

EAST COAST RAILWAY
WALTAIR DIVISION

STATION WORKING RULES OF VISAKHAPATNAM (ROUTE RELAY INTERLOCKING)

Date of Issue:-

Date of brought in force:

Ref: Rly. Bd. Lr. No: 2000/Safety/A&R/19/36, Dt: 27-10-2005.

NOTE: -

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

1. STATION WORKING RULE DIAGRAM:

- a) Station Working Rule Diagram: SI/23029, ALT-'D'.
b) Signal Interlocking Plan: SI/23029,ALT-'D'.

2. GENERAL LOCATION:

a.	Name of the Station:	:	VISAKHAPATNAM
b.	Class	:	'B'-Class
c.	Name of the section	:	Chennai – Howrah
d.	Double/Single/Multiple Line	:	Double Line
e.	Electrified/Non-Electrified	:	Electrified
f.	Railway	:	East Coast Railway
g.	Route	:	'B'-Route
h.	Situated at	:	878.890 From HOWRAH
i.	No. of Cabins	:	Centrally operated Panel with Route Relay Interlocking.

2.1 DESCRIPTION OF STATION:

VISAKHAPATNAM (Code:VSKP) is a 'B' class terminal station on Chennai-Howrah Double line electrified (BG) section of East Coast Railway on 'B' route. It is situated at KM:878.890 from Howrah provided with RRI.

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2.2 BLOCK SECTIONS ON EITHER SIDE AND THEIR DISTANCE & OUTLAYING SIDINGS

GOPALAPATNAM is the Block station situated at a distance of 7.067 KM at North side towards HWH end.

Containers siding towards CFS is situated at a distance of 3.11 KM at South end of the yard.

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

	Between Stations	The point from which the Block sections commences	The point at which Block Sections ends.
1.	GPT-VSKP UP LINE		Facing Point No:101A
2.	VSKP-GPT DN LINE	DN advanced starter signal No:60	--

2.4 GRADIENTS

Station between	Chainage in Mtrs.		Stretch in Mtrs.	Gradient
	From	To		
VSKP-Loco Yard Engine siding	000.475	475 Dead End	475	Level 1 in 1000 falling
VSKP-Loco Goomty all line	000	731.5	731.5	Level
VSKP-LOCO Goomty Engine line and Shunting Neck	731.5 979 1280	979 1280 In to Section	247.5 301 --	Level 1 in 2000 Raising Level
VSKP-Yard All lines	000	731.5	731.5	Level
VSKP-GPT Up & DN lines	731.5	950	219.5	Level
VSKP-GPT Up & DN lines	950	1584	634	1 in 631 Raising
VSKP-GPT Up & DN lines	1584	2681.5	1097.5	1 in 150 Raising
VSKP-GPT Up & DN lines	2681.5	3900.5	1319	1 in 1000 Raising
VSKP-GPT Up & DN lines	3900.5	In to Section	--	Level
VSKP Shunting Neck on South side	000	671.17	671.17	Level
VSKP Shunting Neck on South side	671.17	881.47	210.30	1 in 100 falling
VSKP Shunting Neck on South side	881.47	In to Section	--	1 in 150 falling

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2.5 LAYOUT:

- a) i) VISAKHAPATNAM (VSKP) is a terminal station provided with Eleven lines, Out of Eleven lines 10 lines are terminal yard lines and are meant for dealing coaching trains.
- ii) Line No:1,3,4,5,6,9,10 & 11 are passenger carrying train lines provided with high level passenger plat forms with reception and dispatch signals.
- iii) Line no:2 is Non Platform Engine run round line.
- iv) Line no: 7& 8 are terminal yard lines.
- b) A high level passenger platform of 649 Mtr. X 15 Mtr. Is provided for Line No.1.
- c) An Island platform of 601 Mtr. & 9.4 Mtr. Is provided for Line No. 3 & 4.
- d) An Island high level passenger platform of 686 Mtr. X 10.6 Mtr. Is provided for Line no:5 & 6.
- e) A high level passenger platform of 652 Mtr. & 12 Mtr. Is provided from Line No:11.
- f) A saloon Siding of CAL 115 Mtr. Is provided at GPT end of yard takes off from Point no: 125A.
- g) An goods/Parcel van siding of CSL 112.25 Mtr. Is provided at South End of the yard.
- h) A Shunting neck No:1 of CSL-33.21 Mtrs. Is provided at South end of the yard takes off from Point no:151 with an isolation of Point no:155.
- i) Container siding towards CFS is isolated by DS No:156 at South end of the yard.
- j) A shunting neck no:2 of CSL 340 Mtrs. Is provided at the North end of the yard towards WAT MYD and is isolated from DS no:107A.
- k) A Shunting neck no:3 cum rack placement line of CSL 310 Mtrs. Is provided at the North end of the yard and is isolated by DS no:104.
- l) A Shunting neck no:4 of CSL 145 Mtrs. Is provided at the North end of the yard and GPT is taken off from UP line through Point no:103 on UP line and 103A as loco yard Line no:1.

2.5.1 RUNNING LINE:

The station is provided with 11 running lines.

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DIRECTIONAL MOVEMENT

The Trains arriving at this station from Gopalapatnam are UP trains.

The trains leaving this station proceeding towards Gopalapatnam are DN trains.

HOLDING CAPACITY OF LINES:

i)	Line no:1	CSL 622 Mtr. (Starter to SH)
ii)	Engine Line no:2	CSL 354.64 Mtr. (SH to SH)
iii)	Line no:3	CSL 589 Mtr. (Starter to SH)
iv)	Line no:4	CSL 661.69 Mtr. (Starter to SH)
v)	Line no:5	CSL 874 Mtr. (Starter to SH)
vi)	Line no:6	CSL 800.32 Mtr. (Starter to SH)
vii)	Line no:7	CAL 372 Mtr. (Starter to SH)
viii)	Line no:8	CAL 372 Mtr. (Starter to SH)
ix)	Line no:9	CAL 524 Mtr. (Starter to SH)
x)	Line no:10	CSL 641 Mtr. (Starter to SH)
xi)	Line no:11	CSL 823.25 Mtr. (Starter to SH)

2.5.2 NON RUNNING LINES AND THEIR CAPACITY IN CSR:-

Sl. No:	Non Running Lines	CAPACITY
1	Saloon Siding	115 Mtr. (SH to DE)
2	Goods/Parcel Van Siding	112.25 Mtr. (SH to SB)
3	Shunting Neck	33.21 Mtr.
4	Shunting Neck	392 Mtr.
5	Tower Wagon siding	72 Mtr. (FM to DE)

2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT:-

- i) Visakhapatnam station is a terminal yard, hence a speed restriction of 10 KMPH is imposed on Permanent basis.
- ii) A new Coaching complex is provided via H-Goomty for washing maintenance of coaches and for marshalling and drawn out of coaching rakes. The spurs are provided for repairing of coaches. Detail working procedures are in Appendix-H.

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2.5.4 DESCRIPTION OF SIDINGS**NORTH END****i) SALOON SIDING:**

It takes from Point no:125 and terminates in to a dead end towards the station Building and is isolated from Line no:1 by a derailing switch 125B. These two points 125A & 125B DS are operated from the panel by Elect. Point Machine and the movement over the saloon siding are governed by Shunt Signal No.21 & 8.

ii) SHUNTING NECK No:2

The Shunting neck takes off from Point No:107 at the North end of the yard towards Waltair MYD. The siding is isolated by a derailing switch 107 DS. The Point No:107 is operated electrically from panel by electrical point machine and the movements over the shunting neck are governed by shunt signal no: 48, 50 and 15.

iii) SHUNTING NECK No:3 CUM RAKE PLACEMENT LINE:

The Shunting neck takes off from Line No:6 and is isolated by a derailing switch 104 DS. The point no.104 is operated electrically from panel by electrical point machine and the movements over the shunting neck are governed by shunt signal no: 13, 48 & 50.

iv) SHUNTING NECK No:4

The Shunting neck takes off from Loco yard line no:1 and from UP line towards GPT end of the yard through Point no:103. The Point no:103 is operated electrically from panel by electrical point machine and the movements over the shunting neck are governed by shunt signal no. 50 52, 54 & 5.

The shunting neck is also connected from loco yard line no:2 through hand operated key locked point controlled by control no:141 from panel.

SOUTH END:**i) GOODS/PARCEL VAN SIDING:**

It takes of from Line no:1 from point No.147A and is isolated by a derailing switch 147B DS. These two points 147A & 147B are operated from the panel by Elect. Point Machine and the movements over the siding are governed by Shunt signal No:29.

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ii) SHUNTING NECK NO:1

The shunting neck takes off from Point No:151B at the South end of the yard and is isolated by a derailing switch 155. These points No.151 & 155 is operated electrically from panel by electrical point machine and the movements over the shunting neck are governed by shunt signal no.55, 53, 43, 41, 45, 47 & 6.

iii) CONTAINER SIDING:

The container siding takes off from Point No:151 of south end of the yard and is isolated by derailing switch 156. These two points 151 & 156 are operated from the RRI cabin and the movements over the container siding are governed by Shunt signal No. 39, 27, 41, 43, 45, 47, 53, 55 & 2. Detail Working procedures are in Appendix-H.

2.6 LEVEL CROSSINGS:

One 'A' class Engineering manned interlocked level crossing gate is situated at KM:877/13-15 between VSKP and GPT-RRI. Detailed working instructions of the gate are mentioned in Appendix-A.

3 SYSTEM AND MEANS OF WORKING:

System of Working in force:

- i) Automatic Block System (between VSKP-GPT) in accordance GR 9.01(1)(a) (b) (c), I, II, 9.01 (2), 9.02(1) (2) (3) (4) (5) and SR's there to 9.09, 9.10(1) (2), 9.11(1) (2) and SR's there to 9.12 and SR's thereto 9.14 and SR's thereto and 9.15 and Block working Manual chapter-VI.
- ii) Absolute Block System (between VSKP-'E'-cabin WMY) in accordance with the provision of G & SR chapter VIII rule no:8.01 (1) (a) & (c) and 8.03 (2) and chapter XIV with inter cabin slotting. The Authority for the Loco pilot to proceed in to the block section with his train by taking off the shunt signal no:50 and written authority on form No:T/511.

4. SYSTEM OF SIGNALLING AND INTERLOCKING:

- a) This is a 'B' class station with Standard – 1R interlocking.
- b) Centrally operated Route Relay Interlocked Panel is provided to operate multi aspect colour light signaling in accordance with GR No. 3.07 (4), (5), (6) and (7), 3.08 (4) (b) and (c), 3.09, 3.10, 3.17, 3.19, 3.20, 3.24(4), 3.27(b), 3.32(2) to govern the movement of trains in and out of the yard. All running line points are provided with

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Elect. Point Machines which have got in built locking and detection arrangement and operated from the Central operating panel.

- c) Calling on signals in accordance with the GR No.3.13(1), (b), 3.13(2), (3), (4), (6)(b) are provided below the stop signal for receiving/dispatching a train to pass stop signals in the ON position.
- d) Shunt signals are provided for controlling shunting movement in the yard in accordance with GR 3.14
- e) All running lines and siding points in the yard are motor operated except where otherwise marked as HP and electrically detected by the relevant signals governing the movement of train over them.
- f) In case of emergency signals once taken off for a train can be put back to 'ON' even though the panel is in locked condition, but route cannot be altered without complying the due process of emergency cancellation.
- g) Operating Panel:- A compact miniature domino type panel is installed in the control room of RRI cabin to operate all points and signals in the entire yard.
- h) Indication Panel:- A domino type full panel is installed in the RRI cabin to indicate all signals, track circuits and points position of the entire yard. This will indicate position of signals and points in conjunction with the operating panel.

4.1.2 CRANK HANDLE:

When any motor point has failed to operate from panel, it is inevitable to operate by means of crank handle. To achieve this these Crank handles accessibility keys are provided in locations near to points zones for manual setting with a telephone facility.

The crank handles accessible keys at the location are released by the operation of control push button by the panel SS to Appendix 'B' regarding setting of points by crank handle. Panel, SS in RRI cabin controls and operates all the points and signals in the interlocked zone.

4.1.3 CALLING ON SIGNALS:

Miniature calling on signals are provided below UP Home signals and starter signals in terms of GR 3.13(6), (B). Calling on signal is taken off for reception of trains or dispatch of trains when the Home signal or Starter signal above it cannot be taken off due to failure or any other reason or for admission of train on to a blocked line. (Details of signaling and interlocking given in Appendix – 'B').

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4.2 **CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN SS/DY.SS AND S&T MAINTENANCE STAFF.**

Double Locking arrangement for Relay room is provided. Key of one lock remains with signal maintainer of the section and the key of the other lock remains with the SM on duty. The relay room cannot be opened unless both the keys are used. In the event of necessity such as for attending failure or regular maintenance on being requisitioned by S&T maintainer SM shall handover the key to the maintainer. On completion of the work the maintainer shall lock the relay room and return the key to SM. The transaction shall be recorded in relay room key register by SM on duty vide O.M. 1.14 and SR 3.51.05 and shall duly signed by SM/SS and maintainer respectively.

Whenever the key is taken by the maintainer for normal maintenance of work, the S&T staff shall give a remark in the register that, they will not interfere with the safe passage of train. The SM on duty shall ensure that this remark is given by the S&T staff, otherwise the installation shall be treated as non- interlocked and the action taken in terms of GR 3.69, 3.70 and SR's thereto.

4.3 **POWER SUPPLY:**

Integrated Power Supply system (IPS) has been provided at this station. All out door and Indoor signaling gears are fed through the IPS. The IPS is fed from the following sources of power supply.

- | | | |
|------|----------------|---|
| i) | Normal | 3 phase 50Hz power supply from APTRANSCO |
| ii) | Stand by –I | UP AT |
| iii) | Stand by – II | DN AT |
| iv) | Stand by – III | 2 Nos. of Diesel Generator power supply – 3 phase 400V – 50Hz 30 KVA. |

The availability of power supply is indicated by a stencil indicator on the operating panel "M1" when normal supply, "M2" for stand by UP AT or DN AT power supply and "M3" for stand by Diesel Generator supply. A selection switch of UP AT and DN AT has been provided in the panel room. In the event of failure of main power supply SM on duty shall select the power supply source as UP AT or DN AT as per the availability of AT supply and turn the change over switch to required position.

In the case of normal power supply and both AT supplies fails the SM on duty shall arrange to start the Diesel Generator (DG) provided in the Generator room adjacent to the RRI building. A change over switch is provided in the DG room. Before starting of the Generator, SM on duty shall ensure that the change over switch is kept in the neutral (middle) position. After starting the DG in no load condition and when the DG runs in full speed. SM on duty shall rotate the change over switch to the desired position. The DG can

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be started both manually or electrically through self starting mechanism with the help of keys provided for this purpose.

SM on duty shall maintain procurement, accountal and consumption details of diesel oil in the Diesel Generator log book provided for the purpose.

In the event of failure of main power supply as well as all stand by sources the signaling system shall work with the help of Battery back up through IPS. One SM monitoring panel for IPS has been provided in the panel room for continuous monitoring of the healthy condition of the IPS by on duty SM. The details of power supply is given in Appendix-'B' of this SWR.

5.0 TELECOMMUNICATION:

- i) Electronic communication instrument (Magneto Phone) is provided between VSKP RRI and GPT RRI.
- ii) RRI VSKP and out door SS/Dy.SS's office is connected to VSKP-PSA section control.
- iii) RRI cabin is connected to RJY-VSKP section control (of SC Railway).
- vi) Telephone communications are provided between General SS and VSKP RRI.
- v) Telephone communications are provided between RRI cabin and 'E' cabin of WMY.
- vi) Telecommunications are provided between RRI cabin and 'A' class LC gate at KM:877/13-15 between VSKP and GPT.
- vii) RRI cabin is equipped with public Announcement (PA) system for controlling yard and bahar line movement.
- viii) Auto Telephone (of Main auto exchange) are provided at RRI cabin and General SS's office.
- ix) Auto Telephone (of Yard intercom) are provided at RRI cabin, General SS's office and inquiry office.
- x) Auto Telephone (of MPM exchange) is provided at 'E' cabin of MYD.
- xi) 25W VHF set is provided at RRI cabin.
- xii) BSNL Telephone is provided at General SS's office.

