles/ animals passing from gate are within height loading gauge provided on either side of the level crossing gate.
- xix. Gateman shall prevent trees passing by persons or cattle to the maximum extent.

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

- In case gateman observes anything unusual with a passing train, he shall take following action:
- i) He shall take prompt action to warn the Loco Pilot /Guard of the passing train by showing red flag by day and red flashing light by night.
 - ii) But in case of train parting, gateman shall show stop hand signal and shall show prescribed signal for train parting i.e. green hand signal during day and white light during night waving UP and DN vertically.
 - iii) He shall simultaneously try to draw the attention of the Loco Pilot /guard by whistling continuously, shouting, and gesticulating, throwing ballast on the brake van or by any other means.
 - iv) If Loco Pilot /guard fails to take notice, gateman shall immediately inform the Station Master, if connected on telephone, to take appropriate action, under exchange of private number.

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

- 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 the Gateman is unable to remove the obstruction, 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 gate man shall protect the line/gate as under:-

ON DOUBLE LINE SECTION:

- i) If both line are obstructed the Gate man shall plant a red banner flag by day and a red flashing light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.

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- ii) Then he will similarly protect the other line.
- iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red flashing hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and flashing red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 Mtrs. on BG and place one detonator on the line. Thereafter he shall proceed to a distance 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 line, showing red hand signal similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.
- vii) In case the gateman observes or hears 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 loco pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

A. Other action to be taken by Gatemen:-

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

1.6 ENGINEERING ITEMS:

For visibility requirements at level crossings, provision of speed breakers on the approach roads of level crossings and census of traffic at level crossings are described in para 916,918,919, of IRPWM.

WORKING INSTRUCTIONS FOR ENGINEERING LEVEL CROSSING GATE, INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL POSITION "OPEN TO ROAD TRAFFIC.

1. Mode of Operation:-

- i) This Gate is interlocked and provided with lifting barriers operated by a power operated by two power operated panel for UP & DN separately. The following buttons & indication are provided this gate panel.

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- a. Green Button- for opening the gate barrier
 - b. Red Button - for closing the gate barrier
 - c. Green - for opened gate indication
 - d. Red - for closed indication.
- ii) The normal position of lifting barriers is open for road traffic which is indicates on the control panel by green light.
 - iii) A telephone communication is provided between the Gate and Station Master on duty at the station STLI.
 - iv) Whenever signals are required to be taken “off” for the reception/ dispatch of a UP & DN Train or for the pass across the Level crossing Gate, the SM on duty will instruct the Gateman of duty to close the Gate barriers against the road traffic.
 - v) On receipt of the above instructions the gate man will close the barriers against the road traffic by operating the gate panel, pressing the red button till the barrier is fully operated and close against road traffic and a red indication appeared on panel. After receiving red indication of gate closed position, the gateman will reverse the knob of rotary switch to reverse position for signal no S-1 for UP train & Signal no S-2 for DN trains. By operation of rotary switch the concerned gate signal will be turned into ‘OFF’ position

2. INTIMATION TO GATEMAN:

- i) The Station Master shall intimate the Gateman through telephone connected at his end, above movement of trains proceeding to words the level crossing gate.
- ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the Station Master to the Gateman as soon as he received Train Entering Section advice from the dispatching station.
- iii) If the actual running time of the train from either end of the section is less than 10 minutes, Station Master will convey this advice to the Gateman before obtaining/granting line clear.
- iv) If should be the duty of the Gateman to Ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

3. Failure of Telephonic Communication:

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

- i. If the telephone fails at the gate connected with the station at the dispatching end Station master issue a caution order to the Loco Pilot of the departing train.
- ii. Stations Master shall advise the Loco Pilot to whistle continuously and proceed cautiously while approaching the gate.
- iii. In case the gate signal is ‘ON’ he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- iv. In case of an approaching train, the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- v. The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot dispatching a train in the block section from his end.
- vi. Station Master shall also advise the gateman through Gagman/Patrolman/ Loco Pilot of the first train that the telephone has become defective.

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- vii. Station Master should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii. Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection/fit memo for the same.

4. Failure of Lifting Barriers Gates:

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

5&6. Failure of the gate barrier with the gate in opened condition/ closed condition in case of power supply failure:

- i) When the gate cannot be Open due to power supply failure the gateman will break the seal of crank handle and will open the gate by crank handle. If the gate is becomes in operative in open condition and cannot be closed. The gateman will advise SM on duty immediately under exchange of private numbers.
- ii) There after the gate must be treated as non-interlocked and processer for reception/dispatch of trains as prescribed for non-interlocked gates should be adopted.
- iii) The gate man shall secure the gate against the road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) Station master on duty shall issue a caution order to the loco pilot of a departing train.
- v) He shall also advice the station master at the dispatching end under exchange of private no to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- vi) SM shall advise S & T staff responsible for maintaining the gate to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the gate and issue reconnection/fit memo for the same.

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A USE OF EMERGENCY GATE CRANK HANDLE:-

In case when lifting barrier fails to operate due to failure of power supply or on account of failure of barrier, Crank handle with key for manual operation of gate, is kept at gate lodge in a sealed box. Gateman shall break open the seal of the box. Before this he shall inform the SM who will keep the relevant signals permitting trains through the gate should be at 'ON'. SM will further ensure that no trains shall be permitted unless crank handle is brought back after closure of gate and relevant indications are available on gate operating panel. To open gate, crank handle shall be inserted into the motor of the boom in the groove provided for the purpose after unlocking the boom at boom stop by key on one side of the boom. Similar action is required for opening of second boom. S&T staff shall immediately be advised in case of failure of barrier and use of crank handle for LC gate. S&T staff shall also reseal the box after normal working is resumed.

NOTE :-

- i) An Rotary Switch is provided on Gate Control Panel for LC 412 'C' which when turned to replace concerned signals protecting Gate to 'ON'.
- ii) Failure of barrier and use of crank handle for LC gate, S&T staff should also reseal the box after normal working is resumed.
- iii) SM shall advise S & T staff responsible for maintaining the gate to repair the same at the earliest.
- iv) Normal working will be resumed only after S &T staff repair the gate and issue reconnection/fit memo for the same.

(B) WORKING OF SLIDING BOOM:-**i. Mode of operation for closing gate by Sliding Boom:**

The gate is provided with one additional sliding boom on each side of power operated lifting barrier. Each sliding Boom will be parallel to the existing power operated lifting barrier of it's side and would normally so positioned that the complete body of the boom is lying away from the road i.e. no part of the sliding Boom shall normally project on to the road leading to the L.C. gate. The Sliding booms installed are meant to be used in case of emergency when the power operated lifting barriers are damaged or close indication not found due to any reason. These are normally locked on its post, with padlock. The keys inside the locks provided on the boom stands.

There can be the following conditions necessitating the use of Sliding Boom Barriers:

- a. When the gate barriers are damaged during Opening/Closing of the gate or the gate is in open condition.
- b. Whenever the gate is broken during closing, opening or in open condition the gateman will inform the SM on duty who in turn will inform the S&T staff for rectification/replacement of the damaged lifting gate/barriers.
- c. when the close indication failed due to any reason.

The gateman, after getting specific instruction form SM on duty will turn the road switch provided at gate to reverse position to through the road signal to danger and start closing the Sliding Boom during this process he will slide the sliding boom of side "A" by pulling the handle to close position up to stand provided for the purpose.

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He will insert the chained key marked “X” in the boom stand lock and lock it, a key marked “Y” will be released, thereafter he will go to the other side “B” and by pulling the handle to close position of the sliding Boom up to its boom stand will insert the chained key marked “X” in the boom stand lock and lock it. Also insert the “Y” key in the lock marked “Y” and turn clockwise in boom stand of side “B”. After locking both keys in “B” side a 3rd key “Z” will be released. The gateman will take the key, apply it to the T-2 lock/KLCR fitted in the gate lodge and turn it after doing that he will now turn barrier switch to reverse position to activate the gate control relays to energies.

NOTE:

- a. At the time of operating the sliding boom gate man can put back the road signal to RED by operating the RSR switch, provided in gate lodge and after Complete closing of sliding boom the road signals get locked in Red position.
- b. When the gate is secured by sliding boom and close indication found the controlling signals allowing the train movements towards the gate will be take off to normal aspect.

ii. Mode of opening the sliding Boom:

For opening of the sliding boom after passage of the train, gateman will get specific permission from ASM on duty for opening the sliding boom to clear the road traffic. After getting permission from ASM, gateman will turn the barrier. Switch to normal position to through the gate signal to danger and take out Z key from T-2 lock/KLCR apply it in sliding boom of Z lock and adopt procedure in reverse order of closing the sliding boom to clear the road traffic. Now the will turn the road switch to the normal to clear the road traffic. Now he will turn the road switch to the normal to clear the road signal/.ake out “Z” key from T-2 lock/KLCR apply it in sliding boom of “Z” lock and adopt procedure in reverse order of closing the sliding boom to clear the road traffic.

ROAD TRAFFIC SIGNALS:-

Road traffic signals are provided on tubular posts on each side of LC for road users at a suitable location so as to be visible clearly to the approaching vehicles. The road traffic signals shall show the following aspects.

- i) Steady Red aspect to indicate the ‘closed’ condition on the road barriers.
- ii) Steady Yellow aspect to indicate the “OPEN” condition on the road barriers.
- iii) When POLB becomes defective in open condition then Gateman can put back the road signal yellow to “RED” by operating the road signal switch provided on gate panel in gate lodge for the purpose if it becomes necessary.

HOOTERS:-

Hooters mounted on posts near each barrier pedestal and working in conjunction with the road traffic are provided to warn the road users to the imminent closing of barrier while the barrier is being closed. The hooters shall cease sound when the barriers are closed.

7. Defective Gate signals:

- i) The Gate Man shall treat the Gate signal as defective and must not take ‘OFF’ then under following circumstances.

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- a) If Gate signals can be taken 'OFF' without closing the Gate, or
- b) The key can be extracted from the operating winch the gate is open condition, or
- c) The key can be extracted from the leaf gates when the gate is open condition.
- ii) When gate man clear gate signal S-1/S-2 to OFF position if 'OFF' indication is not displayed on gate control panel, gate man will advise S&T staff through DY/SS of these signal position, the Gate man will make all efforts to put it at 'ON' position.
- iii) The Gate man will immediately advise the Station master on duty, under exchange of private number, regarding defective Gate signal.
- iv) There after the Gate must be treated as non-interlocked and procedure for reception/dispatch as prescribed for non-interlocked gates should be adopted.
- v) He shall show hand signal flag by day and green light by night to the passing train after closing the gate.
- vi) Station master on duty issue a caution order to the loco pilot of a departing train.
- vii) He shall also advise the Station master at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- viii) Station master shall advise S&T staff rectify the defective gate signal and issue reconnection/fit memo for the same.
- ix) Normal working will be resumed only after S&T staff rectify the defective Gate signal and issue reconnection/fit memo for the same.

8. OBSTRUCTION AT THE GATE:

- i) If the gate is broken by a road vehicle, which is fouling the track, or if lifting barrier or any other part of the gate foul the track or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by a day and red flashing lamp by night on post provided at both ends of the gates for this purpose.
- iii) Immediately after this, the gateman shall advise to SM on duty regarding the defects/obstructions at the gate under exchange of private number.
- iv) If there is no response from SM after two/ three attempts, he shall first protect gate & then inform on phone.
- v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item No. 1.5{5}.
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the SM who shall not start the train unless he has been assured by the gateman that, road vehicle or lifting barriers are not fouling the track.
- viii) The SM shall also inform the SM at the dispatching end, under exchange of private number, asking him not to dispatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of obstructions the gateman shall inform to SM accordingly, under exchange of PVT. No.

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- x) SM shall then issue a caution order to Loco Pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks and there after exhibit green hand signal, if the gate is not obstructed.
- xii) SM shall advise Maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will resumed only after Maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

9. OBSTRUCTION OF THE TRACK NEAR LEVEL CROSSING GATE:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment, which is visible to the gateman, the gateman and SM will adopt the procedure given under item No. 8 above. If the obstruction fouls the Level crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

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

S.N.	DESCRIPTION	REMARKS.
1	Number of Level crossing Gate.	415
2	Engineering or Traffic Gate/Classification	Traffic Gate 'C' Class
3	Under Control of Station Master/SSE P. Way.	Station Master (STLI)
4	Location at Kms.	1215/18-20
5	At Station	STLI
6	In Between Station	SLV-STLI (JHS End)
7	BG/MG/NG	BG
8	Single Line/ Double Line/Multiple Line	Double Line
9	Normal Position.	Open
10	Interlocked/ Non-Interlocked.	Interlocked
11	Means of Interlocking.	Interlocked with stop signals of the station
12	Provision of Signal at Kms.	-
13	Signalling arrangement	MACLS
14	Means of communication-Telephone/ Bell etc.	SM STLI
15	Width of Level crossing Gate	5.00 M
16	Type of Road (NH/SH/Others)	Other
17	Name of Road	Sithouli Factory
18	Metalled/ Non-Metalled	Metalled
19	Approach Road	Metalled
20	Width of the Road	6.00 M
21	Angle of the Road crossing (Incase of skew Gate)	90 ⁰
22	Road Gradient (if any) (i) North/East Side (ii) South/West side.	Level Level
23	Road Alignment (Straight/Curve) (i) North/East Side (ii) South/West Side	Straight Straight
24	Provision of Height Gauges	Provided
25	Type of Barriers.	P.O.L.B. With Sliding Boom
26	Length of check rail.	8.30 M.
27	Road surface in between Level crossing Gates	Metalled
28	Length of rumble strip/ Speed breakers	Available
29	Road signs	Available
30	Speed Breaker Indication Board.	Available
31	TVU.	36612 on 03-02-2019
32	Census next due on.	03-02-2022
33	Demarcation for placement of Detonators	Provided
34	No. of Gateman working.	2
35	Nearest Railway Medical Assistance.	STLI/GWL
36	Nearest private Medical Assistance available (if any)	GWL
37	List of Equipment available Yes/No.	Yes

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1.2 EQUIPMENT KEPT AT GATE LODGE:

S.N.	Items	Quantity/Number
01	Hand Signal Lamp Tri Colour	3
02	Hand Signal Flag Green	1 mounted on stick
03	Hand Signal Flag Red	3
04	Banner Flag Red	3
05	Posts for exhibiting red banner flag	2
06	Spare chains with padlocks	2 with stop mark
07	Detonators	10 in plastic case
08	Gate lamps	2
09	Tommy Bar	1
10	Mortar pan	1
11	Spade/Fowrah	1
12	Hammer	1
13	Pick Axe	1
14	Tin case for flags	1
15	Can for Oil	1
16	Water pot/Bucket	1
17	Canister For muster Roll	1
18	Set of spare spectacles of gateman wearing glasses	1
19	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20	Basket	1
21	Whistle	1
22	Wall clock	1

1.3 RECORDS 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) Gateman Rule Book in Hindi/English.
- (3) List for tools and books.
- (4) Duty Roster.
- (5) Certificate for working as gateman
- (6) Bio-data particulars of Gatemen, including date of passing vision test, Initial/ refresher course, safety clamp, etc.
- (7) Accident Register.
- (8) Record of last census of road traffic at level crossing gate.
- (9) Public complaint book
- (10) Inspection Book

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1.4 MODE OF OPERATION: When level crossing gate is required to be opened for passage of road. Detailed working given in “ working instruction “ (1).

1.5 DUTIES OF GATE MAN:

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

(2) POSITION DURING PASSAGE OF TRAINS:

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

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

(3) ROUTINE DUTIES OF GATEMAN:

- i) Gateman shall ensure that red banner flag/red light is placed across the track whenever the gate is kept in open condition at non-interlocked level crossing and during emergencies or obstruction on track, at other types of gate.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sun set to sun rise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the Gate unless reliever arrives and takes charge of it, However, if it is necessary to leave the Gate in an emergency, he must close and lock the Gate against road traffic, before leaving the Gate.
- iv) Except where otherwise prescribed under special instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like Hot Axle, hanging chains, hanging battery, any vehicle/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.
- vi) Gateman shall also be prepared to repeat any signal which guard may give to Loco Pilot on Walkei Talkei or in any other way.
- vii) If Lifting barriers Gate get damaged or becomes out of order, the Gateman shall use the spare chain with the disc and padlock for securing the Gate against Road Traffic.
- viii) Gateman shall report to the nearest Station Master, Gang mate or SE (P. Way) any defect in his Gate or apparatus pertaining to it, as soon as possible.
- ix) In the event of the Gate signal becoming defective the Gate man shall maintain the signal in the ‘ON’ position even by disconnecting the signal or the wire if necessary.
- x) Gateman shall ensure that he is having Competency certificate in his possession while on duty.

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- xi) Gateman shall work the Gate as per Gate working instructions and remain well conversant with these instructions.
- xii) Gateman shall ensure that equipment supplied at the Gate is in good order and ready for immediate use.
- xiii) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xiv) Gateman shall keep the road surface well watered and rammed in case of un-metalled roads.
- xv) Gateman must be vigilant to see that inconvenience to Road users due to closure of Gates should be to the minimum possible extent.
- xvi) Gateman on electrified section shall watch that road vehicles/ animals passing from the gate are with in the height-loading gauge provided on either side of the level crossing Gate.
- xvii) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

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

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

- (i) He shall take prompt action to warn the Loco Pilot and guard of the passing train by showing red flag by day and flashing red light by night.
- (ii) But in case of train parting, gatemen shall not show stop hand signal and shall show prescribed signal for train parting i.e. green hand signal during day and white light during night waving up & down vertically.
- (iii) He shall simultaneously, try to draw attention of the loco pilot and guard by whistling continuously, shouting gesticulating, throwing ballast on the brake van or by any other means.
- (iv) If Loco Pilot and guard fail to take notice, gateman shall immediately inform the SM/ASM, if connected on telephone, to take appropriate action, under exchange of private number.

(5)(a) 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, shall immediately advise the Station Master/Cabin man 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 SM after two or three attempts, he shall first protect the gateman and then inform on phone.

