



ପତ୍ରାଙ୍କ ସଂଖ୍ୟା: ଏମ.ଇ.ଏମ.ସି.ସମ୍ବଲପୁର/ବି.ଏଫ୍.ଆ./2018-19/119.....

ଦିନାଙ୍କ 17/05/2019

To  
The General Manager,  
Jagannath/Bharatpur/Lingraj/Kaniha/Hingula/Talcher/  
Ib Valley/Lakhanpur/Orient/Basundhara Area.

**Sub:- Regarding implementation of newly approved Standard Operating Procedure (SOP) for Planning, Procurement, Installation, Operation & Maintenance of Road Weighbridges (In-motion & Static) at MCL.**

Dear Sir/s,

In order to have uniform guidelines to be followed across MCL with regard to Planning, Procurement, Installation and Operation & Maintenance of Road Weighbridges, a revised comprehensive Standard Operating Procedure (SOP) is enclosed herewith for strict implementation by all concerned.

You are requested to go through the SOP and instruct the concerned for ensuring implementation of the same at your area. This SOP supersedes the earlier issued SOPs w.e.f. 17.05.19.

This has the approval of competent authority.

Yours faithfully

17.5.18  
General Manager(E&M)/HOD

(Circulation with all enclosures)

Copy for kind information to:

- 1.D(T/OP-P&P), MCL, Sambalpur.
- 2.D(F), MCL, Sambalpur.
- 3.GM(Vig), MCL, Sambalpur.
- 4.TS to CMD, MCL, Sambalpur.
- 5.TS to D(T/OP), MCL, Sambalpur.

CC for kind implementation:

- 1G.M/ HOD (E&T), MCL
- 2.G.M/ HOD (Civil), MCL
- 3.G.M/ HOD (M&S), MCL
- 4.G.M/HOD (Sys), MCL
- 5.SO(E&M) of all Areas of MCL - For monitoring & compliance of the SOP.
- 6.O/c

# STANDARD OPERATING PROCEDURE (SOP) FOR ROAD WEIGHBRIDGES UNDER MCL

## PLANNING, PROCUREMENT & INSTALLATION

- Nodal Officer (Maintenance), WBs (NO(M)) shall be appointed by Project Officer (PO) for each project preferable E&T engineer.
- Nodal Officer (Operation), WBs shall be Siding in-charge or Dispatch in charge.

### **1. Planning of Road weighbridges:**

Planning for Road WBs is to be done either as per Project Report (PR) provision or Scheme or against Survey off.

#### a) Planning against PR provision :

The Plant & Machinery (P&M) indent will be prepared by Nodal Officer (Maintenance), WBs and be vetted by Project Engineer (E&M), Colliery Manager, Dispatch In-charge, Project Finance Officer & agreed by Project Officer at Project level. The P&M indent will be further vetted by SO (S&M), SO (E&T), Staff Officer (P&P), Staff Officer (E&M), Staff Officer (F)/AFM & Staff Officer(Mining)/DGM /GM(Op) at area level and agreed by Area GM. Subsequently the indent shall be forwarded to the GM(E&M)/HOD, MCL HQ for further technical vetting and seeking approval the competent authority as per the DOP.

#### b) Need based Planning: A Scheme with the following details to be prepared:

- i) Production of project.
- ii) Dispatch of project.
- iii) Existing no. of Road WBs in project and WB wise dispatch of each WB in project for last six months
- iv) Reason why dispatch target cannot be met from Existing WBs
- v) How much dispatch will be increased by installing new WBs
- vi) Whether the target of dispatch can be achieved by relocating the existing WBs of the area to increase the availability of trucks for weighment or not.
- vii) Whether WBs are required for internal weighment/ both end weighment (if so specific reason for proposing In-motion or Static Road WBs).

The AMR scheme with the P&M indent will be prepared by Nodal Officer (Maintenance), WBs and to be vetted by Project Engineer(E&M), Colliery Manager, Dispatch In-Charge, Project Finance Officer & agreed by Project officer at Project level. The P&M indent will be further vetted by SO (S&M), SO (E&T), Staff Officer (P&P), Staff Officer (E&M), Staff Officer (F)/AFM & Staff Officer(Mining)/DGM /GM(Op) at area level and agreed by Area GM. Subsequently the indent shall be forwarded to the GM(E&M)/HOD, MCL HQ for further technical vetting and seeking approval of the competent authority as per the DOP.