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5.1 FAILURE OF COMMUNICATIONS – FAILURE OF AUTOMATIC BLOCK SIGNALS:

In the event of failure of all or series of signals worked under Automatic Block signaling system the concerned official of signal department shall take immediate steps to inform all concerned, and the procedure detailed in these rules shall be adopted for train passing as per GR:9.12 & SRs thereto and BWM CH:IV & VI.

5.2 FAILURE OF COMMUNICATION BETWEEN RRI CABIN (VSKP) AND ‘E’ CABIN (WMY)

- i) Normal Line clear in the form if inter slot is obtained on Magneto phone supported by Private Number.
- ii) In the event of failure of Magneto phone line clear will be obtained on Magneto phone exchanging identification number and supported by private number.
- iii) In the event of total interruption of communication trains shall be worked as per SR. 6.02.04.

6.0 SYSTEM OF TRAIN WORKING:

Movement of trains is regulated by the Section Controller on duty whose orders must be carried out provided they do not contravene any G&SR, BWM, OM, SWR or any other safe working principles. In the event of suspension of control working, the SS/Dy.SS on duty shall work independently in consultation with the Station Master of the adjacent block station and shall be responsible for reception and dispatch of train. He shall ensure that preference is given to important trains and at the same time no undue detention occurs to other train vide OM 2.14 & 2.24(a).

6.1 DUTIES OF TRAIN WORKING STAFF:

The duties of train working staff are mentioned in detail in Appendix – ‘D’

6.1.1 TRAIN WORKING STAFF:

COMPLEMENT OF STAFF		IN EACH SHIFT
Station Manager (NG)	1	SM (NG)-1 (General shift)
Station Superintendent	4	SS -1
Dy.Station Superintendent	6	Dy.SS-1
Yard Master/Asst. Yard Master	10	YM-1
Shunting Jamadar	9	STGM-3
TPM-A	31	TP-1

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

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

- i) The SS/Dy.SS on duty is responsible to nominate a clear line free of any obstructions from the Home signal to the shunt signal on the nominated line at South end yard for admission of trains vide 3.40(1)(a) and 3.40(2)(a).
- ii) The clearance of the running line for the reception of the train is to be verified by the SS/Dy.SS on duty by verifying luminous indication provided on the panel board.
- iii) Sufficient Private Number books and identification number sheets in sealed covers shall always be kept in stock by SMR under lock and Key by maintaining register for this purpose.

6.1.3 ASSURANCE OF STAFF IN THE ASSURENCE REGISTER:

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

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

The conditions laid down in GR 8.01(1)(a) & (b), 8.01(2)(b) & 8.03(1)(a), (b) and (c)(ii), GR 14.10, BWM 5.08 & 5.09(2) shall be complied with before the line is considered 'Clear' and the 'Line clear' is granted. The conditions laid down in GR 8.01(c), 8.01(2)(b), 8.03(2)(b) & (c)(ii) shall be observed for trains running between VSKP-E cabin of WMY.

NOTE:

- i) If the light of the reception signal is found not lit up, line clear shall not be granted for train till such time it is ensured that the concerned Driver is notified of the fact in writing by the SS/Dy.SS of the station to which such line clear is to be granted vide GR 3.49 (4).
- ii) Before granting line clear, the SM on duty shall ensure the closing of the LC gates.

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

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6.2.1.1 SETTING POINTS AGAINST BLOCKED LINE:

When running line is blocked by stabled load wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train of the station etc., the points in rear on double line station should be immediately set against the blocked line except when shunting or any other movement is required to be done on that line (Ref: GR 3.51.06(a)).

If all the lines at a station happen to be blocked, when line clear has been granted to a train, the point should be set for the line occupied by a stabled land or a goods train. [Refer: SR 3.51.06(b)].

6.2.1.2 RECEPTION OF TRAINS ON BLOCKED LINE:

Whenever trains are to be admitted on an obstructed line it is necessary that the trains are piloted 'IN' on a written authority given by the SM on duty and delivered by a competent railway servant to the loco pilot of the train or by taking off the calling-on signal. (Ref: GR 5.09 and SRs thereto).

6.2.1.3 RECEPTION OF TRAINS ON NON-SIGNALLED LINE -NIL-**6.2.1.4 DESPATCH OF TRAINS ON NON SIGNALLED LINE: -Nil-****6.2.1.5 DESPATCH OF TRAINS FROM LINE PROVIDED WITH COMMON STARTER: -Nil-****6.2.1.6 ANY OTHER SPECIAL CONDITIONS SHOULD BE MENTIONED GIVING REFERENCE TO THE G & SR.**

(A) SPECIAL RESTRICTIONS:

- i) Shunting in the face of an approaching train is governed vide GR: 8.09 and SRs thereto.
- ii) Hand shunting is governed vide GR:5.20.
- iii) Fly shunting is prohibited vide SR:5.21.01(c).
- iv) Shunting shall not be permitted at south end of the yard unless the Engine is leading towards falling gradient.
- v) VSKP being a terminal yard, loco pilots of incoming trains must control their trains suitably to stop short of the shunt signals at the terminal end.

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(B) SPECIAL INSTRUCTIONS:

- i) The movement between VSKP RRI and ‘E’ Cabin of MYD are considered as inter yard movements and such movements are authorized by issue of starting order on Form No.OP/T511.
- ii) Provision of inter slotting arrangement is available between VSKP RRI and E-cabin, SS/Dy.SS on duty at VSKP RRI and E-cabin are personally responsible to verify the intact arrival of the trains in terms of SR 4.17.01.
- iii) All lines are track circuited from Fouling mark to starter signal. In case of failure of track circuit the clearance of concerned line should be ensured physically before a train is piloted ‘IN’ over that line.
- iv) Line between starter and Advanced starter on UP and DN lines are track circuited. In case of failure of track circuit, trains should be piloted ‘OUT’ after physical verification.

6.3 CONDITION FOR TAKING OFF APPROACH SIGNALS:

The conditions for taking off approach signals shall be governed by GR 3.40(1)(a), 3.40(2).(a) and relevant SRs there to. The SM on duty shall nominate a clear line not only up to the starter but also for an adequate distance beyond it for reception of trains.

6.3.1 RESPONSIBILITY OF SS/DY.SS FOR RESTORATION OF SIGNALS TO ‘ON’:

SS/DY.SS shall ensure that the signal is gone back to ‘ON’ after passage of a train as per GR 3.36(2)(b).

6.4 SIMULTANEOUS RECEPTION/DESPATCH, CROSSING & PRECEDENCE OF TRAINS.

6.4.1 The interlocking at the station permits the following simultaneous reception and dispatch of trains.

Reception of an UP train on line No.1 or 3 or 4 from GPT when point No. 131, 113, 121, 110, 101 are in normal.	And	Reception of another Train/Engine from ‘E’ cabin of MYD to Line no:5 or 6 or 7 or 8 or 9 or 10 or 11. OR Dispatch of trains from line no.5 or 7 or 8 or 9 or 10 or 11 to GPT or ‘E’ cabin of MYD.
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6.4.1.1 RECEPTION OF UP TRAINS AND SIMULTANEOUS SHUNTING IN THE YARD:

Sl. No:	Reception of Up trains	Simultaneous Shunting Permitted	
		Shunt signal No.	Shunting Permitted up to
1	Reception of an Up train on Line no:1	SH 2	SH4, Line no: 5 to 11
		SH 4	L2
		SH 6	L6 to L11
		SH 18	SH 50
		SH 20, SH 22	SH48 Sh50
		SH23,27,33,35,37,39,41, 43,45,47, 53, 55,34,36,38,42,44,48,54	Free
		SH 50	MYD, S/Neck & S60
		SH5	Loco yard
		SH9, 11, 13, 15	Line no: 5 to 11
2	Reception of an Up train on Line no:3.	SH2,5,32,34,36,38,42,44, 48,54,21, 23,27,29,31,33,37,39,41, 43,45,47	Free
		53, 55	Goods/Parcel Van sdg.
		SH4	Line no: 1 & 2
		SH8,10,12	Loco in Bahar line
		SH18, 20	SH50
		SH5	Loco Yard
		SH9,11,3,15	Line no: 5 to 11
		SH50	MYD, S/Neck & S60
3	Reception of an Up train on Line no:4	SH2,6,34,36,38,42,44,48, 54,21,23, 27,29,31,33,35,39,41,43, 45,47	Free
		53, 55	Loco in Bahar Line
		SH8, 10	In & Out Bahar Line
		SH12	Out Bahar Line
		SH14	SH50
		SH20	Loco Yard
		SH5	Line No:5 to 11
		SH9,11,13,15	MYD, S/Neck & S60
SH50, SH-19	Saloon sdg., Line no:1,2 & 3		

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4	Reception of an Up train on Line no:5	SH2	SH4 & Line No:6 to 11
		SH4	Goods/Parcel Van Sdg.,
		SH6,22,34,36,38,42,44,48,54,19,21.	Line no:1,2 & 3
			Free
		23,27,29,31,33,35,37,41,43,45,47,53,55	
		SH8,10,12	Loco in Bahar Line
		SH14, 18	Loco Out Bahar Line
		SH5	Loco yard
		SH9, 11, 13, 15	Line no: 6 to 11
SH50	MYD, S/Neck & S60		
5	Reception of an Up train on Line no:6	SH2	SH4 & Line no: 6 to 11
		SH4	Goods/Parcel Van sdg.
		SH6	Line no: 1,2,3 & 4
		SH8,10,12	Line No: 7 to 11
		SH14,18	Loco in Bahar Line
		SH5	Loco out Bahar Line
		SH54,3,19,21,27,29,31,33,35,37,3	Loco yard
		9,43,45,47,53,55	Free
SH50			
6	Reception of an Up train on Line no:7	SH2	SH4 & Line No 7 to 11
		SH4	Goods/Parcel Van sdg.
		SH6	Line no:1,2,3 & 4
		SH8,10,12	Line no: 6, 8 to 11
		SH14, 18	Loco in Bahar line
		SH54,3,19,21,27,29,31,35,37,3	Loco Out Bahar line
		9,41,45,47,53,55	Free
		SH5	Loco yard
7	Reception of an Up train on Line no:8	SH2	SH4 & Line No.6,7&9 to 11
		SH4	Goods/Parcel Van sdg.,
		SH6	Line no: 1,2,3 & 4
		SH8,10,12	Line no:6,7,9 to 11
		SH14, 18	Loco in Bahar Line
		SH54,3,19,21,27,29,31,33,35,37,3,9,41,43,47,53,55	Loco Out Bahar Line
			Free
		SH5	Loco Yard

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8	Reception of an Up train on Line no:9	SH2	SH4 & Line No.6,7,8,10& 11
		SH4	Goods/Parcel Van sdg.,
		SH6	Line no: 1,2,3 & 4
		SH8,10,12	Line no:6,7,8, 10 & 11
		SH14, 18	Loco in Bahar Line
		SH54,3,19,21,27,29,31,33,35,37,3,9,41,43,47,53,55	Loco Out Bahar Line Free
		SH5	Loco Yard
9	Reception of an Up train on Line no:10	SH2	SH4 & Line No.6,7,8,9&11
		SH4	Goods/Parcel Van sdg.,
		SH6	Line no: 1,2,3 & 4
		SH8,10,12	Line no:6,7,8 9 & 11
		SH14, 18	Loco in Bahar Line
		SH54,3,19,21,27,29,31,33,35,37,3,9,41,43,47,55	Loco Out Bahar Line Free
		SH5	Loco Yard
10	Reception of an Up train on Line no:11	SH2	SH4 & Line No.6 to 10
		SH4	Goods/Parcel Van sdg.,
		SH6	Line no: 1,2,3 & 4
		SH8,10,12	Line no:6 to 10
		SH14, 18	Loco in Bahar Line
		SH54,3,19,21,27,29,31,33,35,37,3,9,41,43,47,53	Loco Out Bahar Line Free
		SH5	Loco Yard

6.4.2 **CROSSING OF TRAINS:**

VSKP being a terminal station, crossing of trains does not arise at this station.

6.4.3 **PRECEDENCE OF TRAINS**

VSKP being a terminal station, precedence of trains does not arise at this station. But however preference of departure of trains is controlled by SCR and CHC coaching.

6.4.4 **RECEPTION OF TRAINS:**

Reception of trains is governed by the rules laid down in GR 3.07 (4),(5), 3.08(4)(b), 3.13(6)(b), 3.36 to 3.40, 3.47, 3.79, 4.17 and SRs thereto and SRs 3.42.02(iv), 3.42.03, 4.23, 4.24 and other relevant provisions of GR & SR, BWM, OM and SWR shall be followed.

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- i) The movement between 'E' cabin of MYD and VSKP RRI are considered as inter yard movements and such movements are authorized by issue of starting order on forms T/511 by SS/DY.SS/SM on duty at 'E' cabin and VSKP RRI as the case may be. There is a provision for inter cabin slotting between VSKP-RRI and 'E' cabin for the above movements which shall be supported by Private Numbers. Both the SS/DY.SS/SM on duty at VSKP RRI and 'E' cabin are personally responsible to ensure the complete arrival of the train with its last vehicle in terms of SR 4.17.01 before allowing each successive movement in either direction and this fact shall be supported by exchanging private numbers.
- ii) The SS/DY.SS on duty shall inform the gate man at 'A' class level crossing gate at KM:877/13-15 between VSKP-GPT RRI about the train number, description and expected time of passage of train at the gate.

6.4.5 PUTTING BACK OF SIGNALS:

UP home and DN starters, UP & DN calling on, Shunt and DN advance starter signals will go back to 'ON' after occupation of track circuit.

CONDITIONS FOR TAKING OFF APPROACH SIGNALS:

The condition for taking off approach signals shall be governed by GR 3.4(1).

6.4.6 ADEQUATE DISTANCES:

To take off the Home signal for admission of a train keeping the adequate distance (Signal over lap) clear of any obstruction does not apply at this station as this is a terminal station vide GR.3.40(1). The SS/DY.SS on duty as VSKP RRI shall ensure that the nominated line is free and clear of any obstruction from Home signal to the UP shunt signals at the South end of the Yard in the direction of the train before taking off the Home signal.

Sl. No:	Description of Home signal	Distance to be kept clear
1	UP home signal for Line no:1	Between signal No:1 and UP shunt signal No:31 of South end of the yard.
2	UP home signal for Line no:3	Between signal No:1 and UP shunt signal No:35 of South end of the yard.
3	UP home signal for Line no:4	Between signal No:1 and UP shunt signal No:37 of South end of the yard.
4	UP home signal for Line no:5	Between signal No:1 and UP shunt signal No:39 of South end of the yard.
5	UP home signal for Line no:6	Between signal No:1 and UP shunt signal No:41 of South end of the yard.

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Sl. No:	Description of Home signal	Distance to be kept clear
6	UP home signal for Line no:7	Between signal No:1 and UP shunt signal No:43 of South end of the yard.
7	UP home signal for Line no:8	Between signal No:1 and UP shunt signal No:45 of South end of the yard.
8	UP home signal for Line no:10	Between signal No:1 and UP shunt signal No:53 of South end of the yard.
9	UP home signal for Line no:11	Between signal No:1 and UP shunt signal No:55 of South end of the yard.
10	UP home signal for Line no:1	Between signal No:1 and UP shunt signal No:31 of South end of the yard.

6.5 COMPLETE ARRIVAL OF TRAINS:

Since yard consists of continuous track circuits LVCD provided which are depicted in RRI Panel. Complete arrival of the train is ascertained through indication on panel board. However, whenever LVCD failed for one or the other reasons the SS on duty shall send one of his station staff with prescribed complete arrival register on form No:T/1410 to the guard and ensure complete arrival vide GR.4.17 & SRs thereto.

The responsibility of verifying complete arrival is devolved on the on duty SS in the RRI cabin by physically checking the 'Clear' green indication of Axle counter reset unit attached to the respective lock & block instrument.