(b) OTHER ACTION TO BE TAKEN BY GATEMAN:

- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub Para (a) above.
- ii) If the gate is broken by a road vehicle which is, 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.

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- iii) He shall note down the particulars of the road vehicle, vehicles number, name of the Driver and owner and relay these details to the nearest Station Master/ASM or JE/SE/SSE (P.Way) regarding the particulars and obstructions at the level crossing gate, through messenger or other means available.
- 1.6 For visibility requirements at level crossings, provision of speed breakers on the approach roads of level crossings and census of traffic at level crossings are described in Paras 916, 918, 919 of IRPWM.

WORKING INSTRUCTIONS FOR TRAFFIC LEVEL CROSSING GATE INTERLOCKED, PROVIDED WITH TELEPHONE, WITH NORMAL POSITION “OPEN TO ROAD TRAFFIC.

1. Mode of operation:

- (i) This gate is interlocked and provided with lifting barriers operated by a power operated panel. The following Buttons & indications are provided this gate panel.
- a) Green Button - For opening the gate barrier.
 b) Red Button - For closing the Gate barrier.
 c) Green indication - Gate opened indication.
 d) Red indication - Gate closed indication.
- (ii) The normal position of lifting barriers is open for road traffic, which is indicated on the control panel by a green light
- (iii) Whenever the signals are required to be taken ‘off ‘ for the reception of a DN train or for an UP train to leave across the level crossing gate, the SM on duty will instruct the gateman on duty to close the barriers against the road traffic .
- (iv) The gateman will close the barrier against the road traffic by operating, the gate operated panel pressing the red button till the barrier is fully operated and closed against road traffic and a indication will appear on gate panel. After this gateman will press the push button provided on gate operating panel to transmit the ‘ Gate closed position’ to SM’s panel and SM who will observe the closed indication ‘Yellow Steady light’ and will take ‘OFF’ the signal. During the closing of Gate, hooter starts, till the control is not transmitted to SM by Gateman through push button.
- (v) After passing the UP/DN train SM released control by pressing XXN and XN button simultaneously for opening the gate barrier yellow light will lit at gate and Gateman can be opened the Gate barrier, by pressing the green button on the gate operating panel till the barrier is fully operated and opened for Road traffic and a green indication appeared on panel

NOTE:After the control has been released from the panel for the gate to be opened, the steady (Yellow/white light) indication on the control panel will change into a flashing (Red light) indication which will continue till such time gate is opened by the concerned gateman then a steady RED light indication will appear (above the concerned XRN button) on the control panel. When the gate is required to close for road traffic, to pass the train SM on duty will advise to the gateman to close the gate. Gateman will close the gate for road traffic as written in (Para iv) above.

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After receiving control from gate, the SM on duty will withdraw the control by the pressing XN and XRN button simultaneously then flashing red indication will replace to steady yellow then gate will locked for road traffic and SM can take 'OFF' respective signal/signals for the reception /dispatch of the train.

2 Intimation to Gateman:

- i. The SM shall intimate the Gateman through telephone connected at his end about movement of trains proceeding towards the level crossing gates.
- ii. The Gateman shall close the gate and transfer the key to the Station Master.
- iii. The reception/departure signals will then be taken 'OFF':
- iv. In order to ensure that road traffic is not held up for a long time, the Station Master must ensure that the train is ready for departure in all respects before he advises the Gateman for closing the gate.
- v. When the train has to be piloted to and from the station yard or any shunting movement is to be done, the staff deputed to pilot the train or to perform shunting across the gate shall be personally responsible to ensure that the gate is closed against road traffic before allowing any movement across the gate.
- vi. After the passage of train, the SM shall release the gate control and advise the gateman.

3. FAILURE OF TELEPHONIC COMMUNICATION:

- When telephonic communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted.
- (i) Station master on duty shall send return advice to the Gateman through the Porter/ Points-man with full details of number/ description and direction of the train.
 - (ii) Gateman on receipt of such advice shall close the gate and transmit the key to Station Master will enable them to take 'OFF' reception/ departure signals.
 - (iii) When sufficient time is not available because of greater frequency of service, Station Master will issue written authority to the train Loco Pilot to pass the signal at 'ON' position.
 - (iv) In addition Station master shall also issue caution order advising the Loco Pilot to whistle continuously and approach the gate cautiously.
 - (v) The train Loco Pilot shall be instructed to pass the gate cautiously on being hand signalled by the Gateman. If hand signal is not seen, Loco Pilot should be prepared to stop short of the gate and ensure the gate is closed following GR 3.73(2)(b).
 - (vi) In case of approaching train the Station Master shall advise the Station Master at the dispatching end, under exchange of private number that the telephone at the gate has failed.
 - (vii) The Station Master at the dispatching end shall then issue a caution order to the Loco Pilot before dispatching a train in the block section from his end.

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- (viii) He should advice S & T staff responsible for maintenance of the telephone to rectify the defect at the earliest.
- (ix) Normal working will be resumed only after S & T staff rectifies the telephone and issues reconnection / fit memo for the same.

4. Failure of Lifting Barriers:

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

NOTE:

- (A) In case of failure of lifting barriers gates worked, SM will send station porter to secure the gate against road traffic by safety chains and padlocks.
- (B) Authority to pass signals at 'on' position as per rules shall also be issued to the loco pilot of both departing and arriving trains.
- (c) In case of lifting barrier in OPEN position the road signal should be switched ON to "RED" by operating the switch.

5&6. Failure of the Gate barrier with the gate in open condition/closed condition in case of power supply Failure:

- i. If the gate cannot be closed & opened then gateman must immediately inform the SM/ASM/CASM on duty on telephone, under exchange of private number.
- ii. Thereafter, the gate must be treated as non-interlocked and procedure for reception /dispatch of trains as prescribed for non-interlocked gates, should be adopted
- iii. The gateman shall secure the gate against road traffic by means of chains and padlocks and Pad locks and pass trains on hand signals
- iv. Station Master on duty shall issue a caution order to the Loco pilot of a departing train.
- v. He shall also advise the SM at the dispatching end, under exchange of private number , to similarly issue a caution order to the Loco pilot before dispatching a train in the block section from his end.

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- vi SM shall advise S & T staff responsible for maintaining the gate to repair the same at the earliest.
- vii Normal working will be resumed only after S & T staff repair the gate and issue reconnection/fit memo for the same.

a. USE OF EMERGENCY GATE CRANK HANDLE:

In case when lifting barrier fails to operate due to failure of power supply or on account of failure of barrier, Crank handle with key for manual operation of gate, is kept at gate lodge in a sealed box. Gateman shall break open the seal of the box. Before this he shall inform the SM who will keep the relevant signals permitting trains through the gate should be at 'ON'. SM will further ensure that no trains shall be permitted unless crank handle is brought back at gate lodge after closure of gate and relevant indications are available on gate operating panel. To open gate, crank handle shall be inserted into the motor of the boom in the groove provided for the purpose after unlocking the boom at boom stop by key on one side of the boom. Similar action is required for opening of second boom. S&T staff shall immediately be advised in case of failure of barrier and use of crank handle for LC gate. S&T staff shall also reseal the box after normal working is resumed.

NOTE: An emergency switch is provided in the gate lodge in a glass fronted sealed and locked box, which when turned by breaking glass of box, will replace concerned signals protecting Gate to 'ON'. Failure of barrier and use of crank handle for LC gate should be recorded in a register provided for this purpose. S&T staff should also reseal the box after normal working is resumed.

(B) WORKING OF SLIDING BOOM:-

i. Mode of operation for closing gate by Sliding Boom:

The gate is provided with one additional sliding boom on each side of power operated lifting barrier. Each sliding Boom will be parallel to the existing power operated lifting barrier of it's side and would normally so positioned that the complete body of the boom is lying away from the road i.e. no part of the sliding Boom shall normally project on to the road leading to the L.C. gate. The Sliding booms installed are meant to be used in case of emergency when the power operated lifting barriers are damaged or close indication not found due to any reason. These are normally locked on its post, with padlock. The keys inside the locks provided on the boom stands.

There can be the following conditions necessitating the use of Sliding Boom Barriers:

- a. When the gate barriers are damaged during Opening/Closing of the gate or the gate is in open condition.
- b. Whenever the gate is broken during closing, opening or in open condition the gateman will inform the SM on duty who in turn will inform the S&T staff for rectification/replacement of the damaged lifting gate/barriers.

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- c. when the close indication failed due to any reason.
The gateman, after getting specific instruction from SM on duty will turn the road switch provided at gate to reverse position to through the road signal to danger and start closing the Sliding Boom during this process he will slide the sliding boom of side “A” by pulling the handle to close position up to stand provided for the purpose.
He will insert the chained key marked “X” in the boom stand lock and lock it, a key marked “Y” will be released, thereafter he will go to the other side “B” and by pulling the handle to close position of the sliding Boom up to its boom stand will insert the chained key marked “X” in the boom stand lock and lock it. Also insert the “Y” key in the lock marked “Y” and turn clockwise in boom stand of side “B”. After locking both keys in “B” side a 3rd key “Z” will be released. The gateman will take the key, apply it to the T-2 lock/KLCR fitted in the gate lodge and turn it after doing that he will now turn barrier switch to reverse position to activate the gate control relays to energies.

NOTE:

- a. At the time of operating the sliding boom gate man can put back the road signal to RED by operating the RSR switch, provided in gate lodge and after Complete closing of sliding boom the road signals get locked in Red position.
- b. When the gate is secured by sliding boom and close indication found the controlling signals allowing the train movements towards the gate will be take off to normal aspect.

ii. Mode of opening the sliding Boom:

For opening of the sliding boom after passage of the train, gateman will get specific permission from ASM on duty for opening the sliding boom to clear the road traffic. After getting permission from ASM, gateman will take out Z key from T-2 lock/KLCR apply it in sliding boom of Z lock and adopt procedure in reverse order of closing the sliding boom to clear the road traffic. Now he will turn the road switch to the normal to clear the road traffic. Now he will turn the road switch to the normal to clear the road signal/.ake out “Z” key from T-2 lock/KLCR apply it in sliding boom of “Z” lock and adopt procedure in reverse order of closing the sliding boom to clear the road traffic.

ROAD TRAFFIC SIGNALS:-

Road traffic signals are provided on tubular posts on each side of LC for road users at a suitable location so as to be visible clearly to the approaching vehicles. The road traffic signals shall show the following aspects.

- i) Steady Red aspect to indicate the ‘closed’ condition on the road barriers.
- ii) Steady Yellow aspect to indicate the “OPEN” condition on the road barriers.
- iii) When POLB becomes defective in open condition then Gateman can put back the road signal yellow to “RED” by operating the road signal switch provided on gate panel in gate lodge for the purpose if it becomes necessary.

HOOTERS:-

Hooters mounted on posts near each barrier pedestal and working in conjunction with the road traffic are provided to warn the road users to the imminent closing of barrier while the barrier is being closed. The hooters shall cease sound when the barriers are closed.

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7. Obstruction at the Gate:

- i. If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gate man shall immediately fix red banner flag by day and red flashing lamp by night on posts provided at both ends of the gate, for this purpose.
- ii. Immediately after this, the gate man shall advise the Station Master on duty, regarding the defects/obstruction at the gate, under exchange of private number.
- iii. Station Master on duty shall be advised to put the reception/departure signals back to 'ON' position, if taken 'OFF' for a train.
- iv. If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- v. He shall note down the particular of the road vehicle, name of the Driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the Gateman that the road vehicle or the lifting barriers are not fouling the track.
- vi. 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.
- vii. After the track has been cleared of all obstructions the Gateman shall inform the Station Master accordingly, under exchange of private number.
- viii. Station master shall then issue a caution order to loco pilot of all trains to proceed cautiously, and pass the reception/departure signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstructions.
- ix. 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.
- x. Station Master shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xi. Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection/fit memo for the same.

8. Obstruction on the Track near Level Crossing:

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

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APPENDIX - 'B'

SYSTEM OF SIGNALLING AND INTERLOCKING:

- (1) SITHOULI is a 'B' Class Station Interlocked to Standard-III. The Station is equipped with Multiple Aspect Colour Light Signals, which are worked from the Panel Instrument installed in the Station Master's Office. Fixed Signals viz. Distant, Inner Distant, Home, Starter and Advanced Starter and Calling-on Signals below UP & DN Home Signals are provided in each direction. IBS signals are provided in UP & DN direction, in addition, independent/dependent Shunt Signals are also provided for controlling Shunting movements. Points are Motor operated and also provided with Interlocked Crank Handle. Details of signalling arrangements are as under.

1.1 TRACK CIRCUIT:

- i) UP and DN main lines from calling on track circuit in rear of Home signal to Advanced starter track circuit ahead of respective Advanced starter signals are continuously DC track circuited including zones of cross over points connecting UP and DN main lines.
- ii) 2GF (11) & 2GF (12) point zone and portion of DN loop line between FM to FM of these points as well as zones of point number 102 both ends of point number 103 are provided with axle counters.

Details of Signalling gears are as follows:

SIGNALS CONTROLLED BY PANEL		
(A) Main Signals	Number	Details
UP Home signal	S – 38	3Aspect with one Route
UP Main line starter	S – 35	3Aspect
UP Loop line starter	S - 34	2Aspect
UP Advance starter	S – 22	2Aspect
UP IBS signal	S – 21 (STLI-SLV)	2Aspect
DN Home signal	S – 2	3Aspect with Route
DN Main line starting	S – 4	3Aspect
DN Loop line starting	S – 5	2Aspect
DN Advance starting	S – 16	2Aspect
DN IBS CUM G signal 418 Inner distant	S- 18 (STLI-GWL)	3Aspect

(b) Subsidiary signals		
UP Calling ON Signal	CO-38	Below UP Home signal
DN Calling ON Signal	CO-2	Below DN Home signal
(c) Shunt signals		
	SH-9, SH-14, SH-15, SH-17, SH-29,	Independent.
-do-	SH-5	Dependent.

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(d) POINTS CONTROLLED BY PANEL:		
Double ended (Motor operated)	101	DN Main to UP Main (Emergency X-over)
	102	UP Loop to Ballast Siding. No.1
	103	UP Loop to up Main
	104	DN Main to DN Loop
	112	UP Main to UP Loop
	111	DN Loop to DN Main
	113	UP Main to DN Main (Emergency X-over)
Single Ended (Motor Operated)	NIL	
Double Ended (G.F. Operated)	2G.F-11	DN Loop line to Ballast siding -2 (JHS end)
	2G.F-12	DN Loop line to Ballast Siding-2 (DLI end)
TRACK CIRCUITS 224AXT	202T, 203T, 204T, 205T, 206T, 211T, 212T, 222T, 223T, 224T, 224AXT, 225T,	DN Main Line
TRACK CIRCUITS 210 AXT	209T, 210T, 210AXT, 219T,	DN Loop Line
TRACK CIRCUITS 232 AXT	231T, 232T, 232AXT, 233T, 234T, 235T, 241T, 242T, 252T, 253T, 254T, 255T. 258T, 259T	UP Main Line
TRACK CIRCUITS 249 AXT	236T, 237T, 249AXT	UP Loop Line

(e) AXLE COUNTERS IN YARD:		
1) DN Loop Line Cum Point Portion of 2GF(11) & 2GF (12)	210 AXT	4 Detection point Axle counter provided on DN loop line covering track portion between track circuit 210T to 219T including 2 GF (11)& 2GF(112) point zone.
2) UP Loop Point No. 102 both end & 103 DLI end Point Zone portion	249AXT	3 Detection point Axle counter provided covering Point Zone portion of Point No. 102 both end & 103 DLI end .
3) Dn Line	224 AXT	2Detection point Axle counter provided on Dn Line is parralel of track.
4) UP Line	232 AXT	2Detection point Axle counter provided on UP Line is parralel of track.

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(f) SS DIGITAL AXLE COUNTER		
Axle Counter STLI on UP Line	UP XT	2 Detection point Axle counter 'UP XT' is provided between UP Advanced starter signal STLI and UP IBS STLI and 400 Mtrs. Beyond it. (Covered under DC track circuit No. 259) on UP line.
SS DIGITAL AXLE COUNTER		
(g) Axle Counter UP IBS STLI-SLV on UP Line	UP BXT	2 Dual detection point Axle counter 'UP BXT' is provided between UP IBS STLI and UP Home signal of SLV including its overlap on UP line.
(h) MULTI SECTION DIGITAL AXLE COUNTERS		
Axle Counter SLV-STLI on DN Line	DN 'T1'-SLV	2 Detection point Axle counter SLV 'DN' 'T1'- is provided between DN Advanced starter signal SLV and DN IBS signal SLV & up to a point 400 mtrs. Beyond, on DN line.
Axle Counter SLV-STLI on DN Line	DN 'T2'-SLV	2 Detection point Axle counter 'T2' is provided between DN IBS SLV and 400 mtrs. Beyond it.
Axle Counter SLV-STLI on DN Line	DN 'T3'-SLV	2 Detection point Axle counter 'T3' is provided between DN IBS SLV and DN home signal of STLI including its overlap on DN line.
Axle Counter STLI on DN Line	DN 'T1'-STLI	2 Detection point Axle counter 'T1' is provided between DN Advanced starter signal STLI and DN IBS SIG CUM GATE 418 INN DIST STLI & up to a point 400 mtrs. beyond, on DN line.
Axle Counter STLI-GWL on DN Line	DN 'T2'-STLI	2 Detection point Axle counter 'T2' is provided between DN IBS STLI and 400 mtrs. Beyond it.
Axle Counter STLI-GWL on DN Line	DN 'T3'-STLI	2 Detection point Axle counter 'T3' is provided between DN IBS STLI and DN home signal of GWL including its overlap on DN line.
Axle Counter GWL-STLI on UP Line	UP 'T5'-GWL	2 Detection point Axle counter 'T5' is provided between UP Advanced starter signal GWL and UP IBS GWL & up to a point 400 mtrs. beyond, on DN line.
Axle Counter GWL-STLI on UP Line	UP 'T6'-GWL	2 Detection point Axle counter 'T6' is provided between UP IBS GWL and 400 mtrs. beyond it.
Axle Counter GWL-STLI on UP Line	'UP 'T7'-GWL	2 Detection point axle counter 'T7' is provided between UP IBS GWL and UP Home signal of STLI including its overlap on UP line.