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c) Planning against Survey off:

The P&M indent with approved surveyed off report will be prepared by Nodal Officer (Maintenance), WBs and be vetted by Project Engineer(E&M), Colliery Manager, Dispatch In-Charge, Project Finance Officer & agreed by Project officer at Project level. The P&M indent will be further vetted by SO (S&M), SO (E&T), Staff Officer (P&P), Staff Officer (E&M), Staff Officer (F)/AFM & Staff Officer(Mining)/DGM /GM(Op)at area level and agreed by Area GM. Subsequently the indent shall be forwarded to the GM(E&M)/HOD, MCL HQ for further technical vetting and seeking approval of the competent authority as per the DOP.

Note: Life of electronic weighbridge is 10 years.

The indent prepared in all the above three cases shall also be accompanied by a proposal initiated from the project level for procurement of weighbridges.

- d) Competent Approval & preparation of Technical parameters and proveness criteria: Once the proposal along with the indent has been approved by the competent authority, the TPS will be prepared by the concerned engineer looking after the job of WB dept, MCL HQ and after vetting of G.M/ HOD (E&M), MCL, the same will be forwarded to the GM(MM) In-charge/HOD, MCL HQ for procurement.

Responsibility:E&M Engineer (WB) and GM(E&M )/HOD MCL HQ.

2. **Procurement:** Procurement shall be done as per the extant provisions of the purchase manual of CIL and other relevant guidelines of the Company.

Responsibility: GM(MM)/HOD, MCL HQ.

3. **Site Selection, Installation & Commissioning of Road Weighbridges.**

I. Site Selection:

The following points should be taken care of during site selection:

- a. The site for installation of Road WBs should be at entry/exit point for dispatch or receiving purposes so that weighed coal trucks cannot enter the coal stock yard again.
- b. Site should be such as to ensure maximum utilization of WB.
- c. Sufficient space should be made available for proper movement of trucks for weighment to avoid jamming at WB
- d. Dispatch guidelines/ circulars issued from time to time should be followed.
- e. Site should be selected to ensure both end weighment (dispatch end & Receiving end) of coal
- f. Site can be easily connected with network for IT initiatives
- g. Security concerns
- h. Drainage system
- i. Power & Network availability

Responsibility : Site selection is the responsibility of Project Engineer (E&M), Project Engineer (Civil), SO(E&T)/ Nodal Officer (Maintenance), WBs, PO & Area Sales Officer agreed by Area GM.

II. Installation & Commissioning: As per Supply Order (Overall Responsibility – Project Engineer (E&M) & Staff Officer(E&M)).

- a) E&M: - Responsibility: Project Engineer (E&M)/Staff Officer(E&M).
- i. Power Supply arrangement-3 phase (1-for AC, 1-for Utility & 1-Weighment system)
  - ii. Stabilized power supply of 220 volt AC.
  - iii. N-E Voltage should be less than 2 Volt. (\*Neutral must be continuous and earthed at Transformer point.
  - iv. Lightning arresters shall installed & maintained near control rooms of the Weighbridges
- b) Civil: Responsibility : Project Engineer (Civil)/Staff Officer(Civil).
- i. RCC ramp should be available at both sides of WB.
  - ii. All the approach roads and ramp on either side of Road WBs should be made with RCC.
  - iii. Drainage arrangement should be made available at each WB to avoid accumulation & jamming with mud during rainy season.
  - iv. Construction of Control room shall preferably within 10-15 meters of selected location of weighbridge.

c) Network & System related issues:

Responsibility : SO (E&T)

#### 4. Operation & Maintenance

- I. Weighbridge must be operated by designed/authorized trained persons only i.e Weighbridge Clerk.
- II. All statutory guidelines circulated time to time should be followed.
- III. Arrangement/Up-keeping of drainage system to avoid jamming of WB platform throughout the year.
- IV. Weighbridge should not be operated without printers.
- V. Degitizer of the weighbridge must be sealed by Weight and Measure deptt of Govt. of Odisha.
- VI. Test weights, Junction Box shall be kept as per guidelines of legal metrology department.

(Overall Responsibility of Operation of Road Weighbridge – PO, Dispatch In-charge/ Nodal Officer (Operations), WBs & Staff Officer (M&S)).

a. Responsibility of Dispatch Officer.