In case the Axle counter reset unit continues to show 'Occupation' in red even after arrival of the train, on duty SS in RRI cabin shall with held the closing the block section and dispatch of 'train out of block section' signal to the station in rear unless and until he has satisfied himself that the train arrived is complete, either by physically checking the LV indication or obtaining the complete arrival report from the Guard of the train in complete arrival register on form No:T-1410.

DESPATCH OF TRAINS:

Working of trains shall be governed as per provisions in GR 9.01(1) (a)(b)(c),I,II,9.01(2), 9.02(1)(2)(3)(4)(5) and SR's there to 9.09.9.10(1)(2), 9.11(1)(2) and SR's there to 9.12 and SR's there to 9.13 and SR's there to 9.14 and SR's there to 9.15 and Block working Manual chapter VI.

i) Dispatch of trains to 'E' cabin/WMY either in to DYD or New coaching complex:

When a train/Engine is ready for WMY the SS/DY.SS/SM on duty of VSKP RRI shall obtain Line clear from SS/DY.SS/SM of 'E' cabin supported by a private number.

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The SS/DY.SS on duty at 'E' cabin if he is in a position to receive the said train/Engine grants line clear and shall release the concerned slot supported by private number.

On getting slot indication on panel and the private number in support of it from the SS/DY.SS/SM of VSKP RRI shall stop all non isolated shunting at his end and withdraw and keep shunting authority issued if any, in his possession.

After ensuring the clearance of the line he shall set the route and clears the departure shunt signals for the passage of out going train/Engine. In addition the SS/DY.SS/SM VSKP RRI shall issue a starting order form No: T/511 to the loco pilot of said train/Engine and copy of the same (duly signed by the loco pilot) must be kept at the RRI cabin properly secured.

As soon as the train passes past the shunt signal No.50 with its last vehicle intact SS/DY.SS/SM of VSKP RRI shall inform to SS/DY.SS/SM of 'E' cabin of the same. The SS/DY.SS/SM of 'E' cabin and SS/DY.SS/SM of VSKP RRI cabin are personally responsible to ensure complete arrival of the train at their end vide SR 4.17.01(a) before allowing such movements for another train/engine in either direction. The SS/DY.SS/SM at the receiving cabin shall give a private number in support of complete arrival of train/Engine to SS/SM at the dispatch end.

- ii) **TRAINS RUNNING THROUGH** :- NOT APPLICABLE.

6.6 **WORKING IN CASE OF FAILURES:-**

Defective signals : Suspension / Failure of signals:

- a) When signal becomes defective the procedure laid down GR 3.68 to 3.71 and SRs there to shall be followed
- b) **DEFECTIVE APPROACH STOP SIGNAL:**

In event of suspension/failure of a Home signal or Routing signal, the 'Calling on signal'.

[Provided below the stop signal] may be taken off for reception of a train and if the 'Calling on' signal also become defective, the trains shall be worked in accordance with GR 3.69 and SR there to. If the defective stop signal can not be kept in 'ON' position the rules laid down in SR 3.68.02 shall be observed.

- c) **DEFECTIVE DEPARTURE STOP SIGNAL:**

- i) In the event of Automatic signal becoming defective the train shall be

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worked in accordance with GR 9.12 and SR 9.12.02 and BWM chapter VI.

ii) In the event of semi Automatic stop signal becoming defective train shall be worked in accordance with GR 9.14(1)(2)(3) and SR 9.14.01 (a)(b) and SR 9.14.02 and BWM chapter VI.

d) **WORKING OF TRAINS IN CASE OF FAILURE/SUSPENSION OF POINTS:**

In case of failures of points controlled by RRI cabin the procedure laid down in rule No.20/06 of OM should be followed for setting of points by crank handle. After every non signal move over motor operated point/points in facing or trailing directions the SS on duty check correct setting of points in both directions [In normal and reverse]. After ensuring proper setting, further movement may be permitted over the points. [For detailed instructions refer to Appendix 'B'].

e) **DURING FAILURE/SUSPENSION OF INTERLOCKING GEARS:**

During failures/suspension of interlocking gears all points concerned [both facing and trailing] must be clamped and pad locked for reception and dispatch of trains. The on duty SS/ SM is responsible for ensuring correct setting and locking of points before permitting any movement over them.

i) **FAILURE OF TRACK CIRCUITS:**

In the event of failure of track circuit of any route the clearance of the route must be physically checked before permitting any movement over the route either for reception or dispatch of any train or shunting operation. Pilot memo shall not be issued either for reception or dispatch of a train until and unless the route over which the train to pass has been physically checked and found clear of obstructions.

6.7 i) **PILOTING OF TRAINS IN TO STATION YARD:**

a) When ever main home signal has become defective 'Calling on' signal shall be taken off to draw the train up to the next stop signal.

b) In case of failure of other reception signals where 'Calling on' signals are not provided the train shall be piloted 'IN' in terms of SR 3.69.03.

N.B: The station master on duty who is deputed for the purpose shall personally supervise the correct setting clamping and padlocking the facing and trailing points and clearance of the nominated route for admission of passenger train or admission of goods train when a passenger train is standing on adjacent line. The keys of pad locks

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of the clams put on the points on the route for piloting 'IN' or piloting 'OUT' shall be in the personal custody of the SM on duty who ensured correct setting or any authorized official till such time the train/Engine/vehicle has utilized the route or alternatively such a movement is canceled. In case of failure of motor operated points the point shall be crank handled clamped and pad locked both in facing end and trailing ends. The rules laid down in SR 3.77.02 and OM 20.6 shall be followed.

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

When the starter signal or inter starter signal has become defective SS/SM at RRI Cabin shall report to take off calling on signal where provided otherwise depute one of his station master to ensure setting clamping and pad locking of route and hand over T/369(3b).

NOTE: The SM on duty who is deputed for the purpose shall personally supervise the correct setting, clamping and padlocking of the facing point, trailing points and ensure clearance of any obstruction including level crossing gate/gates if any on the concerned route for dispatch of all trains vide SR 3.69.03(c).

When the Advanced starter signal has become defective SM shall follow the procedure laid down in SR 9.14.01(b).

6.8 PROVISION FOR WORKING OF MOTOR TROLLIES, MATERIAL TROLLIES, TOWER WAGONS:

Motor trollies and Material trollies, Tower wagons shall be worked as per GR 15.25, 15.27, 17.08 and SR there to BWM 4.39, 4.40, 5.11(2), 5.12, 5.13, 5.14(2)(b) and circulars and orders issued from time to time. Material trollies shall be worked as per GR 15.27 and SR's thereto and in accordance with the provisions of Block Working Manual.

7.0 BLOCK OF THE LINES:

- a) A clear remark in RED ink shall be made immediately in the train signal register indicating time and number of running line blocked. A record thereof shall be made in the station dairy.
- b) Loose vehicles stabled in the sidings and on running lines must be secured in accordance with GR. 5.23 and SR thereto. It is the responsibility of the in-charge of the shunting operations to ensure that the loose vehicles in the sidings and running lines are secured in the above manner after completion of the shunting operations. In other cases the SS/SM concerned is responsible to ensure the securing of the loose vehicles on the running lines as per GR 5.23 and subsidiary rules thereto.

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- c) When a running line is obstructed UP and DN facing points shall be set and precautions taken by the SS/SM on duty in accordance with SR 3.51.06.
- d) When a running line is obstructed for any reason, magnetic Red button collars should be placed on relevant route button for the obstructed line on the operating panel and the obstructed line shall be protected by the SS/SM in accordance with SR 3.51.06 and 5.04.01.

8.0 SHUNTING

8.1 GENERAL PRECAUTIONS:

The rules laid down in GR 3.46, 3.52 to 3.56, 5.13, 5.14, 5.16, 5.17 to 5.21, 8.05, 8.06, 8.145 and 8.15(c) with relevant SRs shall be observed, all shunting movements shall be supervised by the Guard of the train. When there is no Guard the shunting shall be supervised by SM/YM/STJM/Points Man as per SR 5.13.03.

For any non signal movements the SS / SM on duty shall ensure clearance of cross over through the indication on the indication panel and the person who supervises such shunting shall also confirm it to SM on duty over Goomty Phone supported by private number.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approaching train is prohibited vide SR 8.09.02.

8.3 PROHIBITION OF SHUNTING ANY SPECIAL FEATURES:

- a) Hand shunting/Fly shunting is prohibited at both ends of the yard.
- b) Shunting is not permitted in the yard unless the Engine is leading to falling gradient.

8.4 SHUNTING ON SINGLE LINE:

Not applicable to this station.

8.5 SHUNTING ON DOUBLE LINE:

- i) When the line clear has been given no shunting shall be permitted in the block section in rear Vide GR 8.06 (1).
- ii) Shunting or obstruction for any other purpose shall not be permitted in the block section in rear unless it is clear and is blocked back Vide GR 8.06(2) and BWM 5.15(1)(b).

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- iii) Shunting or obstruction for any other purpose shall not be permitted in the block section in advance unless it is clear and is blocked forward Vide GR 8.06 (3) and BWM 5.15(2)(b).

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

While performing shunting in the sidings it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted as also the lines, occupied in shunting. The relevant provisions of GR 5.14 and SR thereto shall be meticulously followed.

9.0 ABNORMAL CONDITIONS :

- a) The rules to be observed in the event of Abnormal conditions:
 - i) The authority to proceed in the occupied Block section in case of obstruction of line or Accident etc is T/A 602 and SR 6.02.05 shall be observed.
 - ii) Trains delayed in Block section : GR 6.04 and relevant SRs shall be followed.
 - iii) Failure/Passing of Intermediate Block Stop signal at 'ON' – Not applicable.
 - iv) Failure of Axle counter Block/BPAC – Not applicable.
 - v) Failure of MRTC – Not applicable.
- b) Procedure for Emergency operation of points by crank handle.
- c) Certificate of clearance of track before Calling-on signal operation is initiated.
- d) Reporting failure of points, signals, Track circuits/Axle counters and interlocking.
In the event of failure of points, signals, Track circuits/Axle counters and Interlocking, SM on duty shall send failure memo to S&T maintainer together with reporting to SCR on duty.

After rectification of the gear at fault the SM on duty shall obtain a memo from the S&T maintainer to that effect.

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9.1 TOTAL FAILURE OF COMMUNICATION:-

In the event of total failure of communication trains shall work in terms of SR 6.02.03.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION:-

- a) In the event of an accident or other obstruction on one of the Lines on double line section, trains shall work in terms of SR 6.02.01.
- b) In the event of total failure of communication if it becomes necessary to introduce single line working on double line section, trains shall work in terms of SR 6.02.02.

9.3 DISPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN.

To dispatch a train under authority to proceed without Line clear SR 6.02.03 shall be observed. To assist the crippled train in the section SR 6.02.05 shall be observed.

10.0 VISIBILITY TEST OBJECT:

11.0 A VTO post is provided at 180 Mtrs, from center line of RRI building to serve as visibility test object vide GR 3.61(2)(b)(iii).

12.0 ESSENTIAL EQUIPMENT AT THE STATION:

Details are given in Appendix 'E', which shall be maintained in good working order vide O.M.20.04(11).

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13.0 APPENDICES:

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

14.0 CERTIFICATE:

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

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APPENDIX-'A'**APPENDIX 'A' TO STATION WORKING RULES OF VISAKHAPATNAM
STATION LEVEL CROSSING GATES****1. GENERAL:****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

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

1	No. of Level Crossing Gate	:	494
2	Engineering or Traffic gate	:	ENGINEERING ('Spl' Class)
3	Under control of station master or permanent way inspector.	:	SSE/P.WAY/WAT
4	Location at Km.	:	KM. 877/13-15
5	At station	:	VSKP
6	In between station	:	VSKP-GPT
7	BG/MG/NG	:	BG
8	Single line/double line/multiple line	:	Double line
9	Normal position	:	Open to Road Traffic
10	Interlocked/ Non-Interlocked	:	Interlocked
11	Means of Interlocking	:	Elect Key transmission
12	Provision of gate single at Km.	:	(i) Up Line :876/7-9 (semi-Auto) (ii) DN Line :877/20 (Semi-Auto)
13	Signaling arrangement	:	MACLS
14	Means of communication Telephone.	:	Telephone Connected with VSKP RRI
15	Width of the level crossing gate	:	8.2 M
16	Type of road	:	Other
17	Name of road	:	Kancharapalem Road
18	Metalled /Non-Metalled	:	Metalled
19	Approach road	:	Metalled
20	Width of the road	:	7.2 M
21	Angle of road crossing (in case of the SKEW gates)	:	90 ⁰
22	Road gradients (if any)	:	[a]North/East Side: Level [b]South/West Side: Level
23	Road alignment (straight/Curve)	:	In Straight

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24	Provision of height gauges	: Provided
25	Type of barriers	: Coupled Lifting Barriers
26	Length of check rails	: 10.50 M
27	Road surface in between level crossing gates.	: Bituminous
28	Length of rumble strip/ speed breakers.	: 8.2 M
29	Road signs	: Provided
30	Speed breakers indication board	: Provided
31	TVU:	: 1199 on 2012
32	Census next due on	: 2015
33	Demarcation for placement of detonators.	: Provided
34	No. of gateman working	: Three (3)
35	Nearest Railway Medical Assistance	: DMO/BNTN Colony
36	Nearest Private Medical Assistance available (if any)	: PH/KGH
37	List of equipment available (Yes/No)	: Yes

1.2 EQUIPMENT:

Items	<u>Quantity / Numbers</u>
1. Hand Signal Lamp Tri Colour	3 Nos.
2. Hand Signal Flag Green	1 No with mounted stick
3. Hand Signal Flag Red	3 Nos.
4. Banner Flag Red	3 Nos.
5. Posts for exhibiting red banner flag	2 Nos.
6. Spare chains with padlocks	2 with stop marker
7. Detonators	10 in each case
8. Fusee	1 Nos.
9. Gate lamps	2 Nos.
10. Tommy Bar	1 No.
11. Mortar Pan	1 No.
12. Spade / Fowrah	1 No.
13. Rammer	1 (In case of asphalted road this may not be provided)
14. Pick Axe	1 (In case of asphalted road this may not be provided)
15. Tin case for flags	1 No.
16. Can for oil	1 No.
17. Water port / Bucket	1 No.
18. Canister for Muster Roll	1 No.

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APPENDIX-‘A’

Items	Quantity / Numbers
19. Set of spare spectacles of gateman wearing glasses	1 No.
20. Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1 No.
21. Basket	1 No.
22. Whistle	1 No.
23. Wall Clock	1 No.

1.3 RECORDS TO BE KEPT AT GATE LODGE:

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

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

1.4 MODE OF OPERATION:

The Gate shall normally be kept open to road traffic. When ever it is required to close the gate SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive or dispatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

1. Key ‘M’ extracted from winch releases lever No.1GF after closing the gate.
2. Lever 1GF thus reversed effects Boom locking & releases Key ‘M1’ from GF.
3. Key ‘M1’ is transmitted electrically to SM/RRI to release control to take off DN advanced starter signal No:S-60 in conjunction with gate control 2S.
4. Key ‘IN’ contact of RKT along with reversal of switch GSA5 will clear signal No:GSA5.
5. Approaching back locking and approach warning provided.

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APPENDIX-'A'**1.5 DUTIES OF GATEMAN:****1. ALERTNESS:**

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

2. POSITION DURING PASSAGE OF TRAINS:

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

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

3. ROUTING DUTIES OF GATEMAN:

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

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- vii) If lifting barriers / leaf gates get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest Station Master, Gangmate or Permanent Way Inspector any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the ‘ON’ position even by disconnecting the signal or the wire if necessary.
- x) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers / leaf gates on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the LP to report the defect at the next station.
- xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xvi) Gateman shall keep the road surface well watered and rammed in case of 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 the height loading gauge provided on either side of the level crossing gate.
- xix) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:**

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

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- i) He shall take prompt action to warn the driver / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the driver / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If driver / guard fails to take notice, gateman shall immediately inform the Station Master / Switchman / Cabin man, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the driver / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master / Switchman / Cabinman, if connected on telephone, to take appropriate action, under exchange of private number.

5. ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the ‘ON’ position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master / Switchman / Cabinman 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 / Switchman / Cabinman after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

a) On double line section:

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

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- ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators, fusees and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters 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 LP of the approaching train.
 - vii) On those Meter Gauge sections where trains run at more than 75 kmph, detonators shall be placed at a distance to be specified under Special Instructions by the Administration.
 - viii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - ix) Thereafter, he shall light up and fix the fusee to warn the LP and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- b) **On single line section:**
- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.

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- iii) Gateman shall then proceed to protect the gate along with detonators, fuses and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the driver of the approaching train.
 - vii) On those Meter Gauge sections where trains run at more than 75 KMPH, detonators shall be placed at a distance to be specified under Special Instructions by the Administration.
 - viii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - ix) Thereafter, he shall light up and fix the fusee to warn the driver and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- c) **Other action to be taken by Gateman:**
- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
 - ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers / leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.

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

1.6 ENGINEERING ITEMS:

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

1.7 SPECIAL INSTRUCTIONS FOR DIFFERENT TYPES OF LEVEL CROSSINGS:

Instructions for different types of manned Level Crossing Gates are given in Annexures as follows:

- | | | |
|------|----------------|--|
| i) | Annexure – I | Engineering Level Crossing Gate, Interlocked with gate signals, provided with telephone, with normal position 'Open to road traffic'. |
| ii) | Annexure – II | Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Open to road traffic'. |
| iii) | Annexure – III | Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Closed to road traffic'. |
| iv) | Annexure – IV | Engineering Level Crossing Gate, non-interlocked, provided with telephone, with normal position 'Open to road traffic'. |
| v) | Annexure – V | Engineering Level Crossing Gate, non-interlocked, provided with telephone, with normal position 'Closed to road traffic'. |
| vi) | Annexure – VI | Engineering Level Crossing Gate, non-interlocked, not provided with telephone, with normal position 'Closed to road traffic'. |

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APPENDIX – 'F' TO STATION WORKING RULES OF VISAKHAPATNAM STATION**RULES FOR WORKING OF OR STATIONS, HALTS, IBH, IBS AND OUTLYING SIDINGS:**

A passenger halt is existing at Mairipalem at 6.6KM from VSKP RRI and GPT RRI. All passenger trains will take a halt as per the duration specified in working time table.

The guards and LPs are responsible to maintain schedule halt and start their train.

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ANNEXURE-I

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

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

1. Mode of Operation:

The Gate shall normally be kept open to road traffic. When ever it is required to close the gate SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive or dispatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

1. Key 'M' extracted from winch releases lever No.1GF after closing the gate.

2. Lever 1GF thus reversed effects Boom locking & releases Key 'M1' from GF.

3. Key 'M1' is transmitted electrically to SM/RRI to release control to take off DN advanced starter signal No:S-60 in conjunction with gate control 2S.

4. Key 'IN' contact of RKT along with reversal of switch GSA5 will clear signal No:GSA5.

5. Approaching back locking and approach warning provided.

2. Exchange of Private Numbers:

i) Immediately after departure of the train, Station Master shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the 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 receives 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) It 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 falls at the gate connected with the station at the despatching end, Station Master shall issue a caution order to the LP of the departing train.

ii) Station Master shall advise the LP to whistle continuously and proceed cautiously while approaching the gate.

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- 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 before dispatching a train in the block section from his end.
- vi) Station Master will also advise the gateman through Gangman / Patrolman / Loco Pilot of the first train that the telephone has become defective.
- 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 or Leaf Gates:

- i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman shall immediately inform the Station Master on duty under exchange of private number, and ensure that lifting of barriers or leaf gates do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure that 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 to the driver of the approaching train.
- v) Station Master on duty shall issue caution order to the LP 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 LP before despatching a train in the block section.
- vii) Station Master shall advise maintenance staff responsible for maintaining the lifting barrier / leaf gates to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the lifting barrier / leaf gates and issue reconnection / fit memo for the same.

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5. Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) Station Master on duty shall issue caution order to the LP 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 LP before despatching a train in the block section from his end.
- vii) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

6. Failure of the Gate Key with the gate in open condition:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the Station Master on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch 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 pass trains on hand signals.
- iv) Station Master on duty shall issue a caution order to the LP of a departing train.

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- v) He shall also advise the Station Master at the despatching end, under exchange of private number, to similarly issue a caution order to the LP before despatching a train in the block section from his end.
- vi) Station Master shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

7. Defective Gate Signals:

- i) The gateman shall treat the gate as defective and must not lower them under following circumstances:
 - a) If gate signals can be taken 'OFF' without closing the gate, or
 - b) The key can be extracted from the operation winch when the gate is in open condition, or
 - c) The key can be extracted from the leaf gates when the gate is in open condition
- ii) If the Gate or the Gate Signal / Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wires, if necessary.
- iii) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- iv) Thereafter, 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 green hand signal flag by day and green light by night to the passing train after closing the gate.
- vi) Station Master on duty will issue a caution order to the Loco Pilot of a departing train.
- vii) He shall also advise the Station Master at the despatching end, under exchange of private number, to similarly issue a caution order to the LP before despatching a train in the block section from his end.

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- viii) Station Master shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- 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 road vehicle which is fouling the track, or if lifting barriers / leaf gates or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the Station Master on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators, fusee and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.
- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers / leaf gates are not fouling the track.
- viii) The Station Master shall also inform the Station Master at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- x) Station Master shall then issue a caution order to LP of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, of 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.

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- xii) Station Master shall advise maintenance staff responsible for maintaining the lifting barriers / leaf gates to repair the same at the earliest.
 - xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers / leaf gates and issue reconnection / fit memo for the same.
9. Obstruction on the Track near Level Crossing Gate:
If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master 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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**APPENDIX-‘B’ TO STATION WORKING RULES OF VISAKHAPATNAM STATION
DETAILS OF SIGNALLING AND INTERLOCKING FOR WORKING THEM
NORMALLY AND IN EMERGENCY ETC., INCLUDING THE POWER SUPPLY
ARRANGEMENT.**

- 1.0** The power signaling and interlocked installations is on per the signaling plan No. SI-23029, Alt-D together with control tables, route section plans and wiring diagrams. Based on the above signaling plan the Station Working Rules diagram attached to the Station Working Rule shows the following.

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

a) In this installation where the points are power operated, the point remains in he last operated position. If the position of the points required to be changed, it shall be resorted individually by operating the concerned point button (WN) in conjunction with Point Group Button [WWN] to require position.

b) Charts given in the Appendix-B showing the operation of entrance and exit buttons for various routes governed by stop signals, calling on signals and shunt signals slots, the designation of various signals etc.,.

c) The Station is of Standard I(R) interlocking, equipped with Multi Aspect Colour Light signals and power operated points with track circuit control over points and berthing tracks etc., centrally controlled from Route Relay Cabin through Metal to Metal relay Type Route Relay installation based on the principles of entrance and exit to confirm to signaling and interlocking plan No: SI-23029, Alt-“D”.

- 1.1** Route Relay Cabin is controlling the movements of trains from and to GPT RRI station and ‘E’ cabin of MYD.

2.0 **DOMINO TYPE PANELS – OPERATING AND INDICATING FOR OPERATION OF THE POWER SIGNALLING:**

Two panels viz. Operating (control) panel and indication panel are installed in the RRI cabin Visakhapatnam.

2.1 **OPERATING (CONTROL) PANEL:-**

The Operating (control) panel is small console, provided with various operating push buttons for signals, points, individual route section release, emergency

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

2.2 INDICATION PANEL:-

The indication panel shows in a domino form interlocked portion of Visakhapatnam station yard with connection to the ancillary yards together with the geographical co-relation to the tracks, points, signals and various other controls as existing at site. This panel through various illuminating indications is provided for the field functions, indicates the condition of a particular field gear at a given time in a miniature form so that the entire traffic operation in the yard as well as the position of power signaling and interlocking installations may be constantly monitored by the panel Station Master Each track circulated line on the indication panel is represented by a separate and distinct colour on the face of the panel and is illuminated indicating the conditions of route setting, route release, track clearance and occupancy of the track etc., Non-track circuited lines are shown in black colour for maintaining visual contact but they are not illuminated.

2.3 POSITION OF CONTROLLING BUTTONS ON THE OPERATING PANEL:

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

2.4 CRANK HANDLE RELEASE PUSH BUTTON:

To release any Crank Handle, concerned Crank Handle control button & Crank Handle group release button [CHRR] to be pressed simultaneously then the steady White light near the Crank Handle button starts flashing till such time the control released accepted by the field agency. At site Red indication appears when the key is extracted from key lever unit a flashing Red indication will appear on the Panel and white light extinguishes after the

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completing the work when the key is inserted and turned in the key lock unit the flashing Red light become steady and the white light starts flashing. After seeking the indication SM/Panel Operated with draw the control by operating the concerned CH button in conjunction with group Crank Handle Normal Button [CHNB].

2.5 LAMP FAILURE MUTING PUSH BUTTON:

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

INDICATIONS:

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

2.6 SIGNAL AND THEIR INDICATIONS:

- a) Manually operated multiple aspect colour light signals are provided at this RRI installation. The indications of various aspects of signals provided in this yard are as follows:-
 - i) Red:-
Red indicates “Danger” aspect and signifies stop dead till the signal is taken off.
 - ii) Single Yellow:
Single Yellow indicates “Caution” aspect and signifies proceed cautiously preparing to stop dead at the next stop signal.
 - iii) Double Yellow:-
Double Yellow indicates “Attention” aspect and signifies proceed prepared to pass the next signal at a restricted speed.

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iv) Green:-

Green indicates “Clear” aspect and signifies “Proceed”.

v) Route Indicators:-

It takes the form of a row of a lunar white lights above the signals at junction points at various degrees from the vertical to the left or right as the case may be to indicate whether the turn out at the junction points is set to the right or to the left side of the driver. In case of more than one such arm if route indicator on the same side, the top most reads to the first loop and he others for subsequent loops in regular order of sequence.

3.0 LIST OF COUNTERS WITH THEIR CODE AND FUNCTION.

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

Sl. No:	Description	Code	Remarks
1	Emergency full-route release counter	EUUYZ	The three button cancellation of any route which is registered in the counter.
2	Emergency sub-route release counter	EUYZ	Individual sub-route release in case of failure is registered in this counter.
3	Emergency Point operation counter	EWZ	Emergency operation of points under track circuit failure operation is registered in this counter.
4	Calling on signal counter.	COGGZ	Whenever a calling on signal is cleared the operation is registered in this counter.

b) LIST OF OPERATING BUTTONS WITH THEIR CODE AND COLOUR:

The operating button are distinctly colored for east identification. The following is the list if the important button with their designations in codes and colours:

Sl. No:	Description	Code	Colour	Remarks
1	Main signal button	S-1 GN	Red	No.1 indicate signal number
2	Shunt signal button	SH-3 GN	Yellow	3 indicates shunt signal number

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Sl. No:	Description	Code	Colour	Remarks
3	Route button	34 UN	Grey	34 indicates route number
4	Buttons for panel intensity control	Ind. Lamp 1,2,3	White	Three such buttons are provided
5	Points button without route section emergency release facility.	101 WN	Blue	No.101 indicates the point number
6	Points button with route section (emergency) release facility	103 WN	Blue with a white dot	No.103 indicates the point number
7	Emergency full route release	EUUYN	Grey	Duplicated for easy access.
8	Emergency route section release button (individual)	EUYN	Grey	Duplicated for easy access.
9	Common push button for points	WWN	Blue	Duplicated for easy access.
10	Point emergency push button	EWN	Blue	Duplicated for easy access.
11	Button for silencing buzzer for signals.	GXYN	White	
12	Button for silencing buzzer for point.	WXYZ	White	
13	Emergency group button for putting back signal to 'ON' position.	EGGN	Red	Duplicated for easy access.
14	Calling on signal group button.	COGGN	Grey	For taking off a calling on signal this button is pressed along with the concerned signal button.
15	Group slot cancellation button	GSRB	Green	
16	Crank Handle group button.	CH-4	Blue	CH-4 indicates crank handle No.4
17	Group crank handle release button	CHRB	Blue	Duplicated for easy reach. These buttons are pressed along with the individual crank handle group button
18	Group crank handle normal button.	CHRB	Blue	for releasing the crank handle and subsequent normalization

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Sl. No:	Description	Code	Colour	Remarks
19	Power failure alarm suppression	XYN	White	Button to be pressed to mute alarm bell due to power failure.

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

Sl. No:	Operation	Button Used	Sequence of operation
1	To clear a calling on signal	GN & UN EGGN, GN & COGGN, GN & UN	First initiate the stop signal route by pressing GN & UN simultaneously, then press GN and EGGN to throw back the stop signal to "ON" [whether it is cleared or not] and then press GN & COGGN simultaneously, release COGGN keeping GN pressed and press UN.
2	To clear a main signal	GN & UN	Press both buttons simultaneously.
3	To clear a shunt signal	SH.GN & UN	Press both buttons simultaneously.
4	To throw cleared signal to danger whether a stop signal or a calling on signal or a shunt signal.	GN & EGGN	Press the concerned GN and EGGN simultaneously.
5	To cancel a route already set after replacing the cleared signal 'ON' [whether it is a stop signal or calling on signal or a shunt signal	GN, EUUYN & UN	Press the GN & EUUYN simultaneously, release EUUYN keeping GN pressed and press UN. This is known as three button cancellation.
6	To release individual route section under emergency.	WN & EUYN	The key under the custody of SSE/Sig., SE/Sig/RRI to be inserted and turned to 'ON' position. Then WN and EUYN buttons are to be pressed simultaneously for emergency sub-route release.
7	Individual operation of points, tracks are clear.	WN & WWN	Press the points button concerned and common points button together.

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Sl. No:	Operation	Button Used	Sequence of operation
8	Individual operation of points, when points tracks fails.	WN & EWN	Break open the seal of EWN key box, insert & turn the key and press both the buttons simultaneously. This operation by panel Station Master is registered in the EWN Counter.
9	To change the position of points after arrival of train.	WN WWN	Concerned Point Button [WN] and Group Point Button [WWN] to be pressed.

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

4.0 **SPECIAL AND IMPORTANT NOTES:**

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

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

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

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

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

Point button without white dot.

1	102	Section/Sections being free
2	104	Section/Sections being free
3	107A	Section/Sections being free
4	116	Section/Sections being free
5	119	Section/Sections being free
6	126	Section/Sections being free
7	134	Section/Sections being free
8	145	Section/Sections being free
9	147	Section/Sections being free
10	154	Section/Sections being free
11	155	Section/Sections being free
12	156	Section/Sections being free
13	159	Section/Sections being free

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

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The following Derailing switches have been provided to facilitate isolation.

North End of the Yard	a)	Point No. 133B of R/6.
	b)	Point No. 135B of R/9.
	c)	Point No. 134B of R/10.
	d)	Point No. 132B of R/11.
South End of the Yard	a)	Point No. 146B of R/3.
	b)	Point No. 152B of R/6.
	c)	Point No. 157B of R/9.
	d)	Point No. 153B of R/11.

5.0 **INDICATIONS:**

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

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

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6.0 POWER SUPPLY :-

Integrated Power Supply System (IPS) has been provided at this station. All out door and Indoor signaling gears are fed through the IPS. The IPS is fed from the following sources of power supply.

- | | | |
|------|--------------|---|
| i) | Normal | 3 Phase 50Hz power supply from APTRANSCO |
| ii) | Stand by-I | UP AT |
| iii) | Stand by-II | DN AT |
| iv) | Stand by-III | 2 Nos. of Diesel Generator power supply 3 phase
400V-50Hz 30 KVA |

The availability of the power supply is indicated by a stencil indicator on the operating panel "M1" for normal supply fails, "M2" for stand by UP AT or DN AT power supply and "M3" for stand by Diesel Generator supply. A selection switch of UP AT and DN AT has been provided in the panel room. In the event of failure of main power supply SM on duty shall select the power supply source as UP AT or DN AT as per the availability of AT supply and turn the change over switch to required position.