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(j) BLOCK INSTRUMENT:

STLI-SLV (Block Section)	Controlled by SGE Block Instrument with dual Block proving by axle counter between STLI UP IBS and SLV UP home signal including its overlap on UP line and between SLV DN IBS signal & STLI DN home signal including its overlap by MSDAC DN line.
STLI-GWL (Block Section)	Controlled by SGE Block Instrument with MSDAC Block proving by axle counter between STLI DN IBS sig cum G 418 inn-Dist. and GWL DN home signal including its overlap on DN line and between GWL UP IBS & UP home signal STLI including its overlap on UP line.

1.2 SIGNAL AND ROUTE TABLE:

The description of the signals, their routes, controls as well as signal/control button and route button/special button, which are required to be pressed and released for clearing any particular signal or releasing any control, is given below. The number of the signal/route corresponds with that of the buttons on the control panel:-

No.	Signal No.	Description	Signal Button	Route Button
1.	S-2 (1)	DN Main to DN Loop Home up to S.5 (Approach)	S-2	DN LP
2.	S-2 (2)	DN Main to Down Main Home up to S.4 (Approach)	S-2	DN MN
3.	CO-2 (1)	'Calling ON' from Down Home to DN Loop Line.	S-2	COGGN & DN LP
4.	CO-2 (2)	'Calling ON' from Down Home to Down Main Line.	S-2	COGGN & DN MN
5.	S-4	Down Main to Down Main (starting)	S-4	224
6.	S-5	Down Loop to Down Main (starting)	S-5	224
7.	SH-5	DN shunt from DN loop line SH-5 to Down Main line up to S-16	SH-5	224
8.	SH-9(1)	DN shunt from UP main line to up main line upto SH-15.	SH-9	UP MN
9.	SH-9(2)	DN shunt from UP main line to up loop line up to SH-14.	SH-9	UP LP
10.	SH-14	DN shunt from UP loop line to down main line up to S-16	SH-14	224
11.	SH-15	DN shunt from UP main line to down main line up to S-16	SH-15	224
12.	S-16	DN Advance starter signal (Departure)	S-16	DN MN DEP
13.	SH-17	DN Shunt from Ballast Siding No.2 to Sig No-S/SH-5 DN loop line & released by SH- 5	SH-17	2GF-12
14.	S -18	DN Intermediate Block Stop Signal (STLI-GWL)	S- 18	DN 2T UN
15.	S-21	Up Intermediate Block Stop Signal (STLI-SLV)	S-21	259
16.	S-22	UP Advance starter signal (Departure)	S-22	UP MN DEP

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17.	SH-29(1)	UP shunt from DN Main line to up loop line up to S-34.	SH-29	UP LP
18.	SH-29(2)	UP shunt from DN Main line to up main line up to S-35.	SH-29	UP MN
19.	SH-29(3)	UP shunt from DN Main line to down main line up to stop board no-1.	SH-29	DN MN
20.	SH-29(4)	UP shunt from DN Main line to down loop line up to stop board no-2.	SH-29	DN LP
21.	SH-29(5)	UP shunt from DN Main line to ballast siding no-2 up to stop board no-3.	SH-29	BS-2
22.	S-34	UP Loop Line to UP Main Line (starting)	S-34	254
23.	S-35	UP Main Line to UP Main Line (starting)	S-35	254
24.	S-38(1)	UP Main to UP Loop line(Approach)	S-38	UP LP
25.	S-38(2)	UP Main to UP Main Line (Approach)	S-38	UP MN
26.	CO-38(1)	'Calling ON' from UP Main to UP Loop line up to S-34	S-38	COGN & UP LP
27.	CO-38(2)	'Calling ON' from UP Main to UP Main Line up to S-35	S-38	COGN & UP MN

Note: -After pressing and releasing COGN button concerned signal button and route button to be pressed.

2. DESCRIPTION AND OPERATION OF CONTROL PANEL.

The combined Control Panel and illuminated diagram has been provided in SM's Office. This depicts a schematic reproduction of the track layout of the station; various buttons for operation of points, routes, signals, crank handle key release. The signal aspects are provided on the control Panel. The adjoining track circuit has been shown in different colours. The following colour Scheme is employed for the various buttons provided on the Control Panel. According to the colour scheme employed for the panel buttons, all the buttons with the exception of the following are of Grey colour.

- | | |
|--|---------------------|
| 1) Main Signal Buttons | RED |
| 2) Emergency Signal Cancellation | RED |
| 3) Common Button for Calling ON Signals. | RED |
| 4) Shunt Signal Buttons | YELLOW |
| 5) Common button for point | BLUE |
| 6) Emergency point button | BLUE |
| 7) Individual point buttons. | BLUE WITH WHITE DOT |
| 8) Button for silencing buzzer for failure of point/signal . | BLUE/RED |
| 9) Slot button | GREY |

3. Description of Buttons provided on the Control Panel.

In addition to the signal, Point and route buttons, which are numbered and located in the corresponding position on the Control Panel, the following special buttons are provided on the Control Panel. To identify the special purpose of certain buttons, the following codes are given under the button concerned as described below: -

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1. M1/M2/M3 are three indications which indicate power supply availability of UP AT/ DN AT/Stand by supply respectively.
2. XYN - P - for Point.
XYN - CH - for Crank Handle.
XYN -S - for Signal.
The above three Buttons with indication are provided on panel. Whenever any point/Crank Handle/signal fails, the concerned light glow and bell/buzzer start ringing. To stop the bell/buzzer and to extinguish light the concerned button is to be pressed.
3. COGGN - Common button for 'CALLING ON' signals with counter.
4. CHYN - Crank handle release button.
5. CHYRN - Crank handle release back button.
6. EUYN - Button for emergency sub route section release button with Counter and key for cancellation.
7. EUUYN - Button for emergency route cancellation with counter.
8. ERN - Common Button for emergency signal cancellation.
9. XXN - Common button for releasing slot to gates.
10. XRN - Common button for receiving back control from gates.
11. YYN - Common button for releasing slot to GF.
12. YRN - Common button for receiving back control from GF.
13. YN GF (11) -Button for releasing control to Ballast siding No.2 (JHS end)
14. YN GF (12) -Button for releasing control to Ballast siding No.2 (DLI end).
15. EWN - Button for Emergency operation of point with counter.
16. OYN - Group button for overlap cancellation with counter.
17. WWN - Group button for point operation.
18. NCR - Normal detection indicator. These are four indicators namely S, R, P, CH on which denote for Signal, Route, Points & Crank Handle respectively.
19. 210AXT, 224AXT & 249AXT resetting button key with counter.
20. SM's Key - This key is taken out by SM, ASM to avoid unauthorized operation of the panel in his absence.
In case panel sized to operation, SM/ASM must see that SM's key is inserted and kept turned to its proper position
21. An "Emergency SM's key" has been also provided on the control panel. This key is normally to be kept "OFF" and remain in safe custody of SM/ASM on duty and to be used when main SM's key 'OUT ' indication (Red) appears on panel due to main SM's Key contact failure. The Emergency SM's key will be used by SM/ASM on duty by turning the key to 'ON' to normalize the panel operation. After verifying the SM's key "IN" indication (Yellow) on the panel and the failure of main SM's key to be advised to on duty S&T staff available at station.

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NOTE:-

- (a) Emergency point operation button will be kept sealed by SE/JE/ESM. Whenever this button is made use of, after the seal is broken, the SE/JE/ESM should be advised immediately so that the button can be re-sealed. Use of the button should be recorded in a register.
- (b) The operation of EUYN button is controlled by a key, which remains in the custody of ASM/SM on duty. Whenever this button is made use of. Use of this button should be recorded in detail in a register.

3.1 Panel Indications:**[a] POINT INDICATIONS :**

The position of the points is indicated on the Control Panel by the illuminated rectangular slit near the point on the panel. The normal setting of a point is indicated by the illuminated slit on the straight route and the reverse setting by the illuminated slit on the diverging route. These slits will display a steady white light if the points are properly set and the Track Circuits controlling the points are clear or a steady red light if the track circuits controlling the points are occupied or have failed. In the event of a point failing to set properly, this steady light will change in to a 'flashing' light. The flashing indication will also appear for a short period when the points are being moved from one position to the other.

The SM on duty should not mistake this as a point failure unless the flashing indication continues for more than 10 seconds. No setting of Route should be initiated over points showing 'flashing Indication. When any particular points are engaged by a route, this will be indicated on the panel by a small white light provided in round slit indicating that the points are not free for operation, when this indication appears, the SM on duty must not interfere with the points.

[b] Signal Indications:

The main signals lit aspects are repeated on the panel as steady aspects. The steady aspects of main signals indicated on the control panel are repetition of the aspects displayed at site. Slanting white strip illuminated above OFF aspect indication of that signal indicates diversion route signal. In case of shunt signals on independent posts the 'ON' and 'OFF' aspects are indicated on the Control Panel by the horizontal and slanting/diagonal white slits/strips respectively.

NOTE: 'Calling ON' signals have been provided below Up Home Signal and Down Home Signal. The clearance of the 'Calling ON' signal indicated by a circular Yellow Light below Red light indication of that signal on the control panel.

[c] Route Indications:

When the route is set by operation of the signal button along with the concerned route button, white lights will appear in the slits on the portion of the track circuited section, covering the route up to the next signal and the overlap.

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The white lights on the track-circuited portion will change into 'Red' lights when a train or vehicles occupy the track section and until the track is clear again. After the passage of the train when the track section is clear, the white lights will re-appear and will extinguish only when the route gets cancelled. In case of shunt signals only that portion of the route excluding the berthing tracks and non-track circuited portion will be illuminated by the appearance of white route lights.

[d] Point or signal lamp Failure indications:

In the event of a Point Failure or Failure of a Signal Lamp, the concerned Point or signal Indication on the control Panel will change from steady light to a flashing light. In the case of any Signal, if the 'Green' indication only is flashing, this will mean that the green lamp of the concerned stop signal and in case of Distant signal off aspect Lamp has fused, but the signal is exhibiting an 'OFF' aspect. But if the green flashing indication on the panel is also accompanied by the steady red indication, this will mean that the off aspect lamps of the Signal have fused and that the signal is exhibiting the 'ON' aspect. The failure of Red lamp of a signal will be indicated by a flashing red indication on the panel. In the event of failure of red lamp of a signal, the flashing red indication on the panel also is accompanied by an audible alarm. On hearing such an alarm and on seeing the flashing indication, the SM on duty should press the signal/point ack. button to silence the buzzer. Pressing of this button will cause the audible alarm to stop and an illuminated letter 'S' or 'P', as the case may be, will continue to appear on the panel which will remain till the failure is rectified.

On hearing audible alarm and noticing the fusing of Red lamp of Home signal or blanking of distant signal of both UP & DN lines, SM on duty will immediately advise the concerned Station Master of the station in rear to issue caution order to the Loco Pilot of the train to be vigilant and see the blank signal. He will also take action to advise ESM to replace the fused signal lamp.

[e] BOBBING/FLICKERING SIGNALS: -

Whenever signal changes its aspect in succession, shall be treated as bobbing/flickering signal and shall be considered as showing the most restrictive aspect and it should be allowed to pass by observing instructions contained in SR:3.68, 3.69, 3.70 and & SRS there under.

The SM/ASM on receipt of information of a bobbing/flickering signal shall record the defect in the failure register and advise SE/JE/ESM concerned immediately to rectify the defect. Such failures should also be reported to the section controller, who will record the same on the chart and take action accordingly.

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[f] Power Supply Indications.

- i) There are three power supplies available at this station namely [1] UP AT Supply, [2]DN AT supply and [3] Local SEB supply. Indications of availability of all these supplies are made available on Automatic cum Manual changeover panel in SM's room.
- ii) The availability of any one AT supply at IBH is indicated by a 'Yellow' LED indication provided at STLI station. In case of both AT supply failure at IBH 'Yellow' LED AT indication will be disappeared.

[g] Indication for prolonged Operation of Group Buttons:

If any button is kept pressed for more than 15 seconds, Button Detection (NCR) indication will appear on the panel along with audible buzzer. When this indication appears, the button should be released immediately. If the 'NCR' indication appears due to any button not returning back to its normal position even after being released, the SM on duty should advise the ESM.

NOTE: To facilitate detection as to which button i.e. Signal or Route or, Point or Crank handle has not returned to its normal position, separate indications S, R , P,CH are provided on the panel. These indications will be available when no button is pressed. When a button is pressed, concerned group indication will disappear from the panel.

[h] INTENSITY OF INDICATIONS:

There are four buttons provided in the panel numbered (1), (2), (3) & (4) by the operation of any of these buttons, the intensity of the panel operation can be increased or decreased by the SM depending upon the visibility of illumination required by him during day or night.

[i] FLASHING INDICATIONS:

Functioning of the flasher relay is repeated on the panel by continuous flashing indication. Availability of this indication on the panel will indicate to the SM on duty that the flasher relay equipment is working satisfactorily.

In the event of flasher relay equipment becoming defective, the flashing indication on the panel will either get extinguished or become steady. SM on duty will report the failure immediately to the SE/JE/ESM.

During the period of failure of flasher relay equipment, flashing indication to indicate the fusing of signal lamps, or approach locking or incorrect setting of points etc., will not be available on the panel. Clearing of the signal, however, proves that the point involved in the route are correctly set and locked. During the period of failure of flasher relay equipment, SIGNALLED moves can be permitted without clamping and padlocking of the points involved in the route, but before authorising any UNSIGNALLED move, SM on duty must ensure that the relevant points in the route are correctly set, clamped and padlocked.

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4. PANEL OPERATION:

For every operation on the control panel, two buttons have to be pressed simultaneously and released i.e. the Signal Button and Route Button for setting route and clearing a signal or the Point and Point Group Buttons (WWN) for setting Point etc. The SM on duty must ensure that more than two buttons are not operated simultaneously at any time.

[a] OPERATION OF POINTS:

The points will at any time remain in the last operated position. A group button, WWN and individual point button near each point are provided. In order to set the points either from 'Normal' to 'Reverse' or from 'Reverse' to 'Normal', individual point button and a Point Group Button should be simultaneously pressed and released which will cause the points to change over to the desired/required position provided the points are not engaged by any route, and also the track circuit controlling the point is unoccupied.

NOTE: In the event of failure of the controlling track circuit, the points, if the points have to be operated, the SM/ASM on duty will first personally verify that the concerned track circuit is not occupied by any train and not locked in any route and then press the concerned point button simultaneously with the Emergency point operation button (EWN) for operating the point from Reverse to Normal or Normal to reverse as the case may be and release. Each time a point is thus operated, it will be recorded on the EWN counter.

[b] Operation of Main SIGNALS:

Before setting the route for a train movement, the point in the route, the points in the overlap and the isolation points, if any, should be set individually to the required position, if not already in that position. The route can then be set and the signal taken 'OFF' by pressing the concerned Route & Signal Button simultaneously and releasing them.

[c] Operation of 'Calling ON' Signal:

Calling 'ON' signal provided below main signals can be taken OFF during the failure of track circuits, provided the requisite points have been set to the required position in the route and isolation points are set to required position. For clearing the 'Calling ON' signal under the track circuit failure condition when track immediately in rear to signal is occupied, SM on duty will set the requisite route by pressing the relevant signal button and COGGN button. Then he will release COGGN Button, keeping the signal button pressed and press concerned route button and release them. This will cause flashing white indication to appear on the right side of the signal on the panel. The 'Calling ON' signal will clear after a lapse of one minute when the flashing white indication on the panel will become steady and will disappear on clearance of Calling ON Signal.

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The Calling On signal, once cleared may not restore to 'ON' position automatically even after passage of the train, and therefore, the SM/ASM, after passage of the train for which the Calling On Signal was cleared, shall immediately restore the Calling On Signal to 'ON' position by pressing the concerned Signal button and Emergency Signal Cancellation Button (ERN) simultaneously and releasing. Every clearing of 'Calling ON' signal will be recorded on COGGN Counter.

Note: When ever in case of Main signal failed Calling on Signal should be taken "OFF" the care should be taken the through signal (Starter Signal) must not be taken "OFF" otherwise Calling on Signal should not come "OFF".

[d] Operation of Shunt Signal:

In the case of Shunting movement, the concerned point in the route should first be set individually to the required position if not already in that position. The shunt signal can then be taken 'OFF' by pressing simultaneously the concerned route Button along with the shunt signal Button and releasing both.

NOTE :After setting the route and clearing the Signal as described in clause [b] or[c] or [d], as the case may be, the SM on duty must verify from the route illumination that the train or shunt move has been signalled on to the intended line.

[e] UNSIGNALLED MOVE OVER ELECTRICALLY OPERATED POINTS:

Unsignalled movement over electrically operated points should be permitted only after personal verification that the relevant points are correctly set, clamped and padlocked as per SR: 3.68-1 of G&SR.

Whenever any unsignalled move has taken place over a point operated by an electric point machine whether in the facing or trailing direction, the SM/ASM on duty shall operate the points to the normal and reverse settings for the purpose of testing the points. After the SM/ASM has ensured that indication regarding the normal and reverse setting are correctly available. It is necessary to clamp and padlock the points as per SR-3.68.1, SR 3.68-7 & SR 3.51-1 Of G & SR.

5. RESTORING SIGNAL TO 'ON' & CANCELLATION OF ROUTE AND OVERLAP:

a] RESTORING SIGNAL TO 'ON':

Whenever it is required to put back signal to 'ON' position during an emergency or due to any other reason, this can be done by pressing the concerned Signal Button along with the Emergency Signal Cancellation Button (ERN).

b] CANCELLATION OF ROUTE ALREADY SET(EUUYN):

Ordinarily a route once set need not be cancelled as the same gets cancelled automatically by the passage of the train over the entire route and this is indicated on the Control Panel by the extinguishing of the route lights. However, should it become necessary to cancel a route already set due to any reason the SM on duty should first restore the Signal Controlling the movement over the route to 'ON' as indicated in Sub-Para[a] above.

