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**PREAMBLE NOTES FOR  
CIVIL ENGINEERING WORKS**

Revised on 26-11-2020



## Part I - General

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1. In the Bill of Quantities, the item descriptions identify the Work that has to be carried out, but in the exact nature and extent of the Work to be performed shall be ascertained by the Bidding Data, General Conditions of Contract, Particular Conditions of Contract, Contract Data, Specifications, Drawings, Schedules, Preamble notes and any other relevant documents as specified and as included in the Bidding document shall be read in conjunction with the heading and item description as described in the Bill of Quantities and sufficiently priced accordingly.
2. The Works as executed shall be measured for payment in accordance with the method adopted in the “Civil Engineering Standard Method of Measurement - 3<sup>rd</sup> Edition (CESMM3)” published by the Institution of Civil Engineers, UK under the item as therein set forth. The Contractor’s rate shall include for the complete execution of the Works as depicted on Drawings and as specified in Technical Specifications and other relevant documents included in the contract document.
3. The measurement of works which are not covered by the CESMM3 or any deviation from CESMM3 shall be measured as specified in this preamble.
4. Replace the Clause 1.2 of Section 1 of CESMME3 with the “Conditions of Contract means the ICTAD/CIDA Standard Bidding Document Procurement of Works – Major Contracts” as defined in the contract document.
5. Add to the end of Clause 1.15 of Section 1 of CESMME3, “or equivalent Sri Lanka Standard”.
6. “SLS” means Sri Lanka Standards published by the “Sri Lanka Standards Institution”. Standards specified by the other Institutions shall be as specified in the specifications.
7. Measurement unit of composite items shall be either “nr” (“number”) or “sum” as specified in the Bill of Quantities and it cover all costs incurred by the Contractor to complete the Works as shown in the drawings and as specified in the specifications.
8. The Quantities stated in the Bill of Quantities are estimates only.

9. The word “(Provisional)” in “Item Description” of the Bill of Quantities means allocated provisional quantity based on assumptions and practices but not on the drawings or the investigations. These quantities are the best possible estimated quantities.
10. Prime Cost Items under Clause 5.15 & 5.16 of CESMM3 shall be considered as Provisional sums.
11. Add to the Clause 5.18 of CESMM3, measurement of reinforcement below 0.1 t shall be measured in complete units of kg.
12. Measurement shall be taken off to actual and total quantity is round off to one decimal place.

Add followings to the Clause 5.19 of CESMM3.

Provisional Sum	-	p. sum
Day	-	day
Month	-	month

13. Add to the Clause 5.22 of CESMME3 “Format of the BOQ may be changed depending on the requirement”.
14. General Contingency/ General Contingency Allowance specified in the Clause 5.25 of CESMM3 shall mean the contingency amount specified in the Grand Summary of Bill of Quantities.
15. Adjustment items described in the Clause 5.26 of CESMME3 shall be the price fluctuation adjustment which is specified in the General Items in the Bill of Quantities.
16. Clause 60 (certificate and payment) and Clause 48 (certificate of substantial completion) of ICE Conditions of Contract (6<sup>th</sup> edition) shall be replaced with the relevant clauses of Conditions of Contract referred in this Contract.
17. Conditions referred in the Section 7 of CESMM3 shall be the Conditions of Contract of this Contract.
18. If any discrepancy is found with the CESMM3 and this preamble, CESMM3 will be superseded by this Preamble.
19. If any discrepancy is found between code of CESMM3, preamble, an item description, the item description shall prevail.

## Part II

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### CLASS A - GENERAL ITEMS

- A.1. Class A - General Items includes all items related to general obligations, Site services and facilities, Temporary Works, testing of Materials and Works, Provisional Sums.
- A.2. Any items of works or services complimentary to the Works which are not specifically provided in Class A, shall be deemed to be included in the rates and prices of items in the Bill of Quantities.
- A.3. Code A 110 of CESMM3 shall mean Performance Security in the form of demand guarantee. Contractor shall obtain the Performance Security at his own cost and the cost will be paid as per the Item No 2.01 (Code A 110) of Bill No.02- Provisional Sums after delivering the Performance Security in the form acceptable to the Employer.
- A.4. Cost of providing Advance Payment Guarantee shall be borne by the Contractor.
- A.5. Insurance under code A 120 shall include the cost of provision of insurance for Works, Plant, Materials, Contractor's Equipment and Workmen Compensation for Contractor's personnel, Employer's staff and Consultant's staff engaging the Works under the Contract and any other insurance cover specified in the Contract except third party insurance.
- A.6. Code A 130 shall include Third Party Insurance as specified in the Contract.
- A.7. Third Party insurance coverage shall compensate the loss of revenue of the business men, transport agencies, bus services etc. The Contractor shall relieve the Employer from any claims what so ever arising out of the closure of road.
- A.8. Code A 211 shall include establishment and removal of office for the Engineer's staff and mobile office for the Engineer's field staff as specified. (80% of the sum shall be paid on the completion of the establishment of office and the balance 20% will be paid after removal).