In case the normal power supply and both AT supplies fails the SM on duty shall arrange to start the Diesel Generator (DG) provided in the Generator room adjacent to the RRI building. A change over switch is provided in the DG room. Before starting of the Generator, SM on duty shall ensure that the change over switch is kept in the neutral (middle) position. After starting of DG in no load condition and when the DG runs in full speed, SM on duty shall rotate the change over switch to the desired position. The DG can be started both manually or electrically through self starting mechanism with the help of keys provided for this purpose.

SM on duty shall maintain procurement, accountal and consumption details of diesel oil in the Diesel Generator log book provided for the purpose.

In the event of failure of main power supply as well as all standby sources the signaling system shall work with the help of Battery back up through IPS. One SM monitoring panel for IPS has been provided in the panel room for continuous monitoring of the healthy condition of the IPS by on duty SM.

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Audio visual alarm in the form of lamp and Buzzer with Ack button have been provided on the IPS monitoring panel. SS on duty shall monitor functioning of IPS through the monitoring panel and shall act according to the indications provided on it. Details of power supply system and SM monitoring panel is given below.

1. 50% depth of discharge (DOD) of battery cells for Generator to start. In this condition, Audio/Visual alarm comes that will be acknowledged with audio cutoff and SS on duty shall arrange to start Generator.
2. 60 to 70% depth of discharge (DOD) warns Alarm. In case of 70% of DOD of IPS battery, signaling system will shut down. SS on duty take precaution so that at 50% of DOD condition, he should arrange to start the Generator for fail safe of safety circuit.

In the event of failure of power supply from State Electricity supply, a small Red indication lamp above the Power Ack button will appear along with Audible buzzer. The SS on duty shall arrange to start Generator to get the supply to signaling installation and change the change over switch to DG supply.

When the normal power supply is restored, and audible buzzer again rings and the Red light indication on the panel extinguishes. The SS on duty shall arrange to operate the change over switch to switch back to local state supply and stop the working Diesel Generator. In both the above cases, to stop the Audible buzzer the SS on duty shall press the power Ack button.

SS INDICATION PANEL:

	Instruction	Condition	LED Indication	Action taken by on duty SS
A	Start Generator	50% DOD	Red	Audio/Visual alarm. Alarm can be acknowledged with auto cut off & Generator to start
B	Emergency start Generator	60% DOD	Red	-do-
C	System Shut down	70% DOD	Red	Signal feed cut off and all DC-DC converters to work Audio alarm will continue till Generator is started.
D	Call S&T staff	Equipment fault	Red	Failure of any module give the alarm in SS indication panel. Alarm shall be acknowledged by SS on duty for audio cut off.

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7.0 INTENSITY OF PANEL LIGHT INDICATORS:

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

8.0 TRACK INDICATORS:

Each track circuit is given a separate and distinguishable colour on the face of the indication panel and entire length of the track circuited portion of the track provided with recti-liner transparent filters and illuminated from behind to indicate the conditions of track circuited lines at any given movement [whether engaged and route set or occupied]. When once a route is set by pressing the entrance and exit buttons for signaled route. For the purpose of giving indications to the Panel Station Master about the occupancy of any or all of the track circuited section/sections, the route is split into four portions and the details of the four portions are as follow:-

- i) Approach track either in rear of the first stop signal or any other stop signal in the station yard.
- ii) Entry portion of a route from the subject signal upto the fouling mark of the berthing track.
- iii) The berthing track and
- iv) The overlap [where provided].

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

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

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sequence of operation of track indications signify the sectional route release for facilitating subsequent traffic movements.

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

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

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

POINT ENGAGED INDICATION:

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

9.0 POINT INDICATION:

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

10.0 APPROACH TRAIN INDICATION:-

At the approach of VISAKHAPATNAM Station yard approach track indications are provided which shall show RED lights as soon as the train occupies the track in rear of the Home signals from respective directions.

11.0 APPROACH LOCKING INDICATIONS:-

Approach locking indications are provided at all signals on the indication panel [other than those signals which have no points or level crossing gates etc., on their routes].

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The expression Approach locking connotes that the locking is effective on a signal route when once the concerned signal is taken off and the train has come within a predetermined distance from that signal. For signals which do not have approach track circuit in rear, dead approach locking connotes that the locking is effective on the signal when once the signal is taken off.

In case it is necessary to cancel a signal that was once taken off three button emergency operation cancellation should be resorted to. Whenever there is no train on the approach track the three button cancellation should be operated straight-away and at once. This operation is counted on the Veeder Counter.

But when there is a train at the approach locked indication [shows with a WHITE DOT light] flashes the movement the signal is put back to 'ON' position and the cancellations is indicated. Then the route can be cancelled with the three button operations. This operation is also counted on Veeder counter.

12.0 BUTTON STUCK UP INDICATION:-

When any of the Signal buttons/Point buttons or Route buttons [GNCR, UNCR, WNCR] is remains in the pressed position for more than 15 seconds, the Panel becomes inoperative and white light appears on the Panel with a audible indication [Buzzer].

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

12.1 AUDIBLE INDICATIONS ON OPERATING PANEL:

[a] SIGNAL FAILURE BUZZER:

Whenever a signal becomes blank due to fusing of RED lamp the signal failure buzzer/sounds and continues till the buzzer muting button viz., XYN[S] on the panel is pressed for acknowledging the failure. A stencil "G" indication also appears and continues till the lamp is replaced.

[b] POINT FAILURE BUZZER:

Incase of failure of a point this buzzers/sounds and continue till the buzzer muting button viz., WXYN is pressed for acknowledging the failure. A stencil "W" indication also appears and continues till the defect is rectified.

[c] GROUP BUTTON BUZZER:

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

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[d] **POINT CHAIN GROUP BELL:**

Incase of any failure of power operation of points through the chain group, this bell rings until it is acknowledged by pressing of the button below P/indicator. However, the flashing indicator “P” continues till the defect is rectified.

13.0 SIGNAL SYMBOLS AND THEIR INDICATION ON INDICATION PANEL:

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

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

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

Incase of a Calling on signal it display a WHITE DOT light on the stem with a circular box [coloured Black] and no light when the signal is at “ON” position.

14.0 INDICATION IN CASE OF FAILURE OF SIGNAL ASPECT:

In case if any aspect of the lamp fuses at the site the green indication flashes on the corresponding signal aspect indication on the indication panel. If the red lamp fuses the Red indication on the corresponding signal symbol flashes.

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

15.0 FAILURE OF POWER SUPPLY INDICATIONS:

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

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**CHART SHOWING THE OPERATION OF THE ENTRANCE AND EXIT
BUTTONS FOR CLEARING STOP SIGNAL/CALLING ON SIGNALS**

The push button chart for initiating stop signals and calling on signals;

Sl. No.	Signal Route	From Signal	To destination	Buttons operated		Remarks
				Signal	Route	
1	S-1[A]	S-1	S-31	S-1	L-1T	
2	S-1[B]	S-1	S-35	S-1	L-3T	
3	S-1[C]	S-1	S-37	S-1	L-4T	
4	S-1[D]	S-1	S-39	S-1	L-5T	
5	S-1[E]	S-1	S-41	S-1	L-6T	
6	S-1[F]	S-1	S-43	S-1	L-7T	
7	S-1[G]	S-1	S-45	S-1	L-8T	
8	S-1[H]	S-1	S-47	S-1	L-9T	
9	S-1[I]	S-1	S-53	S-1	L-10T	
10	S-1[J]	S-1	S-55	S-1	L-11T	
11	C-1[A]	C-1	S-31	S-1+COGGN	L-1T	
12	C-1[B]	C-1	S-35	S-1+COGGN	L-3T	
13	C-1[C]	C-1	S-37	S-1+COGGN	L-4T	
14	C-1[D]	C-1	S-39	S-1+COGGN	L-5T	
15	C-1[E]	C-1	S-41	S-1+COGGN	L-6T	
16	C-1[F]	C-1	S-43	S-1+COGGN	L-7T	
17	C-1[G]	C-1	S-45	S-1+COGGN	L-8T	
18	C-1[H]	C-1	S-47	S-1+COGGN	L-9T	
19	C-1[I]	C-1	S-53	S-1+COGGN	L-10T	
20	C-1[J]	C-1	S-55	S-1+COGGN	L-11T	
21	S-10	S-10	SA-60	S-10	60AT	
22	C-10	C-10	SA-60	S-10+COGGN	60AT	
23	S-14	S-14	SA-60	S-14	60AT	
24	C-14	C-14	SA-60	S-14+COGGN	60AT	
25	S-18	S-18	SA-60	S-18	60AT	
26	C-18	C-18	SA-60	S-18+COGGN	60AT	
27	S-20	S-20	SA-60	S-20	60AT	
28	C-20	C-20	SA-60	S-20+COGGN	60AT	
29	S-22	S-22	SA-60	S-22	60AT	

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Sl. No.	Signal Route	From Signal	To destination	Buttons operated		Remarks
				Signal	Route	
30	C-22	C-22	SA-60	S-22+COGGN	60AT	
31	S-34	S-34	SA-60	S-34	60AT	
32	C-34	C-34	SA-60	S-34+COGGN	60AT	
33	S-36	S-36	SA-60	S-36	60AT	
34	C-36	C-36	SA-60	S-36+COGGN	60AT	
35	S-38	S-38	SA-60	S-38	60AT	
36	C-38	C-38	SA-60	S-38+COGGN	60AT	
37	S-42	S-42	SA-60	S-42	60AT	
38	C-42	C-42	SA-60	S-42+COGGN	60AT	
39	S-44	S-44	SA-60	S-42	60AT	
40	C-44	C-44	SA-60	S-42+COGGN	60AT	
41	SA-60	SA-60	GSA-2	SA-60	60T KING PUSH	

NOTE:

For taking off Calling on signal press concerned signal button and route button and release route button holding signal button in pressed condition press EGGN button and then COGGN button. Release COGGN button and press route button and concerned signal button. Calling on signal can be taken off after 120 seconds.

Sl. No.	Shunt Signal Route	From Signal	To destination	Buttons operated		Remarks
				Signal	Route	
1	SH-2[A]	SH-2	SH-44	SH-2	L-11T	
2	SH-2[B]	SH-2	SH-42	SH-2	L-10T	
3	SH-2[C]	SH-2	SH-38	SH-2	L-9T	
4	SH-2[D]	SH-2	SH-36	SH-2	L-8T	
5	SH-2[E]	SH-2	SH-34	SH-2	L-7T	
6	SH-2[F]	SH-2	SH-22	SH-2	L-6T	
7	SH-2[G]	SH-2	SH-20	SH-2	L-5T	

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Sl. No.	Shunt Signal Route	From Signal	To destination	Buttons operated		Remarks
				Signal	Route	
8	SH-2[H]	SH-2	SH-4	SH-2	4/27AT	
9	SH-3[A]	SH-3	SB=SALOON SDG.	SH-3	SS	
10	SH-3[B]	SH-3	SH-31	SH-3	L-1T	
11	SH-3[C]	SH-3	SH-33	SH-3	L-2T	
12	SH-3[D]	SH-3	SH-35	SH-3	L-3T	
13	SH-3[E]	SH-3	SH-37	SH-3	L-4T	
14	SH-3[F]	SH-3	SH-39	SH-3	L-5T	
15	SH-4[A]	SH-4	SH-18	SH-4	L-4T	
16	SH-4[B]	SH-4	SH-14	SH-84	L-3T	
17	SH-4[C]	SH-4	SH-12	SH-84	L-2T	
18	SH-4[D]	SH-4	SH-10	SH-4	L-1T	
19	SH-4[E]	SH-4	SB =GOODS/PARCEL SDG.	SH-4	GS	
20	SH-5[A]	SH-5	SB=LOCO YAARD	SH-5	LY	
21	SH-5[B]	SH-5	SH-3	SH-5	52AT	
22	SH-5[C]	SH-5	SH-39	SH-5	L-5T	
23	SH-5[D]	SH-5	SH-41	SH-5	L-6T	
24	SH-5[E]	SH-5	SH-43	SH-5	L-7T	
25	SH-5[F]	SH-5	SH-45	SH-5	L-8T	
26	SH-5[G]	SH-5	SH-47	SH-5	L-9T	
27	SH-5[H]	SH-5	SH-53	SH-5	L-10T	
28	SH-5[I]	SH-5	SH-55	SH-5	L-11T	
29	SH-6[A]	SH-6	SH-44	SH-6	L-11T	
30	SH-6[B]	SH-6	SH-42	SH-6	L-10T	
31	SH-6[C]	SH-6	SH-38	SH-6	L-9T	
32	SH-6[D]	SH-6	SH-36	SH-6	L-8T	
33	SH-6[E]	SH-6	SH-34	SH-6	L-7T	
34	SH-6[F]	SH-6	SH-22	SH-6	L-6T	
35	SH-8[A]	SH-8	SH-50	SH-8	50UN	
36	SH-8[B]	SH-8	SH-52	SH-8	52-AT	
37	SH-8[C]	SH-8	SB-COACHING SIDING	SH-8	CS	
38	SH-8[D]	SH-8	SB-ENGG SIDING	SH-8	ES	
39	SH-9[A]	SH-9	SB-SALOON SIDING	SH-9	SS	

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Sl. No.	Shunt Signal Route	From Signal	To destination	Buttons operated		Remarks
				Signal	Route	
40	SH-9[B]	SH-9	SH-31	SH-9	L-1T	
41	SH-9[C]	SH-9	SH-33	SH-9	L-2T	
42	SH-9[D]	SH-9	SH-35	SH-9	L-3T	
43	SH-9[E]	SH-9	SH-37	SH-9	L-4T	
44	SH-9[F]	SH-9	SH-39	SH-9	L-5T	
45	SH-9[G]	SH-9	SH-41	SH-9	L-6T	
46	SH-9[H]	SH-9	SH-43	SH-9	L-7T	
47	SH-9[I]	SH-9	SH-45	SH-9	L-8T	
48	SH-9[J]	SH-9	SH-47	SH-9	L-9T	
49	SH-9[K]	SH-9	SH-53	SH-9	L-10T	
50	SH-9[L]	SH-9	SH-55	SH-9	L-11T	
51	SH-10[A]	SH-10	SH-50	SH-10	50 UN	
52	SH-10[B]	SH-10	SH-52	SH-10	52-AT	
53	SH-10[C]	SH-10	SB-COACHING SIDING	SH-10	CS	
54	SH-10[D]	SH-10	SB-ENGG SIDING	SH-10	ES	
55	SH-11[A]	SH-11	SB-SALOON SIDING	SH-11	SS	
56	SH-11[B]	SH-11	SH-31	SH-11	L-1T	
57	SH-11[C]	SH-11	SH-33	SH-11	L-2T	
58	SH-11[D]	SH-11	SH-35	SH-11	L-3T	
59	SH-11[E]	SH-11	SH-37	SH-11	L-4T	
60	SH-11[F]	SH-11	SH-39	SH-11	L-5T	
61	SH-11[G]	SH-11	SH-23	SH-11	23 AT	
62	SH-12[A]	SH-12	SH-50	SH-12	50 UN	
63	SH-12[B]	SH-12	SH-52	SH-12	52-AT	
64	SH-12[C]	SH-12	SB-COACHING SIDING	SH-12	CS	
65	SH-12[D]	SH-12	SB-ENGG SIDING	SH-12	ES	
66	SH-13[A]	SH-13	SB-SALOON SIDING	SH-13	SS	
67	SH-13[B]	SH-13	SH-31	SH-13	L-1T	
68	SH-13[C]	SH-13	SH-33	SH-13	L-2T	
69	SH-13[D]	SH-13	SH-35	SH-13	L-3T	
70	SH-13[E]	SH-13	SH-37	SH-13	L-4T	
71	SH-13[F]	SH-13	SH-39	SH-13	L-5T	