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The SM on duty will then press the concerned Signal [other than Advanced Starter Signal] Button and the Emergency Route Release Button (EUUYN) simultaneously and release the latter (i.e.EUUYN Button) keeping the signal button still pressed and press the concerned route button.

This will release the route including the overlap, provided no train has occupied the approach track circuit. However, if the approach track circuit is occupied, the route locked flashing indication will appear (a small circular white light) at the right side of the signal. The route locked indication will remain for stipulated time interval i.e. not less than 120 seconds for the release of the approach locking. The route should then be cancelled by repeating the procedure indicated above, only after the route locked indication becomes steady. Each time the route is thus cancelled, it will be recorded on the Emergency Route Release Button (EUUYN) counter provided on the control panel. However, in the case of Advanced Starter Signals, the route will get cancelled when the signal is restored to 'ON' position by means of Emergency Signal cancellation Button (ERN).

NOTE:

- i] In case, the Route locked indication on the Panel Control extinguishes immediately before the lapses of stipulated time interval i.e. not less than 120 seconds due to the failure of equipment the SM on duty should wait for two minutes and then cancel the route in the usual manner. Further, the SM should report the failure to the ESM immediately and record the same in the S&T failure Register.

CANCELLATION OF SUB ROUTE WHEN TRACK CIRCUIT OR POINTS IN THE ROUTE ARE IN FAILED CONDITION (EUYN OPERATION):

Normally, the route set gets released automatically after the passage of the train over the same, when track circuit or point in the route has not failed. But when a track circuit or point failed after the passage of train the route does not get released either automatically or by EUUYN. The route will now be cancelled by another emergency operation called EUYN cancellation. This operation should be restored to only after verifying by personal observation by ASM/panel operator that the defective track circuit is not occupied by a train or vehicle.

- a. The ASM/ Panel operator will first turn the emergency sub-section route release key (EUYN KEY) provided on panel to reverse position for authentic operation and then press EUYN button on panel.
- b. By doing so, sub section route release timer will start and flashing yellow indication will appear on panel. Now EUYN button can be left but key will remain in turned in reverse position. After 120 sec of time lapse, flashing yellow indication will turn into steady yellow (ESUYKE) indication.
- c. After that ASM/ Panel operator will press the EUYN button and concerned route point/signal button to release the sub –section route which increment the EUYN counter.
- d. After releasing the concerned sub-section route, the ASM/ Panel operator will turn the EUYN key to normal position causing steady (ESUYKE) indication to disappear and remove the key to keep in his safe custody.

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- ii] The SM on duty will maintain a Register for recording the reading and the other details of the route cancellation with the emergency sub route section release Button (EUYN) provided on the panel.
- iii) The Register will have the following columns: -
- 1) Sr. No.
 - 2) Date & time
 - 3) Route to be cancelled
 - 4) Reason for cancellation of the route.
 - 5) The train No. before/after which route to be cancelled.
 - 6) Sig. of the SM/ASM on duty
 - 7) Time route cancelled
 - 8) Reading of the EUYN counter after cancellation of the route
 - 9) Remarks

c] Cancellation of overlap:

After the train arrives and occupies the berthing track, the overlap gets automatically released after the lapse of a stipulated time interval of 120 seconds. Should the overlap (having points in the overlap) not get released automatically after the arrival of a train due to any reason, which will be indicated by the overlap portion remaining illuminated, the SM on duty should press the Route Button behind the overlap and the Overlap Release Button (OYN) simultaneously and release them. This will enable the overlap to be released each time the overlap is thus released, it will be recorded in the 'OYN' Counter provided on the Control Panel.

d] Recording of the readings of Counter:

Operation of the following Buttons are recorded on the counters provided separately for each of these Buttons:

1. Emergency Point Button (EWN)
2. Emergency Route Release Button (EUUYN).
3. Overlap Release Button (OYN).
4. Emergency Route Section Release Button (EUYN).
5. Group Button for Calling ON signal (COGGN).
6. Up axle counter button for resetting (STLI UP ADV –STLI UP IBS).
7. Down Loop line cum 2GF(11) & 2GF(12) point Zone axle counter button (DN Loop 210 AXT)
8. Point No. 102 both end & 103 DLI end Point Zone portion of axle counter button for resetting (249 AXT)
9. Up. IBS (STLI-SLV) passed at 'ON'. resetting button.
10. UP Axle Counter Resetting - UP BXT, (SLV-STLI)
11. DN advanced starter SLV to DN IBS SLV axle counter resetting co- operation push button - DN 'T1' (SLV-STLI)
12. DN IBS Signal SLV passed at 'ON' resetting co- operation button counter.

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- 13 DN MSDAC resetting button - DN 'T3'(STLI - SLV)
- 14 DN advanced starter STLI to DN IBS STLI axle counter resetting push button- DN 'T1' (STLI – GWL)
- 15 DN. IBS (STLI-GWL) passed at 'ON' resetting button.
- 16 DN MSDAC resetting co- operation button - DN 'T3'(STLI - GWL)
- 17 Up advanced starter GWL to Up IBS GWL axle counter resetting co- operation button - UP 'T5' (GWL- STLI)
- 18 UPIBS Signal GWL passed at 'ON' resetting co- operation button counter.
- 19 UP MSDAC resetting button - UP 'T7' (GWL- STLI)

The SM on duty should keep a proper record of all such operations. Separate Registers should be maintained for each of the above buttons wherein each time the Button is operated, the reading on the counter should be recorded stating clearly the circumstances under which the emergency operation had to be resorted to. The SM on duty before handing over charge to his reliever should record the last reading of all the counters in the concerned Registers.

The SM who takes over the charge must verify by actual observation of the readings, on the counters that the last readings on the counters have been correctly recorded in the appropriate Register and the registers should be signed by the SM on duty in token of it.

6. SIGNALS AND SLOT WORKED FROM THE SM's PANEL AT STATION:

DN DISTANT SIGNAL:

This signal is placed at distance of 2000M from DN Home signal & shows attention aspect (Two Yellow light one above the other) in normal position.

CLEAR ASPECT:

(One Green Light) of this signal is controlled automatically in conjunction with clear aspect or Attention (with Caution aspect of DN Home Signal No.S-2 for Main Line) aspect of DN Inner distant signal.

DN INNER DISTANT SIGNAL:

Caution aspect (One Yellow Light). This signal is placed at a distance of 1000M from DN Home signal & shows caution aspect in normal position.

ATTENTION ASPECT:

(Two yellow lights one above the other) of this signal is displayed automatically in conjunction with the Caution aspect or yellow with route of DN Home Signal No. S-2.

CLEAR ASPECT:-

(One Green Light) of this signal is displayed automatically in conjunction with 'CLEAR' aspect of DN Main Home Signal No.S-2.

DN HOME SIGNAL S-2:- This signal have three aspects with one diversion route. Normal aspect of this signal is RED aspect.

CAUTION ASPECT:

One Yellow light with route or without route is displayed automatically in conjunction with DN loop line or DN main line starter signals RED aspect.

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CLEAR ASPECT:

(One Green Light) of this signal is controlled automatically in conjunction with clear aspect green aspect of DN main line starter signal No.S-4

DN MAIN LINE STARTER SIGNAL S-4:

This signal have three aspects i.e. Red yellow & green. Normal aspect of this signal is Red.

CAUTION ASPECT:

One Yellow light is displayed automatically in conjunction with DN advance starter signal S-16. Caution aspect is normally used for shunting movement between starter signal and advance starter signal.

CLEAR ASPECT:

(One Green Light) of this signal is controlled automatically in conjunction with clear aspect green aspect of DN advance starter signal S-16.

DN LOOP LINE STARTER SIGNAL S-5:

This signal have two aspects i.e. Red & yellow. Normal aspect of this signal is Red.

CAUTION ASPECT:

One Yellow light is displayed automatically in conjunction with DN advance starter signal S-16. Caution aspect is normally used for starting a train from DN loop line to advance starter signal.

DN ADVANCE STARTER S-16 –

Clear Aspect (One Green Light) of this signal is controlled by the clear indication provided on the panel for the section controlled by axle counter and by the operation of signal button no.S.16 and DN Main Departure Button on Panel.

DN IBS DISTANT–

This Signal is placed between STLI-GWL station on DN Main Line and shows double yellow aspect (Attention) in normal position

CLEAR ASPECT:-

(One green light) of this signal is displayed automatically in conjunction with ‘OFF’ aspect (Clear aspect) of DN IBS INN DIST SIG CUM GATE (418) INN DIST

S-18 DN LB STOP SIGNAL CUM GATE (418) INN DIST (STLI-GWL) –

This Signal is placed at KM.1220/22-26 between STLI-GWL stations on DN Main Line and shows RED aspect in normal position.

CAUTION ASPECT

This signal is released by Line Clear indication of STLI-GWL SGE three position double line lock & block instrument proving with Axle Counter(DN T3-STLI-GWL) and by the operation of Signal Button No.S.18 & DN 2’T’ UN button of the STLI panel.

CLEAR ASPECT:-

(One green light) of this signal is displayed automatically in conjunction with ‘OFF’ aspect (Clear aspect) of DN GATE SIG (418).

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UP DISTANT SIGNAL STLI CUM UP IBS SIGNAL GWL:

This signal is placed at distance of 2000 Mtrs. (min) from UP Home Signal No.S-38 and shows RED aspect in normal position.

ATTENTION ASPECT:

(Two Yellow lights one above the other) of this signal is displayed automatically with operation of UP IBS GWL Signal Button No-10 and UP 6T Route Button.

CLEAR ASPECT:

(One Green Light) of this signal is controlled automatically in conjunction with clear aspect of UP Inner distant signal.

UP INNER DISTANT SIGNAL:

Caution aspect (One Yellow Light). This signal is placed at a distance of 1025 M from UP Home signal N0.S-38 and show caution aspect in normal position.

ATTENTION ASPECT:

(Two Yellow lights one above the other) of this signal is displayed automatically in conjunction with the caution aspect or yellow with route of UP Home signal No.S-38.

CLEAR ASPECT:

(One Green Light) of this signal is displayed automatically in conjunction with 'CLEAR' aspect of UP Main Home signal No.S-38.

UP HOME SIGNAL S-38:- This signal have three aspects with one diversion route. Normal aspect of this signal is RED aspect.

CAUTION ASPECT:

One Yellow light with route or without route is displayed automatically in conjunction with UP loop line or UP main line starter signals RED aspect.

CLEAR ASPECT:

(One Green Light) of this signal is controlled automatically in conjunction with clear aspect green aspect of UP main line starter signal No.S-35

UP MAIN LINE STARTER SIGNAL S-35:

This signal have three aspects i.e. Red yellow & green. Normal aspect of this signal is Red.

CAUTION ASPECT:

One Yellow light is displayed automatically in conjunction with UP advance starter signal S-22. Caution aspect is normally used for shunting movement between starter signal and advance starter signal.

CLEAR ASPECT:

(One Green Light) of this signal is controlled automatically in conjunction with clear aspect green aspect of UP advance starter signal S-22.

UP LOOP LINE STARTER SIGNAL S-34:

This signal have two aspects i.e. Red & yellow. Normal aspect of this signal is Red.

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CAUTION ASPECT:

One Yellow light is displayed automatically in conjunction with UP advance starter signal S-22. Caution aspect is normally used for starting a train from UP loop line to advance starter signal.

UP ADVANCE STARTER S-22 –

Clear Aspect (One Green Light) of this signal is controlled by the clear indication provided on the panel for the section controlled by axle counter and by the operation of signal button no.S.22 and UP Main Departure Button on Panel.

S-21 UP I.B Stop Signal (STLI-SLV) – This Signal is placed at KM.1211.157 -‘B’ Between STLI-SLV station on Up Main Line. This signal is released by Line Clear indication of STLI-SLV SGE three position double line lock & block instrument with block proving Axle Counter and by the operation of Signal Button No.S.21 & 259T button of the panel.

NOTE: Up & DN Distant, Inner Distant & Up IBS Distant/Inner Distant signals are provided with a ‘P’ marker painted in black on white circular disc.

6.1 GENERAL INSTRUCTIONS:

- a] When a light diesel engine or any other light self propelled vehicle is to be passed over a point or cross over controlled by a Track Circuit, the SM on duty must in addition to watching the track circuiting on the Control Panel, ensure through visual verification that the diesel engine etc. has cleared the concerned Track Circuit and has entered the next track section before interfering with the points set for the previous move or before permitting any other move on the affected lines.
- b] SM/ASM on duty shall personally verify fouling protection of Ballast siding No.-1& 2 after each shunting or movement into /from siding..
- c] For keeping button collars, 8 button collars stands have been provided on the Panel.
- d] In the event of failure of points and/or signals, intimation of the failure should be given by the SM on duty to the Electric Signal Maintainer of the Section on duty and SSE/SIG/M. All the failures should be recorded in the S&T Failure Register.
- e] While issuing T/369(3b) for reception/departure signals protecting facing points, endorsement should be made thereon instructing Loco Pilot to observe speed restriction of 15 KMPH till the Whole of the train has cleared the facing points in the Route.
- f] The panel is provided with a Station Master’s key to prevent unauthorized operation of points and Signals. Normally, all the buttons of the Control Panel are ready to be operated at any time unless the SM on duty locks them by means of the SM’s key.

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- g] After completion of each movement, the Point should be restored to their normal position.
NOTE: When the Control panel is locked, it will not be possible to operate point or clear a signal. But a cleared signal can be put to 'ON' aspect by pressing the concerned Signal and ERN Button. Similarly, a route already set also gets automatically cancelled after the passage of the train. The SM on duty must keep the key in his personal custody whenever he has to leave the panel due to any reason.
- h] It must be ensured that the Dip lorries/ Material trolleys/ Motor trolleys/ Push trolleys are invariably worked after obtaining specific permission of SM on duty under clear Memo. When the Trolley has been removed 'OFF' the track, such removal shall be confirmed by the Officer in charge in writing to SM on duty.
- i] Movement of the insulated Axle of the trolleys will not affect the functioning of track circuit.

6.2 ADDITIONAL PRECAUTIONS TO BE OBSERVED: - Buttons collars shall be placed on the button of defective/disconnected point and the relevant route button. The button collars should not be removed except under the following circumstances: -

- a) When the disconnected point is reconnected and reconnection memo to this effect is received or,
- b) When the defective point has been put right and advice is received or,
- c) When the SM/ASM to undertake a move after he has personally ensured the correct setting clamping and pad locking of the points and the keys are in his personal custody or,
- d) When the special duty guard authorise the SM/ASM to undertake the movement over the points supported by a private numbers.

NOTE: Manual setting of points by Crank Handles for passing traffic should not be carried out by S&T staff unless operating staff not below the rank of ASM is present at site.

7. WORKING OF SGE DOUBLE LINE LOCK AND BLOCK INSTRUMENTS PROVING BY SINGLE SECTION DIGITAL AXLE COUNTER FOR STLI UP IBS -SLV (UP LINE) and MULTI SECTION DIGITAL AXLE COUNTER FOR SLV – STLI (DN LINE) & STLI- GWL UP AND DOWN SECTION.

SGE type lock and block instrument are electrically controlled by means of track circuit and Digital Axle counter. A clear green LED (large) indication appears at Reset box of Digital Axle counter. ie. CLEAR the block section and a Red LED (large) indication shows OCCUPIED the block section.

- (i) DN(STLI - GWL) for Down commutator and
- (ii) UP (STLI - SLV) for UP commutator in such way that commutator can not be changed from "Train on Line" to "Line Closed" position unless the incoming train has passed inside the Home Signal and clear the Block clearing track circuit. This can be ensured from "Free indication" which gets illuminated, by side of the concerned Block instrument

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(A) STLI-SLV SECTION

- i) The UP IBS stop signal No.S-21 at this station is controlled through “Line Clear” indication of SGE three position double line lock and block instruments proving by Dual Digital Axle counter. This signal therefore should not be taken ‘OFF’ until the station in advance (SLV) has signaled ‘line clear’ on the block instrument and a clear Green LED (large) indication appears at reset box of digital Axle counter ie. UP BXT, (SLV – STLI) from UP IBS STLI to SLV. This signal can however be put back to ‘ON’ position at any time in case of emergency by pressing the concerned signal button along with Emergency signal cancellation button (ERN).
- ii) As soon as the train passes over the track circuit placed beyond at the UP IBS signal is automatically replace to ‘ON’ position and a bell/buzzer starts ringing. This bell will continue ringing till train entering section “signal is acknowledged and the commutator of the block instrument is turned to ‘Train on Line” indication by the station in advance. However, in no case the stoppage of ringing of the bell should be treated as the complete passage of the train into the block section but it should be verified by SM on duty. A RED (large) indication shows occupation of the Block section on reset box of concerned Block Digital Axle counter.
- iii) This signal once taken ‘OFF’ and gone back to ‘ON’ position on the passage of train over the track circuit can not be taken ‘OFF’ unless fresh line clear has been obtained.
- iv) In case this signal fail to come to ‘OFF’ after taking ‘Line Clear’ then signal will be treated as defective and the section between STLI- SLV (UP Line) will be treated as one block section, an authority on Form No.T.369 (3b) will be issued to the Loco Pilot of trains to pass the defective UP Advance and UP IBS signal in the ‘ON’ position till such time the signal is put right. Pvt. No. received from station in advance must be quoted on T.369 (3b).
- v) If the ‘Last Stop Signal’ or IB signal fails to return to ‘ON’ position automatically when a train passes beyond the track circuit in advance of the signal then signal should be treated as defective and concerned block working should be suspended and the train shall be worked as per GR 14.13 and SR 3.70-2 of G & SR. The concerned S&T staff must be advised of the defect and an entry should be made in the S&T failure register.
- vi) In the event of this signal going to the ‘ON’ position automatically for any reason before the passage of the train for which it has been taken ‘OFF’, the SM on duty will issue an authority on form no.T-369(3b) that line clear has been obtained from the station in advance quoting the Pvt. No. received as per SR 3.70-2 & 3.75.
- vii) The concerned S&T staff must be advised for the defect and an entry should be made in the S&T failure register.
- viii) When temporary signal line working is introduced for a train to proceed on the right line the TD-602 to pass the concerned advance starting signal and I.B.S signal at ‘ON’ will be issued by SM on duty. The Section between STLI-SLV (UP Line) will be treated as one block section till single line working is in force.