- i. Daily status of the WB to be noted and deficiencies should be reported to concerned deptt., in writing.
- ii. All electrical, network & system parameters should be maintained otherwise same to be reported to Nodal Officer (Maintenance) WBs.
- iii. Daily status (OK/ BD) of the WB system must be recorded on Shift basis in the LOG BOOK. Standard Format of Service-cum-Breakdown register is enclosed and also available with CAMC Work Orders.
- iv. WB shall be maintained clean and ensured by nodal officer (OP).
- v. Weighbridge shall be maintained dust free and outsiders/ unauthorized person shall not be allowed to enter in the WB room.
- vi. A record of visitors at the weighbridges is to be maintained in a bound register, prevention of unauthorized entry shall be ensured.
- vii. All CAMC service persons shall have ID and needs to show while entering in Weighbridge cabin.
- viii. A list of CAMC service persons shall be displayed at Weighbridge cabin. The list shall be circulated by G.M / HOD (E&M) for each new CAMC.
- ix. Annual Stamping certificate must be displayed in all Weighbridge rooms

b. Responsibility of WB Operator/ Clark on duty:-

- i. Zero reading of the Degitizer should be verified & recorded in the LOG BOOK before the starting of each shift – on daily basis before commencement of operation of WB.
- ii. WB is to be isolated during raining/thundering.
- iii. When operators leave the WB room, they must switch off and isolate the WB system & record it in the LOG BOOK that power of WB has been isolated. When the operator will reach in WB Room for operation, they should investigate & report as under in the LOG BOOK itself.
  - a. System was in operation                      yes/no
  - b. All System was isolated                      yes/no
  - c. Room is clean                                      yes/no
  - d. AC/Fan/Stabilizer/UPS fitted                  yes/no
  - e. Seal of the digitizer and junction box must be checked before starting of the weighbridge and shall be recorded in register and the same is to be handed over to next shift operator at the end of the shift. If the seal found broken, weighbridge shall be declared as breakdown.
- iv. **End variation test:** End variation test is to be carried out everyday at least for three positions by placing trucks at (front, middle and back) position of the WB platform. It should be duly recorded in LOG BOOK.

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- v. Daily status (OK/ NOT OK) of the WB system must be recorded in a status register which is other than LOG BOOK or service –cum-breakdown register in the following format: **System Status Register**

Date	Digitizer	PC	Printer	UPS	Battery	AC/ FAN/ Lights	Condition of doors & windows	Cleanness of room	CCTV Camera	Internet	Remarks

(Overall Responsibility of Maintenance of Road Weighbridge – PE (E&M), Nodal Officer (Maintenance), PO & Staff Officer (E&M)).

c. Responsibility of Nodal Officer (maintenance):-

- i. After getting information from Dispatch officer, Nodal Officer (Maintenance), WBs is to entry the Breakdown details in weighbridge module in coal net. An automated SMS will be send to CAMC holder regarding B/D of the Weighbridge.
- ii. Nodal Officer (M) will pursue the CAMC contractor and will make WB ready as early as possible.
- iii. Coordinating the various activities and intimate the conditions of Weighbridges to respective departments such as cleaning to Civil & RFID, Tag, Network related issues to Siding In charge, E&T & Software related issues to System department as soon as the complaint received from Nodal Officer (Operations) or observed during the maintenance visits.
- iv. Any proposal if required to be approved from MCL HQ for rectification of weighbridges should be initiated preferably within three days from the next day of B/D of weighbridge. If any delay occurs, the reason is to be recorded in the proposal. In this regards necessary instruction to the concerned official may be given for implementation.
- v. Any defective material which is replaced on payment basis shall be retained by nodal officer (maintenance) and deposit in store or kept in the safe custody of P.E (E&M) and proper record should be maintained which may be audited by authorities.
- vi. Complete file with fallowing documents shall be ensured for early approval at MCL HQ:
  1. Joint Inspection Report
  2. Rate Justification Documents
  3. Stamping Certificate /Commissioning certificate(If needed)/
  4. Copy of relevant pages from Service-Cum-B/D register
  5. Least Price certificate
  6. Copy of Coal Net Entry in weighbridge module
  7. Offer/ PI / Invoice
  8. Any other relevant documents
  9. Copy of FIR (if applicable)