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Sl. No.	Shunt Signal Route	From Signal	To destination	Buttons operated		Remarks
				Signal	Route	
72	SH-13[G]	SH-13	SH-23	SH-13	23 AT	
73	SH-14[A]	SH-14	SH-50	SH-14	50 UN	
74	SH-14[B]	SH-14	SH-52	SH-14	52 AT	
75	SH-14[C]	SH-14	SB-COACHING SIDING	SH-14	CS	
76	SH-15[A]	SH-15	SB-SALOON SIDING	SH-15	SS	
77	SH-15[B]	SH-15	SH-31	SH-15	L-1T	
78	SH-15[C]	SH-15	SH-33	SH-15	L-2T	
79	SH-15[D]	SH-15	SH-35	SH-15	L-3T	
80	SH-15[E]	SH-15	SH-37	SH-15	L-4T	
81	SH-15[F]	SH-15	SH-39	SH-15	L-5T	
82	SH-15[G]	SH-15	SH-23	SH-15	23 AT	
83	SH-18[A]	SH-18	SH-50	SH-18	50 UN	
84	SH-18[B]	SH-18	SH-52	SH-18	52 AT	
85	SH-18[C]	SH-18	SB-COACHING SIDING	SH-18	CS	
86	SH-19[A]	SH-19	SB-SALOON SIDING	SH-19	SS	
87	SH-19[B]	SH-19	SH-31	SH-19	L-1T	
88	SH-19[C]	SH-19	SH-33	SH-19	L-2T	
89	SH-19[D]	SH-19	SH-35	SH-19	L-3T	
90	SH-19[E]	SH-19	SH-37	SH-19	L-4T	
91	SH-20[A]	SH-20	SH-50	SH-20	50 UN	
92	SH-20[B]	SH-20	SH-52	SH-20	52 AT	
93	SH-21[A]	SH-21	SB-SALOON SIDING	SH-21	SS	
94	SH-21[B]	SH-21	SH-31	SH-21	L-1T	
95	SH-21[C]	SH-21	SH-33	SH-21	L-2T	
96	SH-22[A]	SH-22	SH-48	SH-22	23 AT	
97	SH-22[B]	SH-22	SH-50	SH-22	50 UN	
98	SH-23[A]	SH-23	SH-41	SH-23	L-6T	
99	SH-23[B]	SH-23	SH-43	SH-23	L-7T	
100	SH-23[C]	SH-23	SH-45	SH-23	L-8T	
101	SH-23[D]	SH-23	SH-47	SH-23	L-9T	
102	SH-23[E]	SH-23	SH-53	SH-23	L-10T	
103	SH-23[F]	SH-23	SH-55	SH-23	L-11T	

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Sl. No.	Shunt Signal Route	From Signal	To destination	Buttons operated		Remarks
				Signal	Route	
104	SH-27	SH-27	CONTAINER SIDING	SH-27	CTS	
105	SH-29	SH-29	SH-27	SH-29	4/27 AT	
106	SH-31	SH-31	SH-27	SH-31	4/27 AT	
107	SH-33	SH-33	SH-27	SH-33	4/27 AT	
108	SH-34[A]	SH-34	SH-48	SH-34	23 AT	
109	SH-34[B]	SH-34	SH-50	SH-34	50 UN	
110	SH-35	SH-35	SH27	SH-35	4/27 AT	
111	SH-36[A]	SH-36	SH-48	SH-36	23 AT	
112	SH-36[B]	SH-36	SH-50	SH-36	50 UN	
113	SH-37	SH-37	SH-27	SH-37	4/27 AT	
114	SH-38[A]	SH-38	SH-48	SH-38	23AT	
115	SH-38[B]	SH-38	SH-50	SH-38	50UN	
116	SH-39	SH-39	CONTAINER SIDING	SH-39	CTS	
117	SH-41[A]	SH-41	CONTAINER SIDING	SH-41	CTS	
118	SH-41[B]	SH-41	SB-SHUNTING NECK-1	SH-41	SHN1	
119	SH-42[A]	SH-42	SH-48	SH-42	23AT	
120	SH-42[B]	SH-42	SH-50	SH-42	50UN	
121	SH-43[A]	SH-43	CONTAINER SDG.	SH-43	CTS	
122	SH-43[B]	SH-43	SB-SHUNTING NECK	SH-43	SHN1	
123	SH-44[A]	SH-44	SH-48	SH-44	23AT	
124	SH-44[B]	SH-44	SH-50	SH-44	50 UN	
125	SH-45[A]	SH-45	CONTAINDE R SDG.	SH-45	CTS	
126	SH-45[B]	SH-45	SB-SHUNTING NECK-1	SH-45	SHN1	
127	SH-47[A]	SH-47	CONTAINER SDG.	SH-47	CTS	
128	SH-47[B]	SH-47	SB-SHUNTING NECK-1	SH-47	SHN1	

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Sl. No.	Shunt Signal Route	From Signal	To destination	Buttons operated		Remarks
				Signal	Route	
129	SH-48[A]	SH-48	SB-SHUNTING NECK-2	SH-48	SHN2	
130	SH-48[B]	SH-48	SB-SHUNTING NECK-3	SH-48	SHN3	
131	SH-48[C]	SH-48	ENGINE LINE (LOCO LINE)	SH-48	LL	
132	SH-50[A]	SH-50	SB-SHUNTING NECK-2	SH-50	SHN2	
133	SH-50[B]	SH-50	SB-SHUNTING NECK-3	SH-50	SHN3	
134	SH-50[C]	SH-50	ENGINE LINE (LOCO LINE)	SH-50	LL	
135	SH-50[D]	SH-50	SA-60	SH-50	60 AT	
136	SH-50[E]	SH-50	SB-SHUNTING NECK-4	SH-50	SHN-4	
137	SH-52	SH-52	SB-SHUNTING NECK-4	SH-52	SHN-4	
138	SH-53[A]	SH-53	CONTAINER SDG.	SH-53	CTS	
139	SH-53[B]	SH-53	SB-SHUNTING NECK-1	SH-53	SHN1	
140	SH-54	SH-54	SB-SHUNTING NECK-4	SH-54	SHN-4	
141	SH-55[A]	SH-55	CONTAINER SDG.	SH-55	CTS	
142	SH-55[B]	SH-55	SB-SHUNTING NECK-1	SH-55	SHN1	

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PUSH BUTTON CHART FOR SIDINGS, CRANK HANDLES

Sl. No:	Description of control	Buttons Operated
1	Permission to release CH-1 Key	CH 1 YN + Group trans CH RB
2	With drawl of control of CH-1 Key	CH 1 YN + Group release CH NB
3	Permission to release CH-2 Key	CH 2 YN + Group trans CH RB
4	With drawl of control of CH-2 Key	CH 2 YN + Group release CH NB
5	Permission to release CH-3 Key	CH 3 YN + Group trans CH RB
6	With drawl of control of CH-3 Key	CH 3 YN + Group release CH NB
7	Permission to release CH-4 Key	CH 4 YN + Group trans CH RB
8	With drawl of control of CH-4 Key	CH 4 YN + Group release CH NB
9	Permission to release CH-5 Key	CH 5 YN + Group trans CH RB
10	With drawl of control of CH-5 Key	CH 5 YN + Group release CH NB
11	Permission to release CH-6 Key	CH 6 YN + Group trans CH RB
12	With drawl of control of CH-6 Key	CH 6 YN + Group release CH NB
13	Permission to release CH-7 Key	CH 7 YN + Group trans CH RB
14	With drawl of control of CH-7 Key	CH 7 YN + Group release CH NB
15	Permission to release CH-8 Key	CH 8 YN + Group trans CH RB
16	With drawl of control of CH-8 Key	CH 8 YN + Group release CH NB
17	Permission to release CH-9 Key	CH 9 YN + Group trans CH RB
18	With drawl of control of CH-9 Key	CH 9 YN + Group release CH NB
19	Permission to release CH-10 Key	CH 10 YN + Group trans CH RB
20	With drawl of control of CH-10 Key	CH 10 YN + Group release CH NB
21	Permission to release CH-11 Key	CH 11 YN + Group trans CH RB
22	With drawl of control of CH-11 Key	CH 11 YN + Group release CH NB
23	Permission to release CH-12 Key	CH 12 YN + Group trans CH RB
24	With drawl of control of CH-12 Key	CH 12 YN + Group release CH NB
25	Permission to release CH-13 Key	CH 13 YN + Group trans CH RB
26	With drawl of control of CH-13 Key	CH 13 YN + Group release CH NB
27	Permission to release CH-14 Key	CH 14 YN + Group trans CH RB
28	With drawl of control of CH-14 Key	CH 14 YN + Group release CH NB
29	Permission to release CH-15 Key	CH 15 YN + Group trans CH RB
30	With drawl of control of CH-15 Key	CH 15 YN + Group release CH NB

16.0 STATION MASTER KEY FOR OPERATING PANEL:

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

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17.0 DISTANT SIGNALS AND THEIR ASPECTS:

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

18.0 EMERGENCY OPERATIONS AND THE COUNTERS:

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

- i) Control for Emergency Point Button [EWN].
- ii) Control for Emergency full Route release Button [EUUYN].
- iii) Control of Emergency Route Section Release Button [EUYN].
- iv) Control for “Calling on” Signal [COGGN].
- v) Emergency Gate Release Button [ELXN].

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

In case of failure of track circuit, the points can be set by operation of the emergency point button [EWN] and the point button concerned [after unlocking the EWN control lock] provided the point concerned was not engaged earlier or not locked. This electrical lock [ignition type] shall be in personal custody of the cabin station master and no emergency operations should be carried out without his permission.

The Panel Station Master on duty is responsible for all emergency operations explained above. The Panel Station Master is responsible for correct operation of the emergency buttons and record the operations in the register. The Panel SM should not permit any unauthorized person to operate the control panel.

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

Similarly for any individual point operation, the point button [WN] and the group point button [WWN] have to be pressed simultaneously.

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

19.0 APPROACH LOCKING OF A ROUTE:

Once a signal [either a stop signal or a shunt signal] is taken off, the route including signal overlap in case of main signal gets back locked and the set route cannot be altered or interfered with unless the signal concerned is put back to "ON" position and the route is cancelled by emergency three button operation. After the initiation of such emergency three Button operation, the complete route gets cancelled provided there is no train on the approach track. If there is a train/vehicle on the approach track, the route gets approach locked and can be released only after the count down of 120 seconds by the timer. [The approach locking distance being variable according to the aspect of the signal in rear and other important safety considerations such as maximum permissible sectional speed on the approaching line etc.,].

The shunt signal No.2, 3, 6, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 21, 22, 25, 29, 31, 33, 35, 36, 37, 38, 39, 41, 42, 43, 44, 50, 53 & 55 have been provided with dead approaching locking [in the absence of approach track circuit] and in such case the route once set cannot be altered by emergency operation for a period of 120 seconds after putting back the signal to "ON" position. Every such three button emergency cancellation is countered on the veeder counter.

20.0 EMERGENCY RELEASE OF INDIVIDUAL – ROUTE SECTION AND OVERLAPS:

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

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21.0 TAKING OF CALLING ON SIGNALS:

The calling 'ON' signals have been provided below the following stop signals:

Sl. No:	Button No.	Signal No:	
1	C-1	UP Home signal No.1	On UP Main Line
2	C-10	DN starter signal No.10	On Line No:1
3	C-14	DN starter signal No.14	On Line No.3
4	C-18	DN starter signal No.18	On Line No:4
5	C-20	DN starter signal No.20	On Line No.5
6	C-22	DN starter signal No.22	On Line No:6
7	C-34	DN starter signal No.34	On Line No:7
8	C-36	DN starter signal No.36	On Line No.8
9	C-38	DN starter signal No.38	On Line No:9
10	C-42	DN starter signal No.42	On Line No.10
11	C-44	DN starter signal No.44	On Line No:11

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

22.0 FAILURE OF APPROACH TRACK AND SPECIAL MEASURES FOR TAKING OFF A "CALLING ON" SIGNAL:

In case of failure of the approach track, instead of taking off the 'Calling on' signal the trains shall be piloted treating "Calling on" signal as failure and S&T official shall be informed for expeditious rectification.

During the failure of track circuit before taking off "calling on" signal the clearance of the track on the entire route between _stop signal to stop signal must be certified by the Station Master to the Panel Station Master. In all cases of reception/dispatch of a train by taking off the "Calling on" signal necessary particular including the train No. "Calling on" signal No. and No. registered on the corresponding veeder counter should be recorded in a register maintained for the purpose.

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23.0 TAKING OFF THE SHUNT SIGNALS:

For taking off a shunt signal the corresponding route button and the shunt signal button should be pressed simultaneous and released.

24.0 CLEARING OF STOP SIGNAL:

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

25.0 PUTTING BACK THE SIGNAL TO “ON” POSITION:

In exigencies, when a stop signal or a “Calling on” signal or shunt signal has to be put back to ‘ON’ before passage of the train, the concerned signal button [GN] concerned and the emergency signal cancellation button [EGGN] should be pressed simultaneously.

26.0 LOCKING OF POINTS NORMAL AND SPECIAL CASES:

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

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

27.0 INDIVIDUAL OPERATION OF POINTS WHEN THE TRACK CIRCUIT/CIRCUITS IN THE POINT ZONE HAVE NOT FAILED:

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

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

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28.0 INDIVIDUAL OPERATION OF POINTS IN CASE OF FAILURE OF TRACK CIRCUITS/TRACK CIRCUITS POINT ZONE:

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

29.0 FAILURE OF THE POINTS DUE TO ANY OTHER CAUSES:

If any point fails before a route is lined up, the RRI Cabin SS/DY.SS should first try to set and reset the same point by individual operation to ascertain if the said point can be set in a particular position.

If the said points cannot be set in any position, the RRI Cabin SS/DY.SS should not use the route concerned for normal signaled movement until the defect is rectified by Signal staff and certificate to this effect is obtained from SE(Sig)/JE(Sig) on duty. However, Crank handle operation may be done.

30.0 PADLOCKING AND CRANKING OF POINTS WITH CRANK HANDLE AND ITS CONTROLLING KEYS AND SPECIAL PRECAUTIONS:

For the use of Crank handle for motor operated points the instructions laid down in rule No.20.06 of operating manual should be followed. When the points are set by means of Crank handle, the field Station Master on duty shall ensure that the entire route is correctly set, all the facing and trailing points are clamped and padlocked. All the points on the route must be clamped and padlocked for any signaled movement. The keys of the padlock of all the clamped and locked points should be kept in the personal custody of the field station master before the pilot memo is handed over to the Driver.

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

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

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31.0 RELEASING OF A SUB-ROUTE SECTION:

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

32.0 FAILURE OF TRACK CIRCUITS AND SIGNALS:

In the event of failure of track circuits over point zone setting of the points will be done by Emergency operation after the Field SM ensure that the points zone is clear of vehicles and gives an assurance supported by a Private number to that effect. In case of failure of track circuits, calling on signals where provided may be taken off. If there is no Calling-on-signal or if the same is out of order, the train concerned should be piloted past the signal concerned up to next stop signal ahead after ensuring the clearance of the route and setting, clamping and padlocking the points on the route by the field SM.

33.0 SIGNAL ASPECT:

The aspect control chart of the signals in VISAKHAPATNAM yard in accordance with the aspect control chart as indicated in the Interlocking Plan No:23029 [VISAKHAPATNAM – RRI].

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

Sl. No:	Aspect displayed before failure of signal lamp		Particulars of failure of lamp	Aspect displayed after failure of signal lamp	
	By signal at site	By signal symbol on indication panel		By signal at site	By signal symbol or indication panel
1	Red	Red	Red lamp-main filament fused	Dim Red	Flashing Red
2	Red	Red	Red lamp-both filaments fused	Blank. Signal in rear reverse back to 'ON' position	Flashing Red

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Sl. No :	Aspect displayed before failure of signal lamp		Particulars of failure of lamp	Aspect displayed after failure of signal lamp	
	By signal at site	By signal symbol on indication panel		By signal at site	By signal symbol or indication panel
3	Yellow	Green	Yellow lamp fused.	Red	Red Flash
4	Double Yellow	Green	One yellow lamp fused.	Yellow	Steady Red Flashing
5	Double Yellow	Green	Both Yellow lamps both filaments of both lamps fused.	Red	Flashing Green with steady red
6	Green	Green	Green lamp fused	Double yellow in 4 aspect signals and yellow in 3 aspect signals	Flashing Green

SPECIAL NOTE:

- [1] If the addition to the failure of both filaments of Green lamp, failure of one or both filaments of one or both filaments of yellow fail the aspect assumed by the signal at site is Red.
- [2] A small flashing white light is lit near the main signal symbol, if the signal is put to danger and route cancellation is initiated when it is approach locked. This light remains flashing for 120 seconds after which it becomes steady. Then the panel station master should commence three button emergency route cancellation.
- [3] When a Calling on signal below a stop signal is taken off, a white dot is lit below the stop signal.
- [4] White is not provided on indication panel/operating panel is lit above Green indication signal symbol whenever signal is taken "off" with route indicator for a diversion.