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(B) STLI - GWL SECTION:-

- i) The DN IB stop signal No. S-18 at STLI station is controlled through “Line Clear” indication of SGE three position double line lock and block instrument with Block Proving by Multi Section Digital Axle counter This signal therefore should not be attempted to be taken ‘OFF’ until the station in advance (GWL) has signalled ‘line clear’ on the Block instrument and track section controlled by Axle counter DN T-2 & T-3(STLI- GWL) show clear green LED (large) indication on resetting box. This signal can however be put back to ‘ON’ position at any time in case of emergency by pressing the concerned signal button along with Emergency signal cancellation button (ERN).
- ii) As soon as the train passes over the Detection Point DN –‘T-2’ just ahead of the DN IBS, the DN IBS is automatically replaced to ‘ON’ position and a bell/buzzer starts ringing. This bell will continue ringing till ‘train Block entering section’ signal is acknowledged and the commutator of the block instrument is turned to ‘Train on Line’ by the station in advance and train on line indication appears on block instrument. However, in no case the stoppage of ringing of the bell should be treated as the complete passage of the train into the block section but it should be verified by SM on duty.
- iii) This signal once taken ‘OFF’ and gone back to ‘ON’ position on the passage of train over the track circuit can not be taken ‘OFF’ again unless fresh line clear has been obtained.
- iv) In case this signal fails to come ‘OFF’ after taking ‘Line Clear’ then signal will be treated as defective and the section between STLI - GWL will be treated as one block section, an authority on Form No. T/369(3b) will be issued to the Loco Pilot of DN trains to pass the defective DN Advanced starter and DN IBS in the ‘ON’ position till such time the signal is put right. Private Number received from station in advance must be quoted on T/ 369. (3b)
- v) If the ‘Last Stop Signal’ fails to return to ‘ON’ position automatically when a train passes beyond the Axle Counter detection point, in advance of the signal then signal should be treated as defective and concerned block working should be suspended and the train shall be worked as per GR. 1413 and SR 3.70-2 of G&SR.
- vi) In the event of this signal going to the ‘ON’ position automatically for any reason before the passage of the train for which it has been taken ‘OFF’, the SM on duty will issue an authority on form No.T/369(3b) that line clear has been obtained from the station in advance quoting the Private Number received as per SR 3.70-2.
- vii) The concerned S&T staff must be advised for the defect and an entry should be made in the S&T failure register.
- viii) When temporary signal line working is introduced for a train to proceed on the right line the TD-602 to pass the concerned advanced starter signal and IBS at ‘ON’ will be issued by SM on duty. The Section between STLI - GWL will be made as one block section till single line working is in force.

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7.1(A) PASSING OF INTERMEDIATE BLOCK STOP SIGNAL AT ON/FAILURE OF SGE BLOCK INSTRUMENT WITH DUAL BLOCK PROVING BY AXLE COUNTER BETWEEN STLI -SLV.

The passing of UP IBS No- S-21 at “ON” will result into failure of UP Advanced starter signal No. S-22. For subsequent trains SM/ASM STLI should not take any action to dispatch the subsequent train unless the second train which has passed IBS at “ON” position actually arrived and complete arrival is verified by SM/ASM at other end station i.e. SLV under exchange of private number.

After complete arrival of second UP train at SLV, SM/ASM STLI will ask SM/ASM SLV for Co-operation for UP Line the SM/ASM STLI and SLV will jointly operate the relevant reset buttons and normalize the block section. The operation will be recorded in the respective counters provided at STLI and SLV.

In terms of GR 14.14 of G &SR, if the Block Instruments provided at the stations on either side of an Intermediate Block post or the track circuiting provided beyond the last stop signal or the Axle counters provided at either end of block section fails, the Intermediate Block stop signal shall be treated as defective and the Intermediate block post shall be deemed to be closed and the section between the stations on either side of the Intermediate Block post shall be treated as one Block section.

NOTE:

- i) The operation of STLI -SLV UP Co-operation button at SLV will also be indicated in panel room STLI.
- ii) After normalization of entire block section by Co-op buttons, if a subsequent UP train is to be started, SM/ASM STLI after obtaining “Line clear” from SM/ASM SLV on Block instrument, shall take “OFF” UP IB Signal No.S-21 and then UP Advanced starter No S-22 for the train to depart.
- iii) IBS working register will be maintained by SM/ASM STLI with the following particulars to record for UP IBS section between STLI.- SLV.
 1. Sr. No. and Date.
 2. Train No.
 3. Time train left STLI Station.
 4. Time train arrived at UP IB signal.
 5. Time Loco Pilot Contacted SM/ASM STLI on phone/ Talk back.
 6. P.No. issued by SM/ASM STLI to the Loco Pilot to pass UP IBS at “ON”
 7. Loco Pilot to pass UP IBS at “ON” due to phone defective/signal defective.
 8. Time advice to concerned SM/ASM about the Loco Pilot passing UP IBS at “ON” due to phone/signal defective.

Train No.	Time	P. No. Issued by	
		SM/ASM SLV	SM/ASM STLI

9. No. of T/369-(3b) issued to the loco pilot for passing IBS at “ON”.
10. Time and P. No. issued by SM/ASM for complete arrival of train which passed IB signal at “ON” by SM SLV.
11. Counter No. of CO-OP button after complete arrival of train.

Train No.	Time of train arrival	Counter No.
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- (vi) When UP IBS signal is passed at “ON”, The SM/ASM STLI shall put the button collars on concerned Advance starter signal and IBS signal.

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7.1(B) PASSING OF INTERMEDIATE BLOCK STOP SIGNAL AT ON/FAILURE OF SGE BLOCK INSTRUMENT WITH BLOCK PROVING BY AXLE COUNTER BETWEEN STLI - GWL

The passing of DN IBS No- S-18 at “ON” will result into failure of DN Advanced starter signal No. S-16. For subsequent trains SM/ASM STLI should not take any action to dispatch the subsequent train unless the second train which has passed IBS at “ON” position actually arrived and complete arrival is verified by SM/ASM at other end station i.e. GWL under exchange of private number.

After complete arrival of second DN train at GWL, SM/ASM GWL will ask SM/ASM STLI for Co-operation for DN Line the SM/ASM GWL and STLI will jointly operate the relevant reset buttons and normalize the block section. The operation will be recorded in the respective counters provided at GWL and STLI.

In terms of GR 14.14 of G &SR, if the Block Instruments provided at the stations on either side of an Intermediate Block post or the track circuiting provided beyond the last stop signal or the Axle counters provided at either end of block section fails, the Intermediate Block stop signal shall be treated as defective and the Intermediate block post shall be deemed to be closed and the section between the stations on either side of the Intermediate Block post shall be treated as one Block section.

NOTE:

- (i) The operation of GWL-STLI DN Co-operation button at GWL will also be indicated in panel room STLI.
- (ii) After normalization of entire block section by Co-op buttons, if a subsequent DN train is to be started, SM/ASM STLI after obtaining “Line clear” from SM/ASM GWL on Block instrument shall take “OFF” DN IB Signal No.S-18 and then DN Advanced starter No S-16 for the train to depart.
- (iii) IBS working register will be maintained by SM/ASM STLI with the following particulars to record for DN IBS section between STLI.-GWL.
 1. Sr.No. and Date.
 2. Train No.
 3. Time train left STLI Station.
 4. Time train arrived at DN IB signal.
 5. Time Loco Pilot Contacted SM/ASM STLI on phone/ Talk back.
 6. P.No. issued by SM/ASM STLI to the Loco Pilot to pass DN IBS at “ON”
 7. Time Loco Pilot to pass DN IBS at “ON” due to phone defective/signal defective.
 8. Time advice to concerned SM/ASM about the Loco Pilot passing DN IBS at “ON” due to phone/signal defective.

Train No.	Time	No. Issued by	
		SM/ASM GWL	SM/ASM STLI

9. No. of T/369-(3b) issued to the loco pilot for passing IBS at “ON”.
10. Time and P. No. issued by SM/ASM for complete arrival of train which passed IB signal at “ON” by SM GWL.
11. Counter No. of CO-OP button after complete arrival of train.

Train No.	Time of train arrival	Counter No.
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- (vi) When DN IBS signal is passed at “ON”, The SM/ASM STLI shall put the button collars on concerned Advance starter signal and IBS signal.

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7.1(C) WHEN BLOCK INSTRUMENT IS IN ‘TOL’ POSITION AND A TRAIN IS ALREADY IN BLOCK SECTION AHEAD OF UP IBS/DN IBS AND A SECOND TRAIN PASSES UP IBS/DN IBS AT ‘ON’ POSITION

SM on duty at STLI will immediately advise to SM SLV/GWL & SCOR JHS on phone giving the description of the train and the time at which the train has passed UP IBS/DN IBS at ‘ON’ and obtain acknowledgement of SM at SLV/GWL supported by a private number. SM at SLV/GWL will immediately arrange to receive the first train for which the line clear was granted and advise SM/STLI supported by a private Number in token of the complete arrival of the first train. SM SLV/GWL will then arrange to receive the second train which has passed UP IBS/DN IBS at ‘ON’ and advise SM STLI supported by a private number in token of complete arrival of second train.

After confirming the complete arrival of train at SLV/GWL, SM on duty at SLV/GWL will press UP STLI-SLV/ DN GWL-STLI common Co-operative button which will cause a white indication on the panel provided in SM office at STLI On getting this indication, SM STLI will press concerned “IBS passed at ‘ON’ re-setting button”. This operation will be recorded in the respective counters provided in SM’s offices at STLI & SLV/GWL.

7.1(D) WHEN BLOCK INSTRUMENT IS IN “LINE CLEAR” POSITION BUT UP IBS/DN IBS COULD NOT BE TAKEN ‘OFF’ DUE TO ANY REASON AND THE UP TRAIN/DN TRAIN PASSES AT ‘ON’

On getting warning bell and visual indication regarding the passing of UP IBS/DN IBS at ‘ON’, the SM on duty STLI will immediately advised to SM SLV/GWL. SM SLV/GWL will turn commutator of SGE block to TOL position. SM STLI will immediately advise SM at SLV/GWL on phone by giving the description of the train and time at which the train has passed concerned IBS at ‘ON’ and obtain acknowledgement of SM at SLV/GWL supported by a private number.

After complete arrival of the train, SM SLV/GWL will advise to Station Master STLI about the complete arrival of the train supported by a Private Number. S.M. STLI and SLV/GWL will then normalize the section as described in paragraph 7.1(A) & (B) of this SWR.

7.1(E) WHEN BLOCK INSTRUMENT IS IN ‘LINE CLOSED’ POSITION AND NO LINE CLEAR HAS BEEN GRANTED BY SM SLV/GWL AND TRAIN PASSES UP IBS/DN IBS AT ‘ON’ POSITION :

On getting warning bell and visual indication regarding the passing UP IBS/DN IBS at ‘ON’, S.M STLI will immediately advise SM SLV/GWL giving the description of the train and the time at which the train has passed IBS at ‘ON’ and obtain acknowledgment of SM SLV/GWL supported by a private number.

SM- SLV/GWL will immediately turn his Block Instrument commutator to ‘Line Clear’ position and then to ‘TRAIN ON LINE’ position and arrange to receive the train. After complete arrival of the train, SM- SLV/GWL will advise SM STLI about the complete arrival of train supported by a private number. S.M STLI and SLV/GWL will then normalize the section as described in paragraph 7.(A & B) & 7.1(A&B) of this SWR.

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NOTE:

- (1) Passing of IBS at 'ON' will be indicated by visual RED indication and a warning bell on the panel provided in SMs office at STLI. The audible warning bell can be stopped by operating IBS passed at 'ON' resetting button & co-operative button, but the visual indication will continue till such time the block section is normalized as stated above.
- (2) The passing of IBS at 'ON' will cause the failure of UP Advanced starter/DN Advanced starter at STLI and UP/DN IBS signal for subsequent train.
- (3) In case of failure of IBS or block instrument, the entire section between STLI -SLV/ STLI -GWL should be treated as one block section and trains shall be worked as per GR 14.13 of G&SR.

SPL. Note 'A':

- (1) The Operation of STLI - SLV Co-operative Button at SLV will be indicated on STLI panel by white light.
- (2) The Operation of STLI-GWL Co-operative Button at GWL will be indicated on STLI panel by white light.
- (3) In case when IBS/Block Instrument/track circuit fails and subsequently put right, the IBS signal should be taken 'OFF' first, Advanced Starter then should be taken 'OFF'. The same procedure shall be followed if IBS/ Advanced starter Signal 'ON' aspect lamp is extinguished to avoid the failure of UP/DN Advance Starter signal. When IBS signal is passed at 'ON' SM at STLI will put button collar on signal button.

8. FAILURE OF SGE DOUBLE LINE BLOCKS INSTRUMENT:-

SGE double line block instrument is failed if –

- (1) Commutator of either of block instrument is locked.
- (2) If needle of block instrument is not in correspondence with commutator.
- (3) Bell code could not be transmitted to either end of the block section.

In such cases S&T staff should be called for rectification of the fault and train should be worked on T.369 (3b).

**9. FUNCTION OF UP AXLE COUNTER:
BETWEEN UP ADVANCE STLI - UP IBS STLI.**

- (a) In lieu of the conventional Track Circuits for the running line between STLI UP Advance Starter Signal to UP IBS Signal, Axle Counter has been provided. A separate indication for the occupation and clearance of Axle Counter is given on the indication panel for this section. These indications show green/white light when this portion of the running line is clear and RED light when the same is occupied or when the axle counter equipment has failed.

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If the axle counter in UP IBS STLI - SLV fails the station master at receiving station will give cooperation to the sending station by turning the key provided at the top of the re-setting box named as cooperation key after ensuring that block section is clear of trains in same direction . The line verification indication (small yellow) will appear at that failed track section of sending station. By seeing this indication station master of sending station will press red button on same failed track section along with re-setting key provided at re-setting box. After releasing the press button the preparatory indication (small green) will lit on the same track section and there will be increase of one number in counter box provided over that track section. After coming in preparatory reset mode the failed axle counter will show the “Clear” status (green indication) after complete passage of first passing train. If after the passage of complete train the failed axle counter does not show the “Clear” status (green indication) on duty SS/SM will advise to S&T staff to attend the failure of failed axle counter.

A register will be provided in the SM office in which entries will be made for the above purpose. The on duty Station Master will enter the following in the manuscript register provided for this purpose.

- i) Before re-setting the number of counter.
 - ii) After re-setting, the number of counter.
 - iii) Number and details of last train running on the block section for which re-setting is initiated.
 - iv) Private number for verifying that the entire train has reached to the station and block section is clear of trains.
- (b) When the axle counter equipment controlling the Axle counter section fails, the SM STLI will advise SM/SLV accordingly, supported by private number and obtain his confirmation supported by private number in regard to the complete arrival of the UP train and the clearance of the block section between STLI UP IBS to SLV.
- The SM STLI and SM/SLV will simultaneously operate the relevant co-operate button as the case may be and normalise the Axle counter section, then a green indication will appear. Every operation of the re-setting buttons is recorded in the counter provided for the same on the panel.
- (c) The S.M. STLI shall make relevant entry for every re-setting operation in the register provided for this purpose, which will require the following particulars to be recorded:-
- i) Date, time and train no. for which re-setting of the Axle counter has to be done.
 - ii) Reading of the counter before re-setting.
 - iii) Reading of the counter after re-setting.
 - iv) No. and description of the last train dispatched from the station after which the Axle Counter equipment has failed.
 - v) Date and time the train cleared the section.
 - vi) Private No. received from SM-SLV in token of the clearance of UP IBS section.
 - vii) Signature of S.M. on duty re-setting the Axle counter.
- (d) If the Axle counter equipment cannot be reset, the S.M. will issue a message to ESM about the failure endorsing a copy to S.E. (M) of the section.

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- (e) If the re-setting button is required to be operated by the ESM/SE for the purpose of maintenance or testing etc. the entries must be made in the Counter Register and jointly signed by the S&T Staff and S.M. on duty.
- (f) It must be ensured that Dip lorries/Motor trollies and Push trollies are invariably worked after obtaining specific permission of the S.M. on duty under clear memo.
The S.M. on duty should reset Axle Counter only when trollies/lorries have been moved 'OFF' the track and removal will be confirmed by the officer-in-charge of the trolley in writing. Movement of the insulated Axle of the trollies will not affect the function of Axle Counter.
- h) A signal post talk back telephone communication provided with SM/ASM STLI and UP IBS signal post STLI-SLV section, the 'Calling' facility is provided only at the IBS signal post and not at the station.

9.1 SINGLE SECTION DUAL DIGITAL AXLE COUNTERS IS INSTALLED in following BLOCK SECTION .(STLI UP IBS TO SLV)

- (i) Between . Sithouli UP IBS and UP Home signal of Sandalpur including its overlap on UP line. - UP BXT (SLV – STLI UP IBS) .

9.2.1 FAILURE OF DIGITAL AXLE COUNTER:

- i). When at reset box clear (Green) LED indication is available but block section including it's overlap is not clear.
- ii) When at reset box occupied (Red) LED indication is available but block section including it's overlap is clear.
- iii) When at reset box "No" indication is available.

9.2.2 RESET BOX FOR RESETTING DUAL DIGITAL AXLE COUNTER:

1. Green (large) indication shows the clearance and Red (large) indication shows occupations the block section on reset box of single section digital axle counter provided at station, separate reset box is provided for UP IBS STLI to SLV of UP line block section and a reset -operation button (one) for DIGITAL AXLE COUNTER .
2. On reset box one reset key/lock (key insert, press and turn). One reset push and an electrical counter (for counting the number of reset attempts carried out) has been provided. An indication is also provided near by the reset box of the digital axle counter.