- d. Electrical maintenance : Responsibility :- Project Engineer (E&M)
- i. Availability of 3phase power supply (415 volt AC). One phase for weighment system, one for utility & one for air conditioner.
  - ii. Availability of CVT/stabilizer for weighing system and UPS with minimum 2 hours back up.
  - iii. Maintenance of minimum 3 earth pit of earth resistance less than 1 ohm and well connected with the system, platform, lightening etc... Regular measurement of earth pit resistance with the help of CAMC holder as per CAMC contract is to be maintained in recorded form.
  - iv. Surge protector for power supply should be connected with separate earth pit.
  - v. Arrangement of isolation of system from power supply in case of lightening and heavy rain with clear instruction displayed at isolation point to isolate the system.
  - vi. Earth neutral voltage should be maintained less than 2 volt.
  - vii. Air conditioners & Fans to be maintained.
  - viii. Monthly service reports (Submitted by CAMC holder to GM) to be kept at WB by Project Engineer(E&M).
  - ix. A separate LOG BOOK must be kept and maintained at each and every weighbridge for recording each and every maintenance/repair work done by AMC Holder and the same should be signed by WB staff on duty, Nodal Officer (Maintenance), Dispatch Officer & CAMC Holder. CAMC holder shall submit weigh bridge wise monthly service report to G.M of respective area with a copy to G.M (E&M)/HOD , MCL HQ.
  - x. Junction Box to be kept inside room. In case it is kept outside, arrangement may be made to keep inside before next stamping.
- e. Civil maintenance: Project Engineer (Civil)/Staff Officer (Civil).
- i. All doors, windows, auto door closer to be maintained properly to avoid dust.
  - ii. RCC ramp & RCC road at both side of the platform
  - iii. Proper drainage to avoid any water logging and mud to avoid dust
  - iv. Cleaning arrangement to be done inside WB Room and surrounding of WB & to avoid dust in radius of minimum 50 mtrs of WB.
- f. Installation & maintenance of Electronic items& weighment data communication to MCL HQ from Weigh bridges:
- i. Installation& maintenance of minimum two CCTV Cameras which cover entire Weigh Bridge cabin including Digitizer and also covers the entire weighment platform is to be installed.
  - ii. All data capturing equipment like RFID devices (If available) & Equipment required for implementation of FOIS is to be taken care by Nodal Officer (maintenance), SO (E&T)& G.M/ HOD (E&T), MCL HQ.
  - iii. Patch/Application software and its security/maintenance/ Weighment Software & data communication software is to be properly checked and maintained by SO (system), G.M / HOD (System), MCL HQ.

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g. Annual verification/Re-verification/Stamping of the WBs:

i. A stamping register shall be maintained by project Engineer (E&M) to record the details of the stamping and stamping parameters such as tare count, Cal Weight and Cal Count etc...During each stamping.

ii. SO (E&M), SO (E&T), Nodal Officer (s), Area Sales Manager & Siding In charge/ Dispatch in charge (as case may be) of respective project are to be present while stamping (both annual and stamping due to B/D) of the weighbridge and are responsible for noting the above mentioned parameters in stamping record and to verify whether any changes have been found in stamping parameters compared to previous stamping. If any changes found, the same shall be informed to MCL HQ for further necessary action

iii. The scheduled stamping date is to be communicated by SO (E&M) of that particular area to Vigilance department, E&M, E&T depart...of MCL HQ for information.

iv. Deposit of requisite fees with Weigh & Measure Deptt, Govt, of Odisha shall be carried out well in advance (preferably Three months) for annual stamping, Break down stamping by PE (E&M), SO (E&M), SO (M&S) & PO.

Responsibility: - Overall responsibility is with Project Engineer (E&M) & PO of the Project

h. CAMC of WBs : Proper Comprehensive AMC is to be done for Road WBs as per existing practice or any other modification done time to time as per requirements & guidelines. Over all execution of the CAMC shall be the responsibility of PE (E&M), EiC i.e SO (E&M).

Responsibility: - PE (E&M), SO (E&M), E&M Engineer(WB), MCL HQ & GM(E&M)/HOD, MCLHQ

i. Repairing of PC system& IT initiatives:-

i. Officer Order circulated by Coal India vide CIL/VIGIL/16/14/0002/2018/1710-1729 Dt: 29/03/18 to be followed with other guidelines circulated time to time by MCL

ii. Hard Disc if changed should be kept in custody of Dispatch Officer or area sales officer and it should be recorded accordingly.