34.0 SIGNAL REPLACEMENT AND CANCELLATION OF A ROUTE ALREADY SET:

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

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35.0 CANCELLATION OF ROUTE;

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

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

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

36.0 REPLACEMENT OF 'CALLING-ON' SIGNAL TO 'ON' POSITION:

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

37.0 FORMATS FOR VARIOUS EMERGENCY OPERATIONS:**FORMAT [a] FOR EMERGENCY SUB-SECTION ROUTE RELEASE:**

Date & Time	Route Section	Counter Number		Remarks	Signature	
		Before Release	After Release		On duty DY.SS/RRI	On duty SSE (Sig)/SE (Sig)/RRI

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FORMAT [c] FOR EMERGENCY POINT OPERATION:

Date & Time	Time of Operation	Counter Number		Track Circuit No. failed	Signature	
		Before Release	After Release		On duty DY.SS/ RRI	

FORMAT [d] FOR EMERGENCY FULL ROUTE CANCELLATION:

Date & Time	Time of operation	Counter Number		Route cancelled	Reasons for cancellation	Signature	
		Before Operation	After Operation			On duty DY.SS/ RRI	

EMERGENCY CRANK HANDLE INTERLOCKING:

Excepting the mechanically operated points which are dually controlled by the Route Relay Cabin, all points in VISAKHAPATNAM Yard are operated through electrical point machine provided at site. These are remotely controlled and operated from Route Relay Cabin normally. Whenever there is a failure of power operated point, it should be crank handled at site. For this purpose, it is necessary to insert aperture with the help of the concerned and associated control key. Unless this aperture is opened by the operation of the controlling key the emergency crank handle cannot be inserted in the motor and operated to set the points. This control key will remain held on the point motor while it is being operated by the emergency crank handle. After the point is set and the crank handle is removed, the control key can be extracted and in that process the crank handle inserting aperture gets closed and locked automatically.

The crank handle interlocking key is inserted in the crank handle interlocking box housed in the location/goomty and turned anti-clockwise when, it gets locked. This key cannot be extracted from the box unless the control for releasing the key is transmitted from the Route Relay cabin when the release control is transmitted from the Route Relay cabin a white indication appears just below the key. After obtaining the above indication the RED button below the must be pressed and the key must be turned clockwise and extracted simultaneously. One/Two/Three controlling keys are provided in each box with individual indication and button below the respective key. Inter locking has been provided between signals and emergency crank handle control keys in such a way that the points which controls and once the crank handle key is extracted it is not possible to set the route and clear the signal/signals reading over that point/points till such time the key is restored back to its box. For the purpose of facilitation flexibility and quick reach of the emergency crank handle and crank handle keys have been provided in different groups at different areas in the Yard.

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Zone	Crank Handle combinations Nos.	Handle key combinations Nos.	Controlled Point Nos.	Location
NORTH	CH-1		101	CH LOCATION
	CH-2		102	
	CH-3		106. 111.	CH LOCATION
	CH-4		104. 105. 107.	
	CH-5		110. 113. 131	
	CH-6		115. 121	
	CH-7		116.	
	CH-8		132. 133. 134. 135. 136. 137.	
	CH-9		120.	
	CH-10		119. 125. 126. 127.	CH LOCATION
	CH-11		103.	
SOUTH	CH-12		145. 146. 147. 148. 149.	CH LOCATION
	CH-13		152. 153. 154. 157. 158. 159.	
	CH-14		150. 151. 156.	
	CH-15		155.	

One crank handle is kept in a pad locked box kept at each of the above places and the keys of this padlock after locking the crank handle shall remain in the personal custody of the Station Master RRI. The crank Handle along with the concerned controlling key can be handled only by the concerned operating and the S&T maintenance staff as per the instruction of the SS/DY.SS of RRI. It is the personal responsibility of the operating official to ensure that as soon as the required manual operation of the point/Points in his zone are completed, the c rank handle is restored to the padlocked box and the box properly padlocked and that the crank handle control key is also returned to the respective crank handle interlocking box and transmitted to the Route Relay cabin expeditiously.

It will be seen from the above table that, in all there are fifteen groupings covering all the power operated points in VISAKHAPATNAM yard. Control keys have special arrangements of configuration for each group and the point machines of the corresponding group have a matching configuration at the key hole permitting the entry of the key meant only for the particular set of points in that group. The detailed procedure of the emergency crank handle operation of points at different zone are given below.

38.0 POINT ON SOUTH AND NORTH ZONE:

- [1] The concerned operating official shall exchange private number with the SS/DY.SS of RRI from the respective zones (South/North) giving his identification. The

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private Number shall be recorded in the crank handle register. The SS/DY.SS should then order the Panel Station Master to release the concerned crank handle controlling key. The Panel station Master should release the control by pressing the concerned crank handle button and the crank handle group button [CHRB]. The release of CHNB the control is indicated by flashing WHITE indication on the panel near the crank handle button.

At site on the concerned crank handle interlocking box. The WHITE indication appears below the key. The SS/DY.SS should then press the RED button below that key and extract the key from the box. There will be no indication on the Panel when the key is extracted at site.

The point/points is/are then operated with the help of the emergency crank handle taken out by the SS/DY.SS from the padlocked box in the goomty/gate lodge after opening the aperture in the point machine with the help of the controlling key by the SS/DY.SS at site and set to the desired position, clamped and padlocked both facing and trailing and the keys of the pad lock shall be in the personal custody of the SS/DY.SS after which the SS/DY.SS shall restore the controlling key to its original place in the crank handle interlocking box (after locking the crank handle in its box) and turned clockwise.

Restoration of the controlling key back in its place is indicated by flashing 'WHITE' indication. The panel operator should then withdraw the released control by pressing the crank handle button and the CHNB. The steady WHITE indication appears indicating the normal condition. The WHITE indication on the crank handle interlocked box at site also disappears. When the control has been withdrawn the field SM should advise the Cabin Station Master communicating a Private Number assuring him that the desired point/points has been operated to the required position as ordered by SS/DY.SS set correctly, clamped and padlocked in their proper position and the control is returned. The private number given by the field SM shall be recorded in the crank handle register.

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

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

The route once set and locked for receiving or dispatch a train shall not be interfered with unless the said movement is completed or cancelled and expressly so directed by the SS/DY.SS.

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Whenever the crank handle is required to be used by a signal official for maintenance work or for attending failure, the signal official must give disconnection memo (SI4) to the SS/DY.SS on duty. After making necessary entries in the crank handle register, the RRI Cabin SS/DY.SS shall obtain the acknowledgement of the signal official in the crank handle register and then release the concerned crank handle controlling key to the signal official.

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

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

An emergency crank handle register is to be maintained in the Route Relay Cabin with the following proforma by on SS/DY.SS of Route Relay Cabin wherein the particulars of usage of the emergency crank handle must be recorded.

- [I] Date
- [ii] Point No. which failed or required to be tested.
- [iii] Time of failure.
- [iv] Disconnection Memo No. received from S&T staff.
- [v] Points controlling key No. released from Route Relay Cabin.
- [vi] Time when release was given.
- [vii] Private Number/signature assuring correct setting, clamping and padlocking of the concerned points.
- [viii] Private Number or signature of the official to whom the controlling key is released.
- [ix] Date and time fault rectified.

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- [x] Time when controlling key release with drawn by panel Station Master.
- [xi] Signature and designation of official who rectified the fault.
- [xii] Remarks.

When point become defective the RRI Cabin SS/DY.SS comply with GR 3.51, 3.77, 5.10 and SR's thereto and he must notify all concerned promptly for speedy restoration.

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

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

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APPENDIX – 'C'

APPENDIX-'C' TO STATION WORKING RULES OF VISAKHAPATNAM STATION

ANTICOLLISION DEVICE [RAKSHA KAVACH]

- NIL -

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APPENDIX – ‘D’ TO STATION WORKING RULES OF VISAKHAPATNAM STATION

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

STATION MANAGER (SUPERVISOR)

He has to supervise the work of all categories of staff employed in the station. He is responsible to observe chapter-II and V of G&SR and other relevant rules. He shall also follow the relevant rules of OM Chapter-XX. He is also responsible to see that.

- a) Staff while on duty wear proper uniform. All staff shall follow the rosters issued by DPO/WAT from time to time.
- b) The staff are civil and helpful to all rail users and passengers.
- c) All accidents are promptly reported, attended to, and a comprehensive report with details i.e., sketches, statements of staff involved, fixing responsibility is sent within 48 Hours of occurrence to Sr.DSO/Sr.DOM/Waltair.
- d) All rules prescribed in G&SR Block working Manual and other relevant directives issued from time to time by competent authorities are followed rigidly by all concern and that any irregularities noticed are reported promptly to the authorities concerned.
- e) All station earnings, periodical returns and statements etc., are sent in time by staff responsible for them.
- f) All transportation records are checked daily and ensure proper utilization of wagons placed in parcel siding, registration of indents and supply of wagons as per allotment is done.
- g) Station premises are kept clean and tidy.
- h) All equipment apparatus and instruments including signal and interlocking gears and fittings are kept clean and failures are promptly reported to staff concern for repairs, notice and action. He is also responsible for observance of General Rule 5.05.
- i) The BWM 2.09(e) is complied with daily.

2.0 STATION SUPERINTENDENT:

He is responsible for trains passing during his period of duty in accordance with the rules in force for the time being vide GR.5.01[4] and for safe and timely running of all trains. He will carry out the instructions given to him by the SS/Supervisory provided they do not contravene any G&SR, BWM, OM and SWR and any other safe working principles. He is also responsible for working beyond his duty period when called upon to do so in the exigencies of services.

GENERAL STATION SUPERINTENDENT:

He is responsible to observe the chapter-II of G&SR rules and other relevant rules. He shall maintain diary and record all events of important nature and train detention particulars.

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APPENDIX – ‘D’ TO STATION WORKING RULES OF VISAKHAPATNAM STATION**He is also responsible:**

- a) For right time start to coaching trains, completion of loading and unloading of parcels in time.
- b) For drawing out incoming rakes and placing in washing lines according to schedule.
- c) For drawing and backing the outgoing rakes on to the platform in time as per schedule.
- d) For completion of shunting by all through coaching trains time.
- e) For distributing the staff according to the roster for the shift and their reporting for duty in time.
- f) For placement and drawing out in parcel siding in time.
- g) Coordinating with RRI cabin SS/DY.SS for reception and dispatch of trains.
- h) Assist the RRI cabin SS/DY.SS for reception for piloting ‘IN’ and ‘OUT’ of trains expeditiously in case of signal and point failures.
- i) For attending abnormal conditions in the yard and report to concerned officials.
- j) He is responsible for smooth and efficient working of the station and attend public amenities in the absence of SS or DY.SS.

YARD MASTER / ASST. YARD MASTER

He is responsible for shunting on coaching trains in the yard, working of all sidings.

He is responsible for placements and drawn outs in the parcel siding daily twice.

He is responsible for formation of locals attending shunting at coaching specials, for correct formation of originating trains, placing of incoming rakes in washing line as per schedule, and also placing outgoing rakes on plat form in time.

He will allot and certify the line clearance for all berthing lines in the yard in case of failure of track circuit. He shall maintain YM/AYM’s Diary.

SHUNTING MASTER

He will work under the instructions of YM/AYM and is responsible for a safe and correct operation of shunt movements in an organized way, during the shunting in the yard and sidings. In the absence of YM/AYM the duties of YM/AYM will devolve on him.

3.0 TRAFFIC POINTS MEN :

They will work under the orders SS/DY.SS on duty. They will attend to shunting operations of SS/DY.SS.YM/AYM/STJM and couple and uncouple the wagons/vehicles. They are responsible for piloting of trains ‘IN’ and ‘OUT’ when it is necessary and clamping and padlocking of the facing and trailing points. They will deliver starting orders and caution orders to the drivers of the trains. They will attach trains powers on concerned trains. They will do any other work entrusted to them SS/DY.SS/YM/AYM on duty from time to time.

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APPENDIX – ‘D’ TO STATION WORKING RULES OF VISAKHAPATNAM STATION**BOX CARRIERS:**

They are responsible for loading and unloading of the line boxes of guards and drivers in time as per the instructions given by the on duty Telephone clerks. They must ensure that no detention is caused to train services for loading line boxes. They must promptly attend the light engines or the truck carrying the boxes to and from WMY, load and unload and keep them in box rack and dispatch all the line boxes not required at VSKP station to WMY.

4.0 SAFAIWALA:

He shall attend to the sanitation of the RRI building. Railway premises including SS's office, platforms, staff quarters, latrines and cleaning of drainages etc.,. He shall carry out any other work entrusted to him by the Station Master on duty.

NB:- All staff should be in uniform while on duty and follow their rosters issued by DPO/WAT from time to time.

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APPENDIX – ‘H’
PROCEDURE / INSTRUCTINS FOR WORKING TRAINS BETWEEN VSKP STATION
AND CFS/ICD/CONCORE’S SIDING/VSKP TO OLD VZT STATION IN VIEW OF
INLAND CONTAINER DEPOT TRAFFIC HANDLING BY CONCOR

- 1.1 Description :** Inland Container Depot siding is an extended track at South end of Visakhapatnam station, which was earlier, terminated into a dead end.
- 1.2 Working of Trains:** The movement of trains between VSKP station and ICD/ CONCOR’s siding shall be governed by Form No.T/806. Such shunting authority shall not be issued by SS working at the center unless he ensures proper setting of outgoing route and lowering of shunt signal for the concerned line from LMA at South cabin who shall exchange private number in support of the correct setting of route and lowering of shunt signal.
- 1.3** For admission of ICD Pilots into yard lines (From Line no:7 to 13) line nomination shall be obtained by the SS at the center from Yard Master on duty in the line nomination book under signature.
- 1.4** Between VSKP station and ICD (Old Vizag town station) there are two unmanned Level crossings. Arrangements shall be made for provision of swing gates/gate barriers, which shall remain open for road traffic always. Whenever ICD pilot moved from WMY towards ICD via VSKP, Two TPM/TP’s shall accompany the pilot. Amongst two TPM/TPs, one shall travel in locomotive and the other in the BV. The train which is to pass the gate shall stop at 30 Mts. short of level crossing.

The TPM/TP whoever travels in locomotive shall close the level crossing against road traffic lock the gate and shall give green hand signal to the pilot. As the train passes the gate the TPM/TP boards locomotive. After clearance of the gate, the train shall stop. The TPM/TP whoever travels in the brake van shall detrain, open the lock and open the gate for road traffic and shall entrain into brake van for onward continuation of his journey.

The same above procedure shall be followed protecting both the gates. While doing so, at level crossing of “Sea Horse” Junction, the TPM/TP shall first set the ICD siding hand point in favour of the pilot and shall then close the gate and lock. After clearance of the gate train shall stop. The TPM/TP in the brake van shall detrain, open the gate for road traffic and shall walk up to ICD siding hand point and man there for operation whenever required for shunting of power or train from one line to the other.

To this effect, the keys of padlocks for clamp and gate shall be carried along with duplicate keys as one key shall be kept in the custody of TPM/TP in the locomotive and the other key shall be retained by the TPM/TP in the brake van.

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The crossover connecting Port line to ICD shall also be connected to ICD siding in order to facilitate uninterrupted movements to ICD pilots in the event of VSKP station is not in a position to accept pilot from WMY for whatever the reason may be.

In both the above alternative routes, Two TPM/TP travel and shall jointly work the placements or drawn outs of the pilots to or from ICD siding.