FOLLOWING INDICATIONS ARE SHOWN ON RESET BOX:

A Block section clear	Green LED (Large size)
B Block section occupied	Red LED (Large size)
C 24V Electrical supply available for axle counter	Yellow LED (Small size)
D Axle counter is in preparatory reset mode (when axle counter has failed and resetting attempted at both the ends.	Green LED (Small size)

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3. Glowing of Green LED (small) indication indicates Digital axle counter after failure has been resetted by inserting (turning and pressing the) key with reset button at both the ends with the glowing of this indication Green LED (small) along with flickering of 24 V supply indication yellow LED (small size) indicate the axle counter is in preparatory reset mode. As the digital axle counter is in preparatory reset mode, hence the last stop signal cannot be taken to OFF position; so next train will be passed on PLC/T-369 (3b).

As this train passes the Home signal at receiving end and clear the block section with overlap track circuit, the Green LED (large) will glow and the Green LED (small) along with the Red LED (large) extinguishes which indicate the clearance of block section. Normal working for following train will be introduced.

The counter increments by one count, every operation of resetting should be recorded in separate register as per the columns indicated below:

- i- Serial No.
- ii- Date and Time.
- iii- Failed after the train number.
- iv- First train which was passed on T/369(3b).
- v- Counter reading (prior to resetting)
- vi- Counter reading (after resetting)
- vii- First train which passed on proper line clear after normalization of axle counter.
- viii- Signature of on duty Station Master reset-operation done.
- ix- Remarks of SE/JE (Sig).

NOTE:

1. No resetting of axle counter to be done if section is occupied or is going to be occupied. This must be ensured by on duty Station Master.
2. SE/JE Sig and SM must ensured the replacement with same size LED if the same gone defective.
3. SE/JE/Sig /ESM must seal the reset box after resetting.
4. If the SGE block instruments has failed due to electrical/ Mechanical or any other technical defects and Green LED (large) is glowing (which indicates clearance of block section), resetting of axle counter is not required. Inform SE/JE/Sig /ESM for block instruments failure and after rectification normal working may be introduced.

9.2.3 RESET PROCEDURE OF S.S DIGITAL AXLE COUNTER

Resetting of dual digital axle counter is required to be carried out when Red LED (large) indication for occupied position remain glowing at resetting box of digital axle counter at station even after complete arrival of UP train or after block back/block forward movement or with no train entering in the block section, notices that the digital axle counter has failed. The SM on duty shall ensure complete arrival of train as well as clearance of block section including its overlap for the particular block section line. Then both receiving end SM and dispatching end SM shall carry out the resetting process as under (clearance of block section including its overlap from a train/ obstruction shall be certified by the following means).

By watching LV Board/Tail lamp by Station Master as per GR 4.17.

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By checking train signal register for last through train passing the station and description and details of the last preceding train received completely from SM's of next block section and also from section controller. The certification of complete arrival of the last preceding train will be supported with exchange of private number by on duty SM with SM of next block section/section controller.

After above certification, following procedure will be adopted for resetting of digital axle counter.

RESETTING S.S DIGITAL AXLE COUNTER:

S.N.	Receiving end Station master	S.N.	Dispatching end Station master
1	Call attention beat to be transmitted.	2.	Acknowledge the call attention.
3.	Attend block telephone.	4.	Block telephone attended.
5.	After complete arrival of train information for failure of axle counter to be given.	6.	Acknowledge the information.
7.	On duty ASM/SM after verified the complete arrival of last train and will convey his intention to reset, the axle counter of the concerned block line to dispatching end ASM. In support of this he will exchange private number.	8.	He will acknowledge and exchange private number in confirmation and intimation for intension of resetting of axle counter at his end also.
9	On duty Station master will insert the resetting key, turn and press along with the reset button. He will released the reset button first this will cause increment of electrical counter by one number for each reset operation, with completion of reset operation reset indication glows Green LED (small) on the reset box. (Which indicate axle counter is in preparatory reset mode.)	10	On duty station master will insert the resetting key, turn and press along with reset button. He will released the reset button first this will cause increment of electrical counter by one number for each reset operation, with completion of reset operation reset indication glows Green LED (small) on the reset box. (Which indicate axle counter is in preparatory reset mode.)
11	On duty Station master will take out the key and keep in his safe custody	12	On duty Station master will take out the key and keep in his safe custody
13	After resetting the axle counter on duty Station master will inform the other end station master about resetting done at his end and axle counter is in preparatory reset mode by watching the reset Green LED (small) indication glows on reset box.	14	After resetting the axle counter On duty Station master will inform the other end station master about resetting done at his end and axle counter is in preparatory reset mode by watching the reset Green LED (small) indication glows on reset box.

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16	On duty Station master will confirm the complete arrival and clearance of block section including overlap by watching tail lamp/tail board of the train which was sent on T-369 (3b) by sending end and exchange private number.	15	On duty Station master will exchange the private number with station master on duty at receiving end station and issue T-369(3b) for next train.
17	On duty Station master will watch the block section clearance indications available i.e. Green LED (large), preparatory reset mode indication Glows LED (small) disappears, occupation indication Red LED (large), disappears and repeat them to other end station master.	18	On duty Station master will watch the block section clearance indications available i.e. Green LED (large), preparatory reset mode indication Glows LED (small) disappears, occupation indication Red LED (large), disappears and repeat them to other end station master.

Note: One Pilot train (i.e. T-369(3b) issued) is to be passed in the section to make the system normal.

When Red LED (large) Extinguishes and Green (large) glows normal working is to be introduced. The handle of the block instruments is electrically controlled in such a way that commutator handle at ‘Train On Line’ position can not be turned to ‘line closed’ position unless whole of train passes home signal and clears not only the block section, but over lap section also and axle counter shows clear indication also. The free indication provided near the block instrument appears with the clearance of block section with over lap Axle counter. After getting The “free indication “ commutator handle of block instruments can be brought from ‘Train on line’ position to ‘Line closed’ position.

Normal working of following trains will be introduced. If after adopting the above method for resetting the dual digital axle counter, axle counter does not go in preparatory reset mode. ASM’s at the both the ends will repeat the above procedure once again and inform ESM/JE/SE/SSE/Sig and make the entry in failure register.

Every attempt of resetting shall be supported with exchange of private number and train number should be recorded in register made for this purpose at both the ends.

10. MULTI SECTION DIGITAL AXLE COUNTERS ARE INSTALLED IN FOLLWING BLOCK SECTION .

- i) Between Up Advance signal CUM UP DIST of L-Xing 418 GWL and GWL UP IBS CUM UP DIST of STLI including its overlap. (STLI – GWL UP T5&T6).
- ii) Between GWL UP IBS CUM UP DIST of STLI and Up Home Signal of STLI including its overlap. (STLI – GWL UP T6&T7).
- iii) Between DN starter signal (Advanced position) S-7 SLV and DN IBS signal S-5 SLV including its overlap (SLV –STLI. DN T1 & T2)
- iv) Between DN IBS signal S-5 SLV and DN Home Signal of STLI including its overlap. (SLV – STLI .DN T2 & T3).

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- v) Between DN Advance starter signal S-16 STLI and DN IBS signal CUM GATE No. 418 INN DIST S-18 STLI including its overlap (STLI-GWL DN T1 & T2) .
- vi) Between DN IBS signal CUM GATE No. 418 INN DIST S-18 STLI and DN Home Signal of GWL including its overlap. (STLI-GWL DN T2 & T3).

10.1 FUNCTION OF MULTI SECTION DIGITAL AXLE COUNTER BETWEEN SLV-STLI BLOCK SECTION ON DN LINE & STLI-GWL BLOCK SECTION ON UP & DN LINES:

- (a) In lieu of the conventional Track Circuits for the running line between DN Advanced starter SLV to DN IBS SLV, DN IBS SLV to DN Home signal STLI including its overlap on DN line on SLV- STLI section, between DN Advanced starter signal STLI – DN IBS STLI and DN IBS STLI – DN Home signal GWL including its overlap on DN line on STLI - GWL section Multi Section Digital Axle Counter has been provided.
- (b) In lieu of the conventional Track Circuits for the running line between between UP Advanced starter signal GWL – UP IBS GWL and UP IBS GWL – UP Home signal STLI including its overlap on UP line on GWL - STLI section Multi Section Digital Axle Counter has been provided.

A separate indication for the occupation and clearance of Axle Counter is given on the indication panel for these sections. These indications show green/white light when this portion of the running line is clear and RED light when the same is occupied or when the axle counter equipment has failed.

When the axle counter equipment controlling the Axle counter section under the control of SM STLI fails, the SM STLI will advise SM SLV/GWL accordingly, supported by private number and obtain his confirmation supported by private number in regard to the complete arrival of the UP/DN train.

On UP/DN line the SM STLI and SM GWL and on DN line the SM STLI and SM SLV/GWL will operate the relevant reset button along with key as the case may be and normalize the Axle counter section, and then a green indication will appear. Every operation of the re-setting buttons is recorded in the counter provided for the same on the panel.

10.2 DESCRIPTION OF THE INDICATIONS / FEATURES ON THE AXLE COUNTER INDICATION-CUM-RESET BOX FOR MULTI SECTION DIGITAL AXLE COUNTER:

(a) FEATURES:

- (1) SM's Key for authorizing reset operations.
- (2) Reset push button for resetting Axle Counter.
- (3) Counter for recording Reset Operation.

(b) INDICATIONS:

1	Green Light (Large)	Clear	Indicate that the Block Section/IBS section is clear.
2.	Red Light (Large)	Occupied/ Failed	Indicate that the Block Section/IBS section is occupied/ the BPAC has failed.
3	Green Light (Small)	Preparatory Reset	Indicate that the Axle Counter Resetting operation at both ends is completed.
4.	Yellow Light (Small)	Power 'ON'	Indicate the availability of power supply.

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10.3 CUSTODY OF KEYS:

The SM's key of Axle Counter indication-cum-reset boxes shall be kept in a separate Glass Fronted case and the key of the glass-fronted case shall be under the personal custody the SM/ASM on duty.

10.4 RESET BUTTON:

Reset button is provided in the Reset Box so that whenever the axle counter shows 'Failed' (Red Light-Large) condition, the SM/ASM on duty can reset the same to normal after ensuring that the Block Section/ IBS section is clear.

10.5 COUNTER FOR RECORDING RESET OPERATION:

Each and every operation of the reset button is counted on a digital counter and shall be recorded in a separate register indicating the movement before and after operation of the reset button as per the following Performa:

S N	Date/ Time	Axle Counter failed after the arrival of Train No.	Private Number given to the station in rear/ advance	Private Number received from the station in rear/ advance	Counter reading before resetting	Counter reading after resetting	Train No. dealt after resetting	Private Number given after getting 'clear' indication	Private Number obtained after getting 'clear' indication

10.6 INDICATIONS:-

Indications are provided in the Axle Counter Indication-cum-Reset Box to show the status of the concerned Block Section/ IBS section. The 'Clear' (Green Light-Large) indication on the concerned Axle Counter Indication Box shall be observed by the SM/ASM on duty before obtaining/granting line clear on the relevant Block / IBS section. The Axle Counter Indication-cum-Reset Box displays 'Clear' (Green Light-Large) indication when the Block/IBS section is clear of trains/vehicles and 'Occupied' (Red Light-Large) indication when the Block/IBS Section is occupied or Axle counter pertaining to that section is failed.

10.7 COMPLETE ARRIVAL OF TRAINS:-

In case the Axle Counter shows 'Occupied' (Red Light-Large) indication even after the complete arrival of the Train, no effort shall be made forcibly to bring the Block Instrument to 'Line Closed' condition. Before initiating action to reset the Axle Counter and permitting the next Train into the Block Section, the SM/ASM shall comply with the provisions of GR 14.10 (1) & (2) and satisfy that the train, for which line clear was given, has arrived complete. Once the complete arrival of the train is verified, action can be initiated to reset the axle counter at both ends of the affected IBS/Block section.

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NOTE:

Where in a section, Block Proving by Axle Counter between block stations and complete track circuiting of station section, excluding non-running lines of the receiving stations is installed and is functioning and there is a 'clear' indication of clearance of Block Section as well as complete arrival of the train as per indication given, it would be taken as assurance for complete arrival of the train to the SM/ASM (GR 14.10(4)). Whereas, in case of a run through train, before giving 'Train out of section' signal to the station in rear, as per SR 4.17/1(a)&(b) of G&SR, the SM/ASM must ensure personally that the train has passed complete with Tail Lamp/Tail Board on the last vehicle.

11. RESETTING PROCEDURE OF MULTI SECTION DIGITAL AXLE COUNTERS STLI-SLV ON DN LINE & STLI-GWL ON UP / DN LINE:-

After ensuring that the IBS/Block Section is clear, the Axle Counter shall be reset. The resetting operation shall be resorted to only when there is 'Occupied' (Red Light-Large) indication even though the Block section is clear. The following procedure shall be adopted after advising the S&T staff concerned about the failure of the axle counter.

- (i) The SM/ASM on duty at the receiving station in which the train has arrived complete shall give a Private Number to the SM/ASM at the other end (dispatch station) in token of the complete arrival of the train. The SM/ASM on duty at the dispatch end shall acknowledge the same by communicating a Private Number.
- (ii) The key of the reset box shall then be inserted in the reset box, turned and pressed along with pressing of reset push button by both SM/ASM independently.
- (iii) The reset operation pertaining to Block Section is carried out simultaneously at both ends.
- (iv) 'Preparatory Reset' (Green Light - small) indication, will appear on the Axle Counter Indication – cum – Reset Box at both ends to indicate that the Axle Counter resetting operation is complete.
- (v) The counter, provided for recording resetting operation will register next higher number. Necessary entries shall be made in the 'Block Proving by Axle Counter Resetting Register' maintained for this purpose. Similar entries shall be made by the SM/ASM at the other end of the Block Section also.
- (vi) On clearance of the first train after preparatory reset at the receiving station, the axle counter will show 'Clear' indication at both stations and subsequent trains can be normally dealt with.
- (vii) If on arrival of the first train on preparatory reset, the axle counter does not show 'Clear' indication but preparatory indication continues, the commutator handle of Block instrument will remain locked in TOL position, the block working shall be suspended and S&T officials of the section shall be advised to attend to the failure, and the trains will work on laid down procedure for block failure by issuing necessary authorities until the failure is attended by S&T staff and put right.
- (viii) The entries in Train Signal Register shall be made in Red ink at both stations whenever 'Line Clear' has been obtained with axle counter showing 'preparatory reset indication'.
- ix) No attempt shall be made to close the block section on arrival of the train on preparatory reset if axle counter is still showing preparatory reset indication, instead of 'clear' indication.

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11.1 RULES FOR WORKING OF IB SIGNAL (STLI-SLV DN LINE)/ STLI-GWL UP/ DN LINE:-

(A) AXLE COUNTER:-

- i) In lieu of the conventional track circuits, the Multi Section Axle counters for the DN running line in STLI-GWL section have been provided between STLI DN Advanced Starter Signal and 400 Meters beyond DN IBS STLI & from STLI DN IBS upto DN home signal including overlap of GWL.

Separate indications for the occupation and clearance of the axle counters for the IB section in STLI-GWL sections have been provided on the panel. This indication shows White light when axle counter controlled section is clear, and Red light when the same is occupied or, when the Axle counter section has failed.

(B) FAILURE OF AXLE COUNTER IN SLV-STLI DN LINE & STLI-GWL UP& DN SECTION :

If Axle Counter does not show The 'Clear' (Green Light-Large) indication after clearance of the train on 'Preparatory Reset', it shall be treated as a failure of Axle Counter. The Block Instrument Working of the concerned Block Section shall remain suspended till S&T staff rectifies the same. During this period Trains shall be dealt with as per GR 14.13 and closing of Block Section done as per GR14.10 (1) & (2).

- i) When the Axle counter equipment controlling the STLI DN IB section fails, SM/ASM STLI will advise SM/ASM GWL accordingly, supported by private number. SM/ASM, STLI and SM/ASM GWL will simultaneously operate the relevant CO-OP buttons and normalize the Axle counter section. Every operation of the resetting button is recorded in the counter provided for this purpose.

NOTE 1:

SM/ASM STLI & GWL shall make relevant entry for every resetting operation in the IB working register maintained for this purpose.

The following particulars shall be recorded in the IB working register.

- i) Date, Time and Train No. for which resetting of Axle counter is done.
- ii) Reading on the counter before resetting.
- iii) Reading on the counter after resetting.
- iv) No. and description of the last train dispatched into IB section controlled by Axle counter after which the Axle counter equipment failed & Private Number exchanged between SM/ASM GWL and SM/ASM STLI.
- v) Date and time supported by Private Number in regard to the complete arrival of DN train and clearance of block section. (after which the axle counter failed)
- vi) Date and Time the Axle counter equipment is reset simultaneously operating there relevant CO-OP buttons by SM/ASM STLI and SM/ASM GWL stations.
- vii) Signature of SM/ASM STLI resetting the Axle counter equipment by operating relevant CO-OP buttons.

NOTE 2:

SM/ASM STLI before going off duty shall record the readings of the counters in his diary. Similarly SM/ASM STLI before taking over charge shall verify the last No. on the reset counter & record in his diary.

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(C) PROCEDURE FOR RESETTING OF MULTI SECTION DIGITAL AXLE COUNTER (SLV-STLI DN LINE SECTION.)

