

Engineering Department

DOs & DON'T's

Works – General

- Get Schedule & Conditions before starting the work. Read special conditions.
- Maintain the requisite registers for the work – List given in PCE Ir. Dt.27-05- 05.
- Take proper inventory of material to be released and obtain contractor's signature.
- Ensure that contractor's representative is nominated in writing.
- Departmental tools & plant to be given to contractor only under conditions mentioned in the agreement with deduction of hire charges.
- Beware of Vitiating due to non-operation of unworkable items or Excess operation of high value items. Better to prepare Vitiating statement with every on account bill.
- Galvanising work: Follow instructions given under ESO.59.
- Obtain contractor/representative signature in the registers and while issuing p.way material.
- No un-necessary correspondence with the contractor on contract matters.
- Obtain relevant specifications & Codes required. Get test certificates of material wherever prescribed.
- Ensure Test checks are done as prescribed.

Works – Buildings, Bridges etc.

- **Cement, Steel:** Obtain lab test certificates & purchase bills before making payments.
- **Bricks, Sand, Aggregate, Moorum etc.,** - Check quality at site & send for lab testing.
- **Tiles, Paints, Sanitary fittings etc.,** - Approve the sample after checking the specifications.
- **Earth work:** Follow instructions given under ESO.51/2006 – Use only printed books supplied by railways. Level books shall be treated on par with MBs. Initial levels shall be recorded before commencement of work and copy of the Initial Level book to be submitted to the divisional office. source of soil to be approved prior to execution of work, Soil samples to be sent for testing at regular intervals as per GE-14 towards COE and Blanketing material .
- **Pipe line works:** Follow instructions given under **ESO.49/2006** – Wt. tolerance: **10%**, Accountal of pipes after check etc.
- **Concrete –** No **volume** based batching in design mixes.
 - Use **vibrators** for compaction.
 - Use **leak proof** shuttering to prevent honey combing.
 - Record test **cube results**.
 - Ensure adequate **Curing**.
 - Major and important concreting works should be done in presence of JE/SSE only.**
- **Aggregate:** Use graded aggregate. Conduct sieve analysis and record results.
- **Sand:** Conduct sieve analysis to determine grading (Zone-I,II,III or IV) for appropriate usage.

- **Stone masonry:** Read specifications for CRS & UCRS masonry. Ensure adequate bond stones.
- **Cement:** Check grade of cement used (33,43,53). Consumption & Progress of work should tally.
- **Roof leakage:** Indicates poor quality of concrete and workmanship. Sufficient roof slope to be ensured during working.
- **Wire Mesh:** During execution of mosquito proof wire mesh, ensure proper gauge of Mesh.
- **STEEL:** Structural and reinforcement steel should be of ISP brands or approved by the competent authority only.

Works – Estimates, Bills etc.

- Approval of Drawings while processing of Estimate /before calling of tenders.
- **Quantities:** Assess **realistic quantities to avoid variations**; Preserve **rough calculations** in file for reference & check.
- **Unit of Payment:** Check the **unit of payment** while making calculations.
- Placing of Zonal work orders and submission of bills as per guidelines.
- **Test checks:** **100%** test check of all **hidden measurements**. Check should be against a specific item in MB with **initials and date**.
- **Variation:** Normally to be avoided, if warranted proper technical data should be furnished to support the same.
- **Technical register:** Enter the details as executed at site. Take approvals for **deviations from original** plan.
- Record **deductions** in payment for hiring of railway material or deviation from specifications.
- And also deduct in payment as per agreement conditions prescribed if any.
- Do not record measurements for **new items** without taking administrative approval of competent authority.
- Give adequate time for execution of work orders in **Zonal works**. Deduct penalty for non-execution of work orders.

Works – Contract management

- Works to be executed within the currency period to avoid complications.
- Currency extensions shall be done judiciously.
- Long existing contracts to be targeted for closure. Tenders.
- Tenders are to be finalized with in validity period only.
- Similar nature of works to be followed as per **Latest guidelines** issued by PCE.