Responsibility: - G.M (E&T), G.M (Systems) from MCL HQ and PO and GM of Area from Area.

j. Responsibility of Security : Security Personal at Siding & Weighbridge:

1. Not to allow unauthorized persons in to weighbridge cabin/ control room.

2. Safeguard the all equipments and accessories inside and outside the weighbridge cabin from theft, damage.

3. Not to allow to unload spillage/ excess coal in and around of W.B (within 50 mtrs radius) to avoid jamming of WB.



4. It shall be ensure that vehicles are allowed to enter the WB for weighment in queue only to avoid jamming of trucks near WB.
- k. Following report is to be prepared & maintained by Project Engineer(E&M) duly signed by CAMC holder and Project Engineer(E&M) and countersigned by Staff Officer(E&M) on monthly basis.
- i) Stabilizer/UPS available with the system yes/no
  - ii) Availability of 2/3 nos. of Earth Pits. Yes/no
  - iii) Earth pit is well connected with system, platform & Lightening arrestor separately . yes/no
  - iv) Value of Earth pit resistance (in Ohm) \_\_\_\_\_
  - v) Any other improvement required in operation of WB to be recorded.
  - vi) Surge protector in Power Supply with earth pit. Yes/no
  - vii) Condition of WB room : Clean/Dusty/Remarks if any.
  - viii) Door/window: Ok/broken/Remarks if any.
  - ix) Coal or coal dust available within 50 mtr. Radius yes/no
  - x) Loading and unloading of coal near WB yes/no

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## Responsibility Matrix of Road Weighbridge SOP

### 1. Planning:

Planning of Road WBs as per PR Provision or Scheme or against Survey off

Responsibility: PE (E&M), Dispatch-In-Charge, Manage, Project Officer



Vetting of the requirement

Responsibility: SO (M&S) & SO (P&P)



Recommendation of the requirement

Responsibility: SO (Mining)/ AGM



Agreed By:

Responsibility: Area General Manager



Preparation of Indent

Responsibility: Nodal Officer (Maintenance), WBs, PE (E&M) & SO (E&M)



Forwarding Proposal to HQ for competent approval

Responsibility: Area General Manager



Getting Indent Approval, Preparation of TPS, Proveness Criteria and obtaining approval

Responsibility: E&M Engineer, WBs HQ & G.M/ HOD (E&M), MCL HQ. Preparation of TPS shall be the responsibility of G.M/ HOD (E&T), MCL HQ



Approved proposal to be sent to GM (MM) for procurement

Responsibility: G.M/ HOD (E&M), MCL HQ

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**Responsibility Matrix of Road Weighbridge SOP**

2. Procurement & Installation:

Procurement of Road WBs:

Responsibility: GM/ HOD (MM), MCL HQ



Site Selection:

Responsibility: Nodal Officer (Maintenance), WBs, PE (E&M), PE (Civil), SO (E&T), PO, SO (M&S) Agreed by Area G.M.



Installation & Commissioning:

Responsibility: Nodal Officer (Maintenance), WBs, PE (E&M)& SO (E&M) for E&M related jobs.

