

## **IRRIGATION STRUCTURES / IRRIGATION CHECK LIST 2026**

### **CIVIL ENGINEERING APPRAISAL**

| <b>S#</b> | <b>Items</b>                                                                                            | <b>Descriptions / What is required</b>                                                                                                                                                                   | <b>Page No.</b> |
|-----------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1         | Title of PC-I                                                                                           | PSDP Number / Source of funding, Nomenclature as per PSDP, Name of Tehsil (s) / District(s), Name of Scheme / Project, Cost in Rs. Million                                                               |                 |
| 2         | Cost Summary / General Abstract of Cost                                                                 | Matching with Title of PC-I, Componential Breakup, Overhead Charges such as BST, Contingency, Consultancy (Design, Supervision), Price Adjustment, Land / Property Compensation, Shifting of Utilities   |                 |
| 3         | Page Numbering                                                                                          | Pages are numbered for ease of reference during scrutiny and approval process                                                                                                                            |                 |
| 4         | Status of Land                                                                                          | Free of Cost or charged, District Administration concurrence in case of charged. If Free of Cost , the land owner must give an affidavit showing willingness duly signed with 2 witnesses to be attached |                 |
| 5         | Basis of Rates in Detail Estimates                                                                      | Composite Schedule of Rates (CSR) / Non-Schedule Rate (NSR), Applicable Premium (if any)                                                                                                                 |                 |
| 6         | Source of NSR (if applicable)                                                                           | Rate analysis on pattern of CSR Volume II, 2 or 3 reputed Firm quotations in respect of major (by cost) NSR, Non-application of Premium, To ascertain basis of estimation                                |                 |
| 7         | Provision of PMU (in case cost is in excess of Rs. 3 Billion)                                           | Tabular estimation of Staff on Man Month Basis                                                                                                                                                           |                 |
| 8         | Feasibility Report (in case cost exceeds Rs. 500 Million or cost contains 30% Infrastructure Component) | Report as submitted when Feasibility was carried out                                                                                                                                                     |                 |
| 9         | Background History (in case of Improvement, Rehabilitation, Reconstruction, Augmentation etc.)          | Including Year of Construction, Cost, Reason(s) of deterioration, Designed Population, Target Population, Proposed changes in Design                                                                     |                 |
| 10        | Contingency                                                                                             | In the permissible range as per Planning Commission guidelines                                                                                                                                           |                 |
| 11        | Vehicles                                                                                                | Justification as per Planning Manual Clause 2.47                                                                                                                                                         |                 |
| 12        | Consultancy (Design)                                                                                    | Percentage cost of Civil Works as awarded to the Consultant                                                                                                                                              |                 |
| 13        | Consultancy (Supervision)                                                                               | Tabular estimation of Staff based on Man Month Basis as awarded to the Consultant                                                                                                                        |                 |
| 14        | Price Adjustment                                                                                        | Calculated as per Planning Manual Clause 2.62xviii on yearly allocation basis (to be incurred)                                                                                                           |                 |
| 15        | Signatures                                                                                              | On GAOC, at end of each Detail Estimate, Drawings, Designs, Site Plan, Comparative Statement (in case of Revised / Modified PC-I) duly by concerned SDO and XEN                                          |                 |
| 16        | Site Plan                                                                                               | Showing location of Irrigation Structure with respect to other                                                                                                                                           |                 |

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|-----|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|     |                                                            | topographic features.                                                                                                                                                                                                                                                                                                                                                    |  |
| 17  | Comparative Statement (in case of Modified / Revised PC-I) | Columns of Approved (Component, Quantity, Amount) Modified / Revised (Component, Quantity, Amount) Difference, Componential Remarks (to justify change in cost in terms of technical parameters)                                                                                                                                                                         |  |
| 18  | Non Duplication Certificate                                | Certificate to the effect that the proposed work in PC-I is not part of any other Scheme or has been executed in the past                                                                                                                                                                                                                                                |  |
| 19a | Item Description used in Detail Estimate                   | (in case item is present in CSR) Item description as per CSR<br>(in case item is absent in CSR) Item description containing the required specs                                                                                                                                                                                                                           |  |
| 19b | Rates used in Detail Estimate                              | (in case item is present in CSR) correct CSR Reference, Rate as per CSR Book) Unit of measurement as per CSR Book<br>(in case item is absent in CSR) rate as obtained in rate analysis, Unit of measurement as per conventional practice                                                                                                                                 |  |
| 19c | Quantity in Detail Estimate                                | Quantity Description (name of location), Entry of Length, Breadth and Height in corresponding columns), Detail Measurement Sheet (if separately attached)                                                                                                                                                                                                                |  |
| 19d | Amount in Detail Estimate                                  | Mathematically correct result of (Quantity x Rate)                                                                                                                                                                                                                                                                                                                       |  |
| 19e | Total Cost of Detail Estimate                              | Mathematically correct sum of all items                                                                                                                                                                                                                                                                                                                                  |  |
| 20  | Certificate of Quantities obtained from Drawings           | Certificate to the effect that Quantities are obtained from Drawings, duly signed by XEN concerned                                                                                                                                                                                                                                                                       |  |
| 21  | Fill quantities for Embankment                             | Calculated on basis of Earthwork Sheet containing columns of RD, NSL, PRL, H, Area, Mean Area, Length, Volume                                                                                                                                                                                                                                                            |  |
| 22  | L Section                                                  | Plotted between PRL / NSL (y axis) and RD (x axis), to be used in Earthwork Sheet                                                                                                                                                                                                                                                                                        |  |
| 23  | X Section                                                  | Containing RL of NSL, PRL at specified RD, HFL marked, to be used in Earthwork Sheet                                                                                                                                                                                                                                                                                     |  |
| 24  | Classification of Rock (if applicable)                     | Certificate duly signed by SE concerned containing Rock Classification by percentage                                                                                                                                                                                                                                                                                     |  |
| 25  | Classification of Soil                                     | Certificate duly signed by SE concerned containing Soil Classification by percentage                                                                                                                                                                                                                                                                                     |  |
| 26  | Bar Bending Schedule (in case of RCC Structure)            | In respect of quantity of steel proposed for each Structure separately                                                                                                                                                                                                                                                                                                   |  |
| 27  | Lead Chart (if applicable)                                 | Contains mechanism of rate calculation as per CSR Book                                                                                                                                                                                                                                                                                                                   |  |
| 28  | Certificate of shortest distance (if applicable)           | Certificate to the effect that the distance(s) as taken in PC-I are the shortest distance(s) available for site to quarry, duly signed by concerned XEN                                                                                                                                                                                                                  |  |
| 29  | Design Sheets                                              | In respect of Capacity Discharge of Weir, Channel (before and after), Canal (before and after), Discharge in River / Creek calculated by Manning / Halcrow-ULG on 200 year Return Period or more including data of 2022 Flood, Scour Depth Design Sheet (check against Scouring Depth) Stability Design Sheet of Retaining Wall (checks against sliding and overturning) |  |

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|----|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--|
| 30 | Number of Crates method (for GI Wire quantity) | As per convention. Justification if absent.                                                                         |  |
| 31 | Drawings (Plans and Sections)                  | Legible, Dimensioned Drawings so as to relate with Quantity Details in Detail Estimate or Detail Measurement Sheet, |  |