1.5 The Guard of the train shall pick up the PN book and ID cover from SS/RRI of VSKP coaching yard.

1.6 On arrival of the Pilot in the siding the Guard shall exchange ID number and Private Number with SS/RRI of VSKP yard through VHF set which shall be provided at ICD for the use of the Guard for communication between Guard and the SS/RRI.

The Guard shall be responsible to repeat complete arrival of the train with arrival time at the siding to SS/RRI/VSKP yard. No shunting shall be permitted by YM/VSKP at South end of the yard until the arrival report of the pilot received by SS/RRI from the Guard of the pilot from the siding.

The Guard shall obtain fresh permission from SS/RRI VSKP supported by ID number and Private number for starting light engine/Pilot to VSKP station.

While returning from ICD to VSKP the procedure adopted earlier shall be repeated.

All pilots shall be moved between WMY-VSKP-ICD vice versa with match truck in rear.

While clearing the return pilot from ICD the match truck shall be attached in rear before starting Pilot from ICD.

The ICD pilots shall be moved during 00:00 hrs. to 04:00 hrs i.e., during the coaching lean period to avoid detention to coaching train and no Crew and Guard changing shall be done at VSKP station.

The Points man shall be given broken roster to suit the pilot movement.

Additional Inputs required:

In the event of emergency the Railways shall move the empty coaching rake to ICD for temporarily stabling.

Before granting permission to start the pilot from ICD siding by SS/North cabin/VSKP South end non isolated shunting shall be suspended till the complete arrival of pilot into the coaching yard.

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The Guard of the Pilot shall invariably travel by match truck in both the directions of the pilot to ensure complete arrival of the train. The Guard shall fix up the Last vehicle Indicator during daytime and tail lamp during night.

The provisions as applicable in the MOU signed by Indian Railway and M/s. Container Corporation of India Limited shall be implemented.

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WORKING PROCEDURE FOR WORKING COACHING RAKES BETWEEN VSKP STATION AND NEW COACHING COMPLEX (NCC)/WMY

- 1.1 Description: The new coaching maintenance complex yard is having two stabling lines and two pit lines. It takes off from engine line between VSKP-MYD at a chain length of 1688.50 meters from CSB of VSKP.

The take off point to coaching maintenance complex, when reversed, guide the train into coaching complex entry line. The normal position of the same point guides to into DYD of WMY(via 'E'-cabin.

At the other end i.e., West end of coaching complex, all the lines are converging to SC Railway goods dispatch line and there is no shunting neck and hence the dispatch of SC Railway goods and backing/shunting of rakes towards west end are to be dealt on the same line.

- 1.2 Nomenclature of lines & function with capacities:

There are two grids in NCC as follows:

A) Washing Line Grid:

- i) Line no:1 Stabling Line.
- ii) Line no: 2 to 6 Washing Lines

B) Coaching Shed Grid

- a. Line no: 1 to 4 are repair lines. The entry into repair lines are accessed from West end of the coaching complex. At East end, all the repair lines are terminated into uncommon dead end.
- b. Line No: 5 is wheel line and is taken off at West end of coaching complex yard and terminated into dead end at East end.

- 1.3 SYSTEM OF WORKING:

Trains are worked under Absolute Block System:

- 1.4 The crossover connecting the entry line with the running line between VSKP-'E' cabin shall be operated by TPM/TP of 'H' goomty and shall clamp and padlock in required position and to this effect the TPM/TP at 'H' goomty shall confirm to SS/SM at 'E' cabin supported by private number.

- 1.5 Working of Trains:

Reception of Trains:

- a) Before granting inter slot to VSKP RRI for trains coming from VSKP to coaching complex, the SM at 'E'-cabin of WMY shall obtain assurance from TPM/TP at 'H' Goomty supported by Private Number to the effect that the entry line point is set, clamped & padlocked in favour of the intended train.

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- b) After granting the slot to the VSKP RRI and receiving out report from VSKP RRI the SS/SM at 'E' cabin of WMY shall make efforts to take off shunt signal and advise the TPM/TP at 'H' Goomty to exhibit hand signal at the entry point.
- c) After complete passing of the train over the entry line point, the TPM/TP at H-goomty shall normal the point and there after shall repeat the complete arrival report to the SS/SM at 'F' cabin of WMY supported by a private number.
- d) Shunting master/TPM'A" of 'E' cabin shall supervise shunting in coaching complex and shall after the arrival of train into stabling line, confirm to the SS/SM at 'E'cabin of WMY to the effect that the train is standing clearing the fouling mark between the adjacent lines supported by a private number.
- e) The rake so placed in the stabling line, shall be backed in to pit line from GPT end of the yard taking all precautions such as blocking backing forward the section between D-cabin & GPT and clamping and padlocking of all the facing points that are involved in the movement of the train which are not interlocked, the authority for such movement shall be the shunting authority where in the private number obtained from GPT is endorsed.

Dispatch of Trains:

- a) Before dispatch of trains from the new coaching complex to VSKP station, the SS/SM of 'E'-cabin shall obtain inter slot from VSKP RRI cabin as it is prevailing in case of trains worked between DYD-VSKP. He shall advise the TPM/TP at H-goomty to set, clamp and padlock the point connecting entry line to engine line. He shall also advise the shunt master/TPM in coaching complex to set the points that are involved in the movement of the train clamping and padlocking the facing points. As a confirmation of the SS/SM of 'E'-cabin shall obtain private number from TPM's of H-goomty and coaching complex.
- b) There after the SS/SM shall handover the starting order (T-511) for dispatch of the train to VSKP and advise the TPM/TP at H-goomty to exhibit proceed hand signal at the entry point.

1.6 Authority to proceed:

- a) For the trains proceeding from VSKP coaching complex, the authority to proceed is taking off of the shunt signal as is prevailing.
- b) Authority to enter into the Coaching complex entry line is shunt signal together with proceed hand signal exhibited by TPM/TP of 'H'-goomty.
- c) For trains proceeding from Coaching Complex to VSKP, the authority to proceed is the starting order (T-511) issued by SS at 'E' cabin.

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- 1.7 Shunting :
All the shunt movements in coaching complex (i.e., the placement of rakes in pit lines on stabling lines, reversal of powers and detaching of sick coaches etc.,) shall be done after clamping and pad locking of all facing points and under the supervision of shunt master/TPM.
- 1.8 Telecommunication:
Auto telephones are provided to SS 'E'-cabin, SS VSKP RRI cabin.

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APPENDIX – ‘H’
PROCEDURE / INSTRUCTINS FOR WORKING TRAINS BETWEEN VSKP STATION
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- 1.2 **Working of Trains:** The movement of trains between VSKP station and ICD/ CONCOR’s siding shall be governed by Form No.T/806. Such shunting authority shall not be issued by SS working at the center unless he ensures proper setting of outgoing route and lowering of shunt signal for the concerned line from LMA at South cabin who shall exchange private number in support of the correct setting of route and lowering of shunt signal.
- 1.3 For admission of ICD Pilots into yard lines (From Line no:7 to 13) line nomination shall be obtained by the SS at the center from Yard Master on duty in the line nomination book under signature.
- 1.4 Between VSKP station and ICD (Old Vizag town station) there are two unmanned Level crossings. Arrangements shall be made for provision of swing gates/gate barriers, which shall remain open for road traffic always. Whenever ICD pilot moved from WMY towards ICD via VSKP, Two TPM/TP’s shall accompany the pilot. Amongst two TPM/TPs, one shall travel in locomotive and the other in the BV. The train which is to pass the gate shall stop at 30 Mts. short of level crossing.

The TPM/TP whoever travels in locomotive shall close the level crossing against road traffic lock the gate and shall give green hand signal to the pilot. As the train passes the gate the TPM/TP boards locomotive. After clearance of the gate, the train shall stop. The TPM/TP whoever travels in the brake van shall detrain, open the lock and open the gate for road traffic and shall entrain into brake van for onward continuation of his journey.

The same above procedure shall be followed protecting both the gates. While doing so, at level crossing of “Sea Horse” Junction, the TPM/TP shall first set the ICD siding hand point in favour of the pilot and shall then close the gate and lock. After clearance of the gate train shall stop. The TPM/TP in the brake van shall detrain, open the gate for road traffic and shall walk up to ICD siding hand point and man there for operation whenever required for shunting of power or train from one line to the other.

To this effect, the keys of padlocks for clamp and gate shall be carried along with duplicate keys as one key shall be kept in the custody of TPM/TP in the locomotive and the other key shall be retained by the TPM/TP in the brake van.

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The crossover connecting Port line to ICD shall also be connected to ICD siding in order to facilitate uninterrupted movements to ICD pilots in the event of VSKP station is not in a position to accept pilot from WMY for whatever the reason may be.

In both the above alternative routes, Two TPM/TP travel and shall jointly work the placements or drawn outs of the pilots to or from ICD siding.

1.5 The Guard of the train shall pick up the PN book and ID cover from SS/RR1 of VSKP coaching yard.

1.6 On arrival of the Pilot in the siding the Guard shall exchange ID number and Private Number with SS/RR1 of VSKP yard through VHF set which shall be provided at ICD for the use of the Guard for communication between Guard and the SS/RR1.

The Guard shall be responsible to repeat complete arrival of the train with arrival time at the siding to SS/RR1/VSKP yard. No shunting shall be permitted by YM/VSKP at South end of the yard until the arrival report of the pilot received by SS/RR1 from the Guard of the pilot from the siding.

The Guard shall obtain fresh permission from SS/RR1 VSKP supported by ID number and Private number for starting light engine/Pilot to VSKP station.

While returning from ICD to VSKP the procedure adopted earlier shall be repeated.

All pilots shall be moved between WMY-VSKP-ICD vice versa with match truck in rear.

While clearing the return pilot from ICD the match truck shall be attached in rear before starting Pilot from ICD.

The ICD pilots shall be moved during 00:00 hrs. to 04:00 hrs i.e., during the coaching lean period to avoid detention to coaching train and no Crew and Guard changing shall be done at VSKP station.

The Points man shall be given broken roster to suit the pilot movement.

Additional Inputs required:

In the event of emergency the Railways shall move the empty coaching rake to ICD for temporarily stabling.

Before granting permission to start the pilot from ICD siding by SS/North cabin/VSKP South end non isolated shunting shall be suspended till the complete arrival of pilot into the coaching yard.

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The Guard of the Pilot shall invariably travel by match truck in both the directions of the pilot to ensure complete arrival of the train. The Guard shall fix up the Last vehicle Indicator during daytime and tail lamp during night.

The provisions as applicable in the MOU signed by Indian Railway and M/s. Container Corporation of India Limited shall be implemented.

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**WORKING PROCEDURE FOR WORKING COACHING RAKES BETWEEN VSKP
STATION AND NEW COACHING COMPLEX (NCC)/WMY**

- 1.1 Description:** The new coaching maintenance complex yard is having two stabling lines and two pit lines. It takes off from engine line between VSKP-MYD at a chain length of 1688.50 meters from CSB of VSKP.

The take off point to coaching maintenance complex, when reversed, guide the train into coaching complex entry line. The normal position of the same point guides to into DYD of WMY(via 'E'-cabin.

At the other end i.e., West end of coaching complex, all the lines are converging to SC Railway goods dispatch line and there is no shunting neck and hence the dispatch of SC Railway goods and backing/shunting of rakes towards west end are to be dealt on the same line.

1.2 Nomenclature of lines & function with capacities:

There are two grids in NCC as follows:

A) Washing Line Grid:

- i) Line no:1 Stabling Line.
- ii) Line no: 2 to 6 Washing Lines

B) Coaching Shed Grid

- i) Line no: 1 to 4 are repair lines. The entry into repair lines are accessed from West end of the coaching complex. At East end, all the repair lines are terminated into uncommon dead end.
- ii) Line No: 5 is wheel line and is taken off at West end of coaching complex yard and terminated into dead end at East end.

1.3 SYSTEM OF WORKING:

Trains are worked under Absolute Block System:

- 1.4** The crossover connecting the entry line with the running line between VSKP-'E' cabin shall be operated by TPM/TP of 'H' goomty and shall clamp and padlock in required position and to this effect the TPM/TP at 'H' goomty shall confirm to SS/SM at 'E" cabin supported by private number.

1.5 Working of Trains:

Reception of Trains:

- a) Before granting inter slot to VSKP RRI for trains coming from VSKP to coaching complex, the SM at 'E'-cabin of WMY shall obtain assurance from TPM/TP at 'H' Goomty supported by Private Number to the effect that the entry line point is set, clamped & padlocked in favour of the intended train.

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- b) After granting the slot to the VSKP RRI and receiving out report from VSKP RRI the SS/SM at 'E' cabin of WMY shall make efforts to take off shunt signal and advise the TPM/TP at 'H' Goomty to exhibit hand signal at the entry point.
- c) After complete passing of the train over the entry line point, the TPM/TP at H-goomty shall normal the point and there after shall repeat the complete arrival report to the SS/SM at 'F' cabin of WMY supported by a private number.
- d) Shunting master/TPM'A" of 'E' cabin shall supervise shunting in coaching complex and shall after the arrival of train into stabling line, confirm to the SS/SM at 'E' cabin of WMY to the effect that the train is standing clearing the fouling mark between the adjacent lines supported by a private number.
- e) The rake so placed in the stabling line, shall be backed in to pit line from GPT end of the yard taking all precautions such as blocking backing forward the section between D-cabin & GPT and clamping and padlocking of all the facing points that are involved in the movement of the train which are not interlocked, the authority for such movement shall be the shunting authority where in the private number obtained from GPT is endorsed.

Dispatch of Trains:

- a) Before dispatch of trains from the new coaching complex to VSKP station, the SS/SM of 'E'-cabin shall obtain inter slot from VSKP RRI cabin as it is prevailing in case of trains worked between DYD-VSKP. He shall advise the TPM/TP at H-goomty to set, clamp and padlock the point connecting entry line to engine line. He shall also advise the shunt master/TPM in coaching complex to set the points that are involved in the movement of the train clamping and padlocking the facing points. As a confirmation of the SS/SM of 'E'-cabin shall obtain private number from TPM's of H-goomty and coaching complex.
- b) There after the SS/SM shall handover the starting order (T-511) for dispatch of the train to VSKP and advise the TPM/TP at H-goomty to exhibit proceed hand signal at the entry point.

1.6 Authority to proceed:

- a) For the trains proceeding from VSKP coaching complex, the authority to proceed is taking off of the shunt signal as is prevailing.
- b) Authority to enter into the Coaching complex entry line is shunt signal together with proceed hand signal exhibited by TPM/TP of 'H'-goomty.

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- c) For trains proceeding from Coaching Complex to VSKP, the authority to proceed is the starting order (T-511) issued by SS at 'E' cabin.

1.7 Shunting :

All the shunt movements in coaching complex (i.e., the placement of rakes in pit lines on stabling lines, reversal of powers and detaching of sick coaches etc.,) shall be done after clamping and pad locking of all facing points and under the supervision of shunt master/TPM.

1.8 Telecommunication:

Auto telephones are provided to SS 'E'-cabin, SS VSKP RRI cabin.

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APPENDIX – ‘E’ TO STATION WORKING RULES OF VISAKHAPATNAM STATION**LIST OF ESSENTIAL EQUIPMENTS PROVIDED AT THE STATION:**

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

Sl. No:	Description	Station / RRI Cabin
1	Hand Signal Lamps	8 (1 spare)
2	Hand Signal Flags	8 (1 spare)
3	Skids / Wooden wedges	6
4	Clamps with padlocks	25
5	Safety chains with padlocks	6
6	Fire and Sand buckets	5
7	Fire extinguishers (DCPT)	2
8	Reminder Button Collars	10
9	First Aid Box	1
10	Stretcher	1
11	Blanket	1

RULES FOR WORKING OF OR STATIONS, HALTS, IBH, IBS AND OUTLYING SIDINGS:

A passenger halt is existing at Marrisalem at 6.6KM from VSKP RRI and GPT RRI. All passenger trains will take a halt as per the duration specified in working time table.

The guards and LPs are responsible to maintain schedule halt and start their train.

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