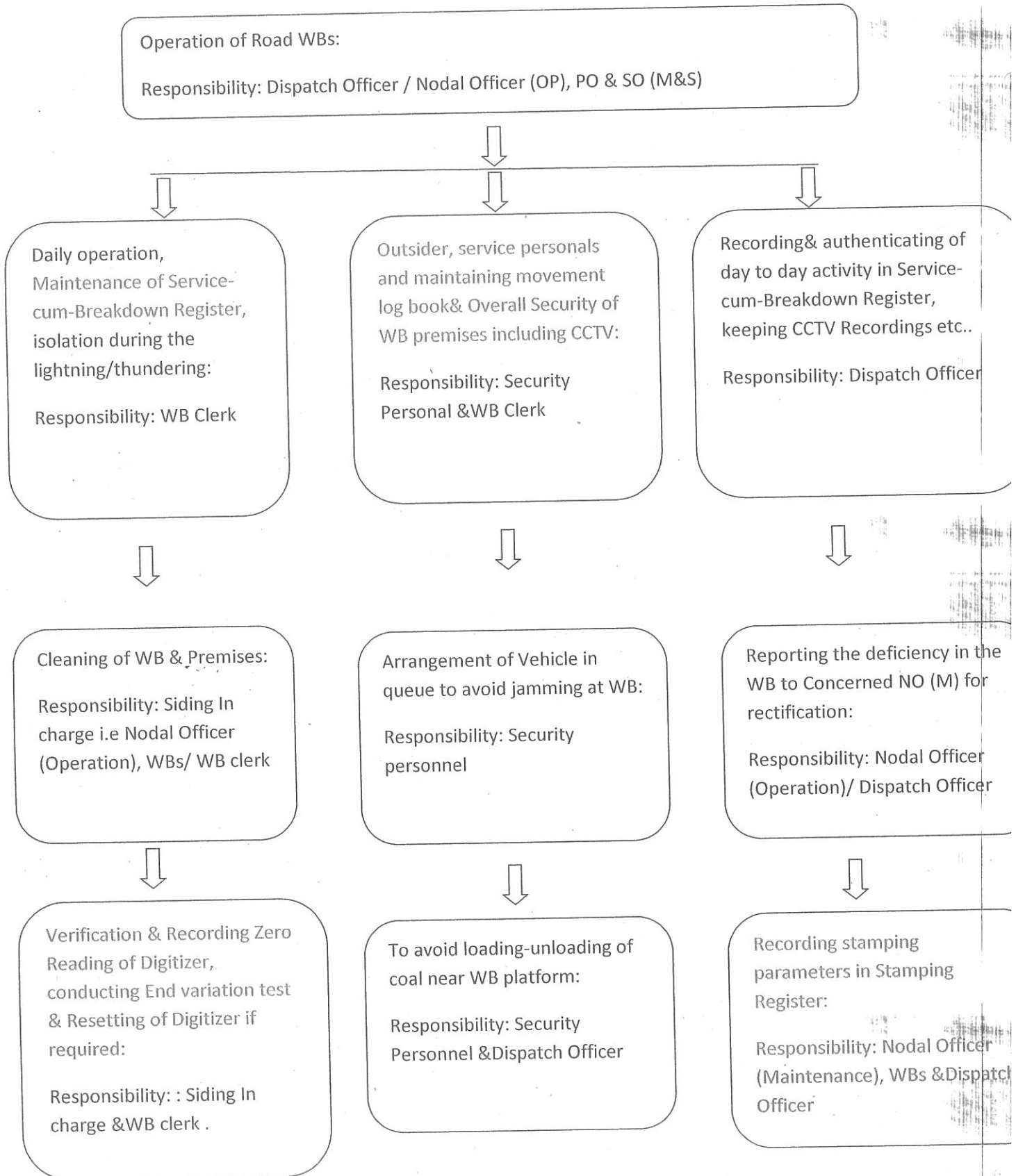
Responsibility: PE (Civil)& SO (Civil) for Civil Related Jobs.

Responsibility: SO (E&T) & SO (System) for network & Software Related Jobs.

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## Responsibility Matrix of Road Weighbridge SOP

### 3. Operation:



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## Responsibility Matrix of Road Weighbridge SOP

**Overall Responsibility: Nodal Officer (Maintenance) WBs, PE (E&M), PO & SO (E&M)**

### 4. Maintenance:

Electrical & Mechanical Maintenance

Responsibility: PE (E&M)



Civil Maintenance

Responsibility: PE (Civil) & SO (Civil)



Software & Network Maintenance

Responsibility: Area System Officer, GM (Systems)/ GM (M&S) MCL HQ

Responsibility: SO (E&T), GM / HOD (E&T) MCL HQ for network related issues.



Annual Verification/ Re-Verification & Stamping of WB

Responsibility: NO (M), PE (E&M), Dispatch Officer/ NO(OP), SO (M&S), SO (E&M)



Timely Finalisation of CAMC of Road Weighbridges

Responsibility: E&M Engineer (WBs), G.M/ HOD (E&M), MCL HQ



Repairing and B/D & Preventive maintenance of WBs

Responsibility: NO (M), WBs, PE (E&M) & SO (E&M)



Maintenance of various LOGBOOKS

Service Cum-Break down Register, Persons movement Log Book, system status register, Stamping register : WB Clerk, Dispatch In charge

Preventive maintenance Register / Service reports: NO (M) & PE (E&M)

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