The resetting procedure given below will be followed:

Failure of Track section	Procedure of Resetting
T 1 (Track section DN Adv SLV-DN IB SLV+ 400 meters)	Preparatory manual reset will be done by SM/ASM SLV with co-operation and last vehicle verification by SM/ASM STLI and exchanging private number with SLV station, as per extent instructions in force.
T 2 (Track section 400 meters beyond IBS)	If track section remains failed after passage of train, preparatory auto reset will be initiated automatically after a delay of 15 to 20 seconds. If complete Block Section from SLV to STLI is clear and preparatory auto reset is not initiated after delay on 30 seconds, SM/ASM SLV will advise to S & T staff to attend.
T 3 (Track section for DN BPAC-SLV)	Preparatory manual reset to be done by STLI station with co-operation of SM/ASM SLV after Last Vehicle verification by STLI station and exchanging private number with SM/ASM SLV as per extent instructions in force.

ii) PROCEDURE FOR RESETTING OF MULTI SECTION DIGITAL AXLE COUNTER (STLI-GWL UP& DN SECTION):

The resetting procedure given below will be followed:

Failure of Track section	Procedure of Resetting
T 1 (Track section DN Adv STLI-DN IB STLI+ 400 meters)	Preparatory manual reset will be done by SM/ASM STLI with co-operation and last vehicle verification by SM/ASM GWL and exchanging private number with GWL station, as per extent instructions in force.
T 2 (Track section 400 meters beyond DN IBS STLI)	If track section remains failed after passage of train, preparatory auto reset will be initiated automatically after a delay of 15 to 20 seconds. If complete Block Section from STLI to GWL is clear and preparatory auto reset is not initiated after delay on 30 seconds, SM/ASM STLI will advise to S & T staff to attend.
T 3 (Track section for DN BPAC-STLI)	Preparatory manual reset to be done by GWL station with co-operation of SM/ASM STLI after Last Vehicle verification by GWL station and exchanging private number with SM/ASM STLI as per extent instructions in force.

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T- 5 (Track section UP Adv GWL- UP IB GWL + 400 meters)	Preparatory manual reset will be done by SM/ASM GWL with co-operation and last vehicle verification by SM/ASM STLI and exchanging private number with STLI station, as per extent instructions in force.
T- 6 (Track section 400 meters beyond UP IBS GWL)	If track section remains failed after passage of train, preparatory auto reset will be initiated automatically after a delay of 15 to 20 seconds. If complete Block Section from GWL to STLI is clear and preparatory auto reset is not initiated after delay on 30 seconds, SM/ASM GWL will advise to S & T staff to attend.
T- 7 (Track section for UP BPAC)	Preparatory manual reset to be done by STLI station with co-operation of SM/ASM GWL after Last Vehicle verification by STLI station and exchanging private number with SM/ASM GWL as per extent instructions in force.

NOTE:-

- (i) The status of Track section shall be available to the SM/ASM STLI through indication provided on the Reset Panel. Status of co-operation received from SM/ASM SLV/GWL shall also be indicated through small LEDs on Reset panel when preparatory reset is initiated, LED indication lit on the Reset Panel. Indication will stay lit till the Track Section is reset. On duty SM/ASM STLI shall advise S & T staff to attend the failure if the complete Block section fails as indicated by LED indication on reset panel.
- (ii) After Preparatory manual reset mode one Pilot train (ie. T-369(3b) issued) is to be passed in the section to make the system normal.

(D) PUSH BUTTONS AND COUNTERS (STLI-SLV SIDE).

Separate push buttons are provided in the STLI panel along with the associated counters and indications:

i)	Axle counter resetting button for SLV- STLI DN Block section (T-3) with counter.	This button is used for resetting the DN Block section axle counter (MSDAC) in cooperation with SLV.
ii)	Axle counter resetting CO-OP button with counter for SLV-STLI DN IB (T-1).	This button is used for giving co-operation to SLV for resetting the axle counters.
iii)	DN IB Signal SLV passed at 'ON' resetting CO-OP button with key counter.	This push button is used for giving co-operation to SLV for resetting DN IB SLV section passed at 'ON'.

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(E) PUSH BUTTONS AND COUNTERS (STLI-GWL SIDE).

Separate push buttons are provided in the STLI panel along with the associated counters and indications:

i)	DN IB Signal STLI passed at 'ON' resetting button with counter.	This push button is provided for resetting DN IB STLI section passed at 'ON' in cooperation with SM GWL.
ii)	Axle counter resetting button for DN ADV-DN IBS STLI (T-1) with counter.	This button is used for resetting the DN IBS STLI section axle counter in cooperation with GWL.
iii)	Axle counter resetting button for GWL-STLI UP Block section (T-7) with counter.	This button is used for resetting the UP Block section axle counter in cooperation with GWL.
iv)	Axle counter resetting CO-OP button with counter for STLI -GWL DN IBS (T-3) & GWL-STLI UP ADV-UP IBS section(T-5)	This button is used for giving co-operation to GWL for resetting the axle counters.

(F) SPECIAL INDICATIONS (STLI-GWL) SIDE:-

i)	DN IBS/Distant/Inner Distant signal. No light indication	A Red light indication will appear when DN IBS/ Distant/ Inner Distant signal is blank. An audible warning bell is also provided which can be stopped by operating the button provided.
NOTE: On noticing that the DN IBS and / or DN IBS Distant / Inner Distant light is / are blank, the Intermediate Block Stop signal shall be treated as defective and the Intermediate Block Post shall be deemed to be closed and the section between STLI-GWL shall be treated as one block section.		
ii)	DN IB Signal passed at 'ON'.	A red indication will appear when a DN train passes DN IB signal at 'ON'.
iii)	GWL-STLI DN CO-OP Indication.	A white indication will appear when SM/ASM GWL presses DN CO-OP. button.
iv)	UP IB Section Clear Indication.	A Yellow indication when the section is clear.
v)	GWL-STLI UP IB reset CO-OP Indication.	A yellow indication will appear when GWL-STLI UP IB reset button is pressed and key is turned.

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(G) SPECIAL INDICATIONS (SLV-STLI) SIDE:

i)	SLV-STLI DN BPAC Re-setting CO-OP Indication.	A white indication will appear when SM/ASM SLV presses DN BPAC Re-setting CO-OP. button.
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(H) CIRCUMSTANCES UNDER WHICH THE WORKING OF INTERMEDIATE BLOCK STOP SIGNAL SHALL BE SUSPENDED AND THE SECTION BETWEEN STLI-SLV & STLI-GWL SHALL BE TREATED AS ONE BLOCK SECTION:

- (a) Failure of Axle Counter provided between Advance Starter signal and IBS
- (b) Failure of Block instruments.
- (c) Failure of IB Signal.
- (d) Failure of track circuits/Axle Counter between IB signal and Home signal of station in advance.
- (e) Failure of Distant signal of IB in “OFF” condition.
- (f) During failure of all communication.

11.2 (A) WORKING OF AXLE COUNTER EQUIPMENT ON DOWN LOOP LINE CUM 2GF(11) AND 2GF(12) POINT PORTION (210 AXT) & UP LOOP LINE ON POINT PORTION 102 BOTH ENDS AND 103 DLI END (249 AXT):

- a) Axle counters with out trolley suppression track circuit are provided on the (entrance /exit portion) DN Loop line Cum 2GF (11) & 2GF(12) point portion (210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) and without trolley protection for lines over protection in lieu of conventional track circuits to indicate their clearance.
- b) Passage of vehicle over the track equipment of axle counter counts the entry or exit of the axles [of vehicles].
- c) When DN Loop Cum 2GF (11),(12) point portion (210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) line is clear, i.e. no vehicle is occupying the berthing portion of DN Loop Cum 2 GF(11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) lines, the axle counter equipment will show “Track Clear” indication on the control panel. When the DN loop Cum 2 GF (11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) lines are occupied or when Axle Counter has failed, it will show “Track Occupied” indication on the control panel by red light.
- d) Line Verification Box has been provided outside the SM room for Re-setting the Axle Counter equipment in case of its failure. The line verification box is provided with SM’s key lock, the keys of which are in the personal custody of SM/ASM on duty.
- e) Before taking “Off” reception signal for receiving a Down train on DN Loop line and UP train on UP loop line, SM/ASM on duty must observe the “Clear” indication on the axle counter indicator.

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- f) The provision of axle counter equipment for berthing portion of DN Loop Cum 2 GF(11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) line is intended to serve as additional “Safe- Guard” to prevent any lapse on the part of the SM/ASM on duty in taking “Off” the signals for the train on line which is occupied. It is, therefore, essential that SM/ASM on duty should satisfy himself that the line is “Clear” before taking “Off” the reception signal for receiving a train on DN Loop line and UP Loop line.
- g) Conventional track circuit detects obstruction on the line throughout the length of the track-circuited portion. In case of Axle Counters, an obstruction (like that of Material Trolley/Dip Lorry etc.) if placed on the track without passing through the track equipment, is not detected. Therefore, it is important for SM/ASM on duty to ensure that the reception line is clear of any obstruction before taking ‘Off’ reception signals for a train on Down Loop and UP Loop line that line by personal verification, in addition to observing Axle Counter indicator and the Control Panel.
- h) SM/ASM on duty shall personally verify fouling of Ballast siding No.2 & 1 after each Shunting or movement in to /from siding.

11.2(B) I WORKING OF SSDAC(224AXT) INSTALLED ON DN LINE IN PARALLEL TO TRACK CIRCUIT 224T.

- i. SSDAC 224AXT is provided on DN line in parallel to track circuit no. 224T. Track circuit no. 224T and SSDAC 224AXT will work independently. Indication for track circuit no. 224T & SSDAC 224AXT has been given separately over the SM’s panel. The portion of track represented by track circuit no. 224T shall be treated as “Clear” of any train vehicle if anyone of the 224T or 224 AXT is showing “clear ” indication over the panel. SSDAC 224AXT has been provided for dual detection of the concerned track section represented by track circuit no.224T.
- ii. Two separate indications are provided over the SM’s panel to show “Occupied”(red indication) and “Clear” (yellow indication) status of the SSDAC 224AXT.
- iii. In case, SSDAC 224AXT has failed after passage of any train and it is showing “Occupied” (red indication) status over the SM’s panel and track circuit no. 224T is showing clear status, the SSDAC 224AXT will be automatically resetted by the “Clear” status of track circuit no. 224T and SSDAC 224AXT will come in preparatory reset mode. After coming in preparatory reset mode, the SSDAC 224AXT will show the “Clear” (yellow indication) status after proper passage of first passing train. If after the passage of first train, the SSDAC 224AXT does not show the “Clear” (yellow indication) status, on duty SS/SM will advise S&T staff for manual resetting of axle counter. Manual resetting can be done only after the physical verification of the concerned track section by operating staff.

11.2(B) II WORKING OF SSDAC(232AXT) INSTALLED ON UP LINE IN PARALLEL TO TRACK CIRCUIT 232T.

- i. SSDAC 232AXT is provided on UP line in parallel to track circuit no. 232T. Track circuit no. 232T and SSDAC 232AXT will work independently. Indication for track circuit no. 232T & SSDAC 232AXT has been given separately over the SM’s panel. The portion of track represented by track circuit no. 232T shall be treated as “Clear” of any train vehicle if anyone of the 232T or 232 AXT is showing “clear” indication over the panel. SSDAC 232AXT has been provided for dual detection of the concerned track section represented by track circuit no.232T.

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- ii. Two separate indications are provided over the SM's panel to show "Occupied"(red indication) and "Clear" (yellow indication) status of the SSDAC 232AXT.
- iii. In case, SSDAC 232AXT has failed after passage of any train and it is showing "Occupied" (red indication) status over the SM's panel and track circuit no. 232T is showing clear status, the SSDAC 232AXT will be automatically resetted by the "Clear" status of track circuit no. 232T and SSDAC 232AXT will come in preparatory reset mode. After coming in preparatory reset mode, the SSDAC 232AXT will show the "Clear" (yellow indication) status after proper passage of first passing train. If after the passage of first train, the SSDAC 232AXT does not show the "Clear" (yellow indication) status, on duty SS/SM will advise S&T staff for manual resetting of axle counter. Manual resetting can be done only after the physical verification of the concerned track section by operating staff.

11.2(C) FAILURE OF AXLE COUNTER:-

When the Axle Counter equipment shows occupied (Red) indication even though the DN loop Cum 2 GF(11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) lines are free & clear of any obstruction; it indicates that the Axle Counter equipment has failed.

- a) In such case, SM/ASM on duty will pass a written memo to the ESM of the station/section to attend the failure. The failure should be recorded in the 'Signal and Telecommunication Failure Register'. The re-setting of the faulty Axle Counter should be done jointly by SM/ASM on duty along with other ASM/SM/points man/other traffic staff or ESM, as the case may be.
- b) The SM/ASM on duty along with other ASM/SM/ points man/ other traffic or ESM, as the case may be, must jointly verify and ensure physical clearance of the DN Loop Cum 2 GF(11),(12) point portion (210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) line, by coming out of his office. After ensuring that the DN Loop Cum2 GF(11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) lines are clear and free from obstructions, SM/ASM on duty and Off duty ASM/SM/ points man/ other traffic or S&T staff available at the station have to press simultaneously the push button provided in the Line Verification Box installed outside SM office and resetting push button in panel DN Loop line Cum 2 GF(11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103DLI end (249 AXT) in SM's office. Whenever the resetting push button for re setting the axle counter equipment is operated, the counter associated with it shows next higher number.
- c) In case neither other ASM/SM nor ESM is available, and if trains have to be received on the DN Loop Cum2 GF(11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) lines of which axle counter equipment has failed, the train may be received on Calling-On Signal and if Calling-On Signal also fails, SM/ASM on duty must ensure that requisite points in the route are correctly set & locked by route setting with steady point indication otherwise points should be clamped and padlocked and trains must be piloted as per SR 3.69-3 till the time the faulty axle counter has jointly been reset.

- d) After resetting of the axle counter which has failed, the indicator will show “Clear” indication. Reception signal for receiving train on the DN Loop Cum 2 GF(11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) lines can then be taken “Off”. SM/ASM on duty shall make an entry for every re-setting operation in the register provided for this purpose. Following particulars shall be recorded in the register and jointly signed by SM/ASM on duty along with “ Off” duty ASM/SM or ESM, as the case may be.
- i. Date, time and train number for which re-setting of the axle counter has been done;
 - ii. Reading of the axle counter before re-setting;
 - iii. Reading of the axle counter after re-setting;
 - iv. Number and description of the last train admitted and dispatched from the DN loop Cum 2 GF(11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) lines after which the axle counter equipment has failed.
 - v. Date and time the train clears the berthing portion of the DN loop line Cum 2 GF(11), (12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) .
 - vi. Date and time axle counter equipment is jointly re-set by SM/ASM on duty along with “Off” duty ASM/SM or ESM.
 - vii. Signature of SM on duty re-setting the axle counter equipment.
 - viii. Signature of “Off” duty ASM/SM or ESM who so ever associated with SM/ASM on duty for re-setting of the axle counter.
- (e) If the defective axle counter equipment controlling the berthing portion of the DN loop Cum 2GF (11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) lines cannot be re-set for the first train or if it can be re-set for the first train, but cannot be re-set for the next train, then in either case the SM/ASM on duty must immediately inform ESM concerned regarding the failure of axle counter equipment, endorsing the copy of the message to SE/Sig/M or SSE/Sig/M concerned to rectify the axle counter equipment.
- f) The ESM/JE/SE/SSE on receipt of the failure message shall attend the station and give a Disconnection Memo on the prescribed form for the defective axle counter equipment. After the defect is rectified, ESM/JE/SE/SSE will give SM on duty a Reconnection Memo stating that the defect is rectified. During the period, the axle counter equipment has failed and is set right, reception of trains on DN Loop Cum 2 GF(11), (12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103 DLI end (249 AXT) lines should be done either by taking “OFF” Calling-On Signal or by clamping, padlocking the points and procedure laid down in SR 3.69-3 should be followed, if Calling-On Signal also fails.

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- g) If re-setting button is required to be operated by ESM/JE/SE/SSE for the purpose of maintenance, testing etc., the reading of the counter must be entered in the register and the concerned maintenance staff should sign jointly with SM/ASM on duty in token of operation of re-setting button. Last reading of re-setting counter for the axle counter equipment for DN loop Cum 2 GF (11),(12) point portion(210 AXT) & UP loop line on point portion 102 both ends and 103DLI end (249 AXT) lines must be entered in the Train Register by SM/ASM on duty at the time of signing “ON” and signing “OFF” duty.
- h) **Working of Push Trolley/Motor Trolley/Dip lorry / Material Trolley –**
- The passage of an insulated axle of a trolley/Motor trolley/Material Trolley or Dip lorry over the axle counter track equipment results in momentary failure of axle counter equipment. This gets restored to “Normal” after the wheel has passed clear off the axle counter equipment. The reception signals, if any, already taken “OFF” will assume “ON” position. The signals can again be taken “OFF” after the Signal cancellation procedure is followed.
 - Un-insulated trollies** - The passage of an Un insulated axle like that of a push trolley/Motor trolley/Material trolley or Dip lorry over the axle counter equipment is followed by failure of reception signals controlled by the axle counter. This will require the re-setting of axle counter before reception signals are taken “OFF”.
 - Under the circumstances explained above, it is essential that Dip lorries/Materials trollies /Motor trollies /Push trollies are invariably worked after obtaining specific permission of SM/ASM on duty under clear memo. SM/ASM on duty should re-set the axle counter only when the trolley has been removed “OFF” the track and the same has been confirmed by the Official in-charge of the trolley in writing.

11.3. SIGNALS ASPECTS WORKED AND CONTROLLED FROM SM’S PANEL AT STATION:

(A) NORMAL ASPECTS OF DN SIGNALS:

	DN Gate Dist.	DN Gate Inner Dist.	DN Gate Sig. S-2 of Gate No. 412	DN Dist.	DN Inner Dist.	DN Home S-2	DN ML STR S-4	DN ADV STR G 16	DN IBS Dist	DN IBS Inn. Dist. cum Gate-418 Dist	DN IBS SIG S-18 cum INN DIST GATE-418
Normal Aspect	Double Yellow	Yellow	Red	Double Yellow	Yellow	Red	Red	Red	Double Yellow	Yellow	Red

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(B) ASPECT SEQUENCE CHART FOR DN SIGNALS**DN IBS ASPECT CHART**

1 st Table			2 nd Table					3 rd Table		
DN Gate Dist.	DN Gate Inner Dist.	DN Gate Sig. S-2 of Gate No. 412	DN Dist.	DN Inner Dist.	DN Home S-2	DN ML STR S-4	DN ADV STRG 16	DN IBS Dist	DN IBS Inn. Dist. cum Gate-418 Dist	DN IBS SIG S-18 cum INN DIST GATE -418
Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Green	Double Yellow	Yellow	Green	Double Yellow	Yellow	Yellow	Red	Double Yellow	Double Yellow	Yellow
Double Yellow	Yellow	Red	Double Yellow	Double Yellow	Yellow with route	Red	-	Double Yellow	Yellow	Red
			Double Yellow	Yellow	Red	-	-	-	-	-

(C) NORMAL ASPECTS OF UP SIGNALS:

	UP IB SIG S-21	UP IB INN DIST	UP IB DIST	UP Gate Sig. S-1 of Gate No. 412	UP GATE (412) INN DIST	UP GATE (412) DIST	UP ADV STG S-22	UP MAIN STG S-35	UP HOME S-38	UP INN DIST	UP DIST CUM UP IBS SIG S-10 (GWL)
NORMAL ASPECT	Red	Yellow	Double Yellow	Red	Yellow	Double Yellow	Red	Red	Red	Yellow	Red

(D) ASPECT SEQUENCE CHART FOR UP SIGNALS.

3 rd Table			2 nd Table			1 st Table				
UP IB SIG S-21	UP IB INN DIST	UP IB DIST	UP Gate Sig. S-1 of Gate No. 412	UP GATE (412) INN DIST	UP GATE (412) DIST	UP ADV STG S-22	UP MAIN STG S-35	UP HOME S-38	UP INN DIST	UP DIST CUM UP IBS SIG S-10 (GWL)
Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Red	Yellow	Double Yellow	Red	Yellow	Double Yellow	Red	Yellow	Yellow	Double Yellow	Green
-	-	-	Yellow	Double Yellow	Double Yellow	Red	Yellow	Yellow	Double Yellow	Green
-	-	-	-	-	-	-	Red	Yellow with route	Yellow	Double Yellow
-	-	-	-	-	-	-	-	Yellow with route	Yellow	Double Yellow
								Red	Yellow	Double Yellow

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11.4 PROCEDURE TO BE ADOPTED IN CASE OF FAILURE OF NORMAL POWER SUPPLY BY THE SM/ASM ON DUTY

- 1) Power supply for signaling system of this station is provided through auxiliary transformers connected to UP & DN Main Line OHE supply. The availability of power for each AT is indicated on the change over panel by illumination, which indicates the availability of power for the particular AT supply.

Normally One AT is connected to signaling load which is indicated by an illuminated indication on the Auto Changeover panel whenever this AT supply fails signaling load will be switched over to 2nd AT automatically which is indicated by an illuminated indication on the Auto Changeover panel.

The arrangements will be in the automatic Change over Panel provided in the ASM/SM room at this station. In case Supply available and automatic change over not taken place One switch provided on Auto change over in panel to change manually by turning the Switch on S1 or S2 position the ASM/SM/Cabin Master should turn Switch, whichever Supply is available.

The indication of UP & DN AT supply are provided in the panel and SM/ASM on duty shall take action to inform OHE staff in case any of the indication is not there. In the event of failure of UP & DN AT supplies a bell provided in panel will ring continuously which pressing button provided near AT supply indication on the panel can silence.

The SM/ASM on duty will advise TPC and concerned OHE staff and concerned SSE/SE/JE-SIG whenever catenary supply fails.

A Register will be maintained by SM/ASM on duty indicating the time of failure of catenary supply, the time OHE authorities informed on TPC or otherwise, the time ESM/SE/JE was advised, the time OHE staff/attended and restored the normal supply.

When the normal catenary supply & stand by Supply does not appears, the ASM/SM on duty shall check up the signal indications and or the signal aspects from the station. In case, there is no signal indication at the Station and no light on the signals. The SM/ASM on duty will treat the signals as defective arrange to receive and/or dispatch the trains in accordance with GR: 3.68, 3.69, 3.70, 3.71, 3.75 and SRs there under of G& SR.

2) POWER SUPPLY SYSTEM AT IBH

Power supply for signaling system of STLI UP/DN IBH is provided through auxiliary transformers connected to UP & DN Main Line OHE supply.

Normally, one AT is connected to signaling load which is indicated by an illuminated indication on the Auto Changeover at IBH, whenever this AT supply fails signaling load will be switched over to 2nd AT automatically which is indicated by an illuminated indication on the Auto Changeover panel.

The arrangements will be in the automatic Change over Panel provided in the IBH. The availability of any one of AT supply at IBH is indicated by a 'Yellow' LED indication provided at STLI station.

In case of both AT supply failure 'Yellow' LED is not lit at STLI station, the SM/ASM on duty must immediately take action and will advise TPC and concerned OHE staff and concerned SSE/SE/JE-SIG. In case, there is no signal indication at the IBH and no light on the signals. The SM/ASM on duty will treat the signal as defective and arrange to receive and /or dispatch the trains in accordance with GR: 3.68, 3.69, 3.70, 3.71, 3.75, and SR's there under .G & SR.

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(AMIT GOYAL)

12. GENERAL INSTRUCTIONS:

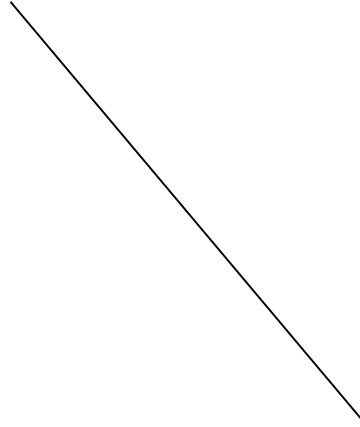
- [a] Reference to Rules:
- I] Refer to S.R. 3.68-1[d] when a signal which detects points becomes defective.
- II] Refer to S.R. 14.13-1 for working trains during the failure of Block Instrument.
- [b] Shunt signals shall be taken 'OFF' for shunting operations.
- [c] The SM/ASM on duty must not take 'OFF' the Advanced Starter for a stopping train to proceed up to IBS, until he has personally ascertained that the correct route has been set for the train. He shall then take "Off" the Advanced starter signal and then the concerned starter signal which shall assume "Off" aspect only after Advanced starter signal has been taken Off and has assumed Off aspect.
- [d] When the use of the crossover is made at either end of the station, the relevant signals protecting the move must be kept at 'ON' position.
- [e] During the time of a point failure and when such point has been set by crank handle, clamped and padlocked by the SM/ASM on duty himself, retaining the padlock keys in his personal custody and traffic has been passed over the same, he will make a suitable endorsement to that effect in the crank handle Register in lieu of Private Number.
- [f] While setting a crossover Point provided with motors Manually by crank handle from 'Normal' to 'Reverse' on both sides, care should be taken to set the end marked [A] first and then set the other end marked [B] later. Similarly, while setting from 'Reverse' to 'Normal' end marked [B] should be set first and then End marked [A].
- [g] The relay room is provided with a double lock. [i.e. One Optg. & other S&T] Optg. Lock & key will be kept in a glass-fronted box and key of the box kept in the personal custody of SM/ASM on Duty. The other key will be in the custody of the JE/SE /ESM ON DUTY of Section.
- [h] Whenever the relay room is to be opened, the JE/SE/ESM ON DUTY will take the key from the SM/ASM on duty making relevant entries in the relay room register maintained at the station.
- [i] On completion of work, the relay room will be locked up and the SM's key handed over to the SM on duty. SM on duty will ensure that relay room is locked properly by both S & T and operating locks. Necessary entries must be completed in the relay room register.
- [j] The relay room register shall contain the following columns:
- i. Date.
 - ii. Time the key taken.
 - iii. Signature of SM/ASM on duty.
 - iv. Signature of S&T Officials.
 - v. Time key handed over.
 - vi. Time locked by SM/ASM on duty.
 - vii. Signature of the SM/ASM on duty.
 - viii. Signature of S&T Officials.
 - ix. Remarks.

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APPENDIX 'C'**ANTI COLLISION DEVICE (RAKSHA KAVACH):**

This device is not use on this section of railways



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APPENDIX – ‘D’

DUTIES AND RESPONSIBILITIES OF THE STAFF:

1. The S.M. is responsible for the efficient discharge of duties devolving upon the several members of staff either permanent or temporary under his orders at the station or within the Station Limits and such staff shall be subject to his authority and direction in the working of the station.
2. The S.M./ASM on duty shall be responsible to see that the working of station is carried out in strict accordance with the rules and regulations for the time being in force.
3. The SM/ASM on duty is responsible for ensuring that the signals taken ‘OFF’ for the reception /despatch of trains are put back to ON’ after the train has passed them as per Para No. 8.03 Block working Manual.
4. In case of unusual occurrence SM/ASM on duty must ensure safety, report occurrence and render assistance as per GR.2.11 of G & SR.
5. SM/ASM on duty will be responsible for all train working on VDU and block instruments.
6. The SM on duty will perform the duties mentioned in SR.6.02-1, 6.02-2, 6.02-3 and 3.75 of G & SR.
7. SM on duty shall be responsible for issue of Caution Orders, T/369(3b), paper line clear ticket and other authority.
8. In case of failure of motor operated point, the ASM on duty will be responsible for setting, crank handling, clamping and padlocking of points as per SR: 3.51-4 and 3.68-1, 3.68-7 of G&SR.
9. In case of failure of points, gates and signals etc. SM on duty will take suitable action and advice to the concerned officials.
10. ASM on duty shall be responsible for exchanging all right signal with through passing trains.
11. SM/ASM on duty shall personally verify clearance of fouling mark of POL Siding after in to and out of POL siding each shunting or movement.
12. He will exchange Private Numbers with all Traffic and Engineering Gates Connected with station to ensure safe movement of trains and advice put to the SM/ASM for giving Line Clear & Signals.

POINTSMAN

1. The points man on duty will be responsible for handing over all authorities and Caution Order to the driver and Guard when required.
2. The points man working under instructions of Guard / Station Master / Person in charge of shunting operation shall be responsible for securing vehicles as per SR.5.23-1 & 5.23-2 of G&SR.
3. The points man on duty shall be responsible for exchanging all right signals from the OFF’ side of the station for all the through passing trains.
4. Stop Boards, Block section limit board and Point indicator lamps are provided in the yard at the location as shown in diagram. Points man shall be responsible for lighting of them by kerosene lamps.

GATEMAN

1. The gateman on duty will be responsible for closing of gates as per instructions of SM / ASM on duty and remain alert for passing train as per SR 16.04 - 01 of G&SR.
2. In case of any obstruction at the gate, the gateman will take steps to remove if he can and advise SM / ASM on duty and then protect the UP and DN Lines.

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APPENDIX – ‘E’

ESSENTIAL EQUIPMENTS AT THIS STATION

ESSENTIAL EQUIPMENTS: -

i)	Switch Clamps.	16 Nos.
ii)	Pad Locks.	17
iii)	Button Collars.	08
iv)	Hand Signal Lamps. LED based.	06
v)	Hand signal Flags (Green)	05
vi)	Hand signal Flags (Red).	08
vii)	Safety Chains.	04
viii)	Wooden Wedges.	08
ix)	Fire Extinguishers.	02
x)	First Aid Box.	01
xi)	Fire Bucket with stand.	04
xii)	Stretcher.	01
xiii)	Detonators	20
xiv)	Safety Rubber Gloves	02

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APPENDIX –F

RULES FOR WORKING DK STATION, HALTS, IBH, IBS & OUTLAYING SIDINGS:

There are no DK stations, halts or outlay siding adjoining this station. Only IB Stop Signalling is provided between STLI-SLV and STLI-GWL in both UP and DN directions.

Details of rules of working of IBS may be seen in Appendix –B.

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APPENDIX `G`

RULES FOR WORKING OF TRAINS IN ELECTRIFIED SECTIONS:

1. KNOWLEDGE OF RULES:

SR 17.01/1 SM shall ensure that all station staff working in the area where electric traction is in use are thoroughly conversant with the rules applicable for running of trains in the section provided with 25 KV AC traction. Ignorance of the rules shall not be taken as an excuse for non compliance.

2. REPORTING OF BREAKDOWNS:

Any break down or defects reported to SM shall be conveyed to the Traction Power Controller through TPC telephone or through section controller immediately. In case of failure of communication, he shall use his discretion regarding movement of traffic and advise the nearest traction official.

3. SAFE CUSTODY OF OHE SWITCHES KEYS AND OPERATION OF SWITCHES:

SR 17.03/4. Station Master shall make them self fully aware, through supplement to the SWR for AC traction, of the location of Isolator Switches provided for control of OHE power supply equipment at his station [SR 17.05/1(4)] and shall be fully conversant with the correct method of opening and closing the same in emergency. Key for all outdoor OHE switches shall be kept locked in glass fronted box provided with a lock, the key of which shall be kept in the custody of the SM. The key of OHE switches shall be issued on demand, only to authorized person whose signatures for receipt shall be obtained in register maintained for the purpose.

- 3.1 In the event of breakage of glass of the box containing the key of the OHE switches shall be kept in safe custody by the SM till the glass of the box is replaced. He shall also advise the concerned SSE OHE to arrange immediate replacement of the glass.
- 3.2 In case of emergency the SM shall operate such OHE switches as per specific direction of the Traction Power Controller (TPC). If the TPC wishes to have any isolator switch opened or closed he shall ask Station Master under exchange of private number to carry out the required switching operation, if SSE (OHE) is not available to him. The SM after carrying out the orders lock the switch in last operated position and inform the TPC of the action taken. He shall not part with the key until receipt of further order from TPC. Record of every such operation shall be maintained on key transaction register. The key shall be deposited back to the SM who intern shall lock the keys in the glass fronted box and make an entry in the register maintained for transaction of the keys in case the SM has not done the operation by himself.

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4. ISSUE OF CAUTION ORDERS:

In case of OHE breakdown on having been reported by the SSE/OHE, JE/OHE the SM, in consultation with the Section Controller shall issue the Caution Order in accordance with SR 4.09/1, to all Loco Pilots entering into the affected section mentioning clearly of the condition and

5. WORKING OF OHE STAFF IN STATION LIMITS:

SR 17.03/8. No person shall disturb the OHE, or carryout bonding or any other work within the Station limits, in such a way as to obstruct the line and necessitate showing of danger signals, without prior permission of the SM.

6. POWER BLOCK:

- 6.1 The SM shall grant local power blocks for working into the siding which does not affect the normal train working under advice to the Section Controller.
- 6.2 SM shall not permit any electric engine to enter into area over which power block has been granted. He shall put button collars on such points leading movement into the area which shall be removed only after cancellation of the block. He shall make entry on the log book accordingly while handing over charge to in coming SM.

7. WORKING OF TOWER WAGON:

SR 17.08/1. A tower wagon is to be treated like a train and shall be worked without a guard. In case of an arranged OHE block, one or more Tower wagons can be worked and follow one another. The SM while authorizing the following Tower Wagon/ Tower Wagons into occupied affected OHE section, shall issue an 'Authority to proceed without line clear' and a caution order mentioning the site of work indicating the speed which under no circumstances, shall exceed 10 KMPH. A Tower Wagon shall however not be permitted to enter the section following a train. The After completion of the work in charge of the Tower Wagon which entered last I the section shall certify at the station in advance about clearance of the section and initial against the relevant entry in the Train signal register in token of the section having been cleared of the last Tower wagon.

8. DUTIES & RESPONSIBILITIES OF STATION MASTER IN CASE OF NO TENSION-FAULT TRIPPING IN OVERHEAD EQUIPMENT: SR 17.08/1

- 8.1 in case of power supply in a section becomes faulty, on getting such information from TPC, the Section Controller shall advise the same to the SM under exchange of private numbers. The SM shall treat the section as under emergency power block and shall take action accordingly.
- 8.2 In case the train has not entered into the faulty section: The SM shall issue a caution order to the Loco pilot of the train in unaffected section to keep a sharp Look out on the adjacent line/lines to see if there are any OHE abnormalities. On reaching the next station loco Pilot shall report whether or not the section over which he has passed is safe for train movement. The SM shall inform the Section Controller accordingly.

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- 8.3 In case the train has entered into the faulty section: In case the train has entered into the faulty section and also into in to the section which been isolated, the SM shall not allow any train to enter into the affected block section unless both Loco Pilot and Guard of the first train in un affected section have been issued caution order:
- i. Proceed with speed not exceeding 60 KMPH during day and visibility ahead is clear and not exceeding 30 KMH during night subject to observance of other speed restrictions in the section.
 - ii. Keep a sharp look out and be prepared to stop short of any obstruction, which may be due to any infringement from the adjacent line-lines and also keep a sharp look out on adjacent line/lines to see if there any OHE abnormalities. On reaching the next station, Loco pilot shall report whether or not section over which he had passed is safe for train movement. The SM shall inform the Section Controller accordingly.
 - iii. The SM shall withdraw the speed restriction on receipt of advice from the Section Controller under exchange of private number.

9. DUTIES OF THE STATION MASTER IN CASE OF UNSAFE CONDITION OF A TRAIN WORKING ON ELECTRIFIED SECTION:

- 9.1 in case of unsafe condition of a train working on electrified traction, the TPC shall advise the Section controller after switching off the power supply of both the lines of the effected section. on getting such information from TPC, the Section Controller shall advise the same to the SM under exchange of private numbers. The SM shall treat the section as under emergency power block and shall take action accordingly. The SM shall not allow any train to enter into even the healthy line of the affected section unless both Loco Pilot and guard of the first train of unaffected section have been issued caution order to `Proceed with speed not exceeding 60 KMPH during day and visibility ahead is clear not exceeding 30 KMH during night subject to observance of other speed restrictions in the section and to keep a sharp look out and be prepared to stop short of any obstruction, which may be due to any infringement or OHE abnormalities from the adjacent line-lines. He shall also advise to the Loco Pilot to report immediately on reaching the next station whether or not the section over which they had passed is safe for train movement.

If the Loco pilot of unaffected section, contacts the SM on phone, the OHE of unaffected portion will be resumed and he will be asked to proceed with restricted speed not exceeding 60 KMPH during day and view ahead is clear and 30 KMH during night subject to observance of other speed restrictions in the section and to keep a sharp look out and be prepared to stop short of any obstruction, which may be due to any infringement from the adjacent line –lines. On reaching the next station loco Pilot will report whether or not the section over which they have passed, safe for train movement.

After ascertaining that there is no infringement, the caution order as indicated shall be withdrawn by SM under exchange of private number with the Section controller.

Note :-Traction working rule with TWRD is attached separately as appendix G which is part of SWR.

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