- A.9. Code A 211 shall include maintenance of office for the Engineer's staff and mobile office for the Engineer's field staff as specified in the Contract and shall be paid in monthly basis.
- A.10. Code A 221 shall include supply of hired or lease vehicles for project staff. This shall include driver, fuel, services, maintenance and all associated expenses.
- A.11. Code A231 shall include supply and maintenance of all office equipment as specified in the Contract.
- A.12. Code A 250 testing of Materials shall be deemed to be included in the rates and prices of the Materials.
- A.13. Code A 260 testing of Works deemed to be included in the Contract Price unless otherwise a separate item is provided in the Bill of Quantities.
- A.14. Code A 271/ A 272 traffic diversion and traffic regulation shall mean the preparation of ways and means to divert the traffic to avoid the working area. Establishment of traffic regulations, provision of barricades, sign boards, sign lights, blinking lights etc. for continuous operation & maintenance, and removal after completion of the Works.
- A.15. Code A 275 coffer dam shall be provided to avoid water seep into the area of permanent work shall be strong enough to withstand in the flood situation, shall be stable and withstand until the completion of Work and shall be removed after completion of Work.
- A.16. Code A 277 dewatering deemed to be included in the rates and prices of the Contract unless otherwise stated.
- A.17. Code A 41\* Dayworks shall be paid as specified in the Schedule of Dayworks included in the Contract.
- A.18. Code A 4\*\*Percentage adjustment to Provisional Sums shall be included in the respective Provisional Sum and paid as stated in the Bill of Quantities.

## **CLASS B - GROUND INVESTIGATION**

- B.1. Class B – Ground Investigation includes Trial pits and trenches, boreholes, samples, site tests, laboratory tests, instrumental observations and professional services in connection with ground investigation.
- B.2. Rates and prices entered in the Bills of Quantities shall cover all site investigations including surveying and tracing of underground utilities and obstacles expressed or required otherwise.
- B.3. Code B 11\* trial pits and trenches shall include preparation and submission of records and results, protection of existing services, cutting and breaking up of asphalt / tar/ concrete or any other type of road, excavation, removal of natural or artificial obstruction if found, dewatering, upholding sides of excavation, disposal of surplus excavated material, removal of dead services, backfilling with selected excavated/ imported material, compaction and reinstatement as stated in the specification of relevant road authority.
- B.4. Trial pits and trial trenches shall be measured separately. Trial pits shall be measured in numbers and trial trenches shall be measured in linear metres. Prior approvals from the Engineer shall be obtained before proceeding trial trenches or pits.

## **CLASS C - GEOTECHNICAL AND OTHER SPECIALIST PROCESSES**

- C.1. Class C Geotechnical and Other Specialist Processes includes Geotechnical processes for altering the properties of soils, rocks and other specialist processes as listed.
- C.2. Code C 65\* shall be read as Plain round steel bar reinforcement to BS 4449 or SLS 949.
- C.3. Code C 66\* shall be read as Deformed high yield steel bar reinforcement to BS 4449 or SLS 949.
- C.4. Definition rule D3 the cross sectional size defined in BS 4449 shall mean the cross sectional size defined in BS 4449 or SLS 949.

## **CLASS D – DEMOLITION AND SITE CLEARANCE**

- D.1. Class D Demolition and Site Clearance includes demolition and removal of natural and artificial articles, objects and obstructions which are above the Original Surface.
- D.2. Item which are not covered by Code D 2\*0 (trees) and D 3\*0 (stumps) shall be covered in D 100 (general clearance).



## **CLASS E – EARTHWORKS**

- E.1. Class E Earthworks includes excavation, dredging, filling, compaction, disposal and landscaping.
- E.2. Where excavation that may endanger any existing structure, are being executed, the Contractor shall take necessary precautions, subject to the approval of the Engineer, to protect the existing structure either from damage or from being rendered unserviceable. The Contractor shall bear the cost of protection Works.
- E.3. Rock which require blasting, control blasting or chemical blasting shall be considered as rock except for M8 in CESMM3.
- E.4. Trimming and compaction where necessary for preparation of excavated surfaces shall be included in the rates of excavation.
- E.5. Trimming and compaction where necessary for preparation of filled surfaces shall be included in the rates of filling.

## **CLASS F – INSITU CONCRETE**

- F.1. Class F Insitu Concrete includes all in-situ concrete works except which are mentioned as excludes in Class F of CESMM3.
- F.2. Provision of concrete shall mean the supply of concrete to the required location in the site in accordance with the specification and testing of concrete as specified in the specification.
- F.3. Placing of concrete shall mean the handling of concrete from the required location in the site, placing and curing in accordance with the Specification.
- F.4. Cement to BS 12 or BS 146 mentioned in the third division shall be replaced with SLS 107 or BSEN 197 (BS 12) unless otherwise specified.

## **CLASS G – CONCRETE ANCILLARIES**

- G.1. Class G includes formwork for in-situ concrete, reinforcement for in-situ concrete, joints in in-situ concrete, post tensioned prestressing and accessories for in-situ concrete.
- G.2. Formwork for kickers shall be deemed to be included in the rates of formwork.
- G.3. Rates of reinforcement shall be deemed to be included for supporting reinforcements, laps and steel supports to top reinforcement.
- G.4. Code G 51\* shall be read as Plain round steel bar reinforcement to BS 4449 or SLS 949.
- G.5. Code G 52\* shall be read as Deformed high yield steel bar reinforcement to BS 4449 or SLS 949.
- G.6. Cost for Code G 811 and G 812 shall be deemed to include in the rates of placing of concrete in Class F.

## **CLASS H – PRECAST CONCRETE**

- H.1. Class H includes manufacture, erection, joining and fixing of precast concrete units at the required position.
- H.2. Materials and workmanship shall comply with the specification.
- H.3. Rate shall include reinforcement required for manufacturing, handling and erection purposes, steel rod or wire hooks and/or mortices for lewis bolts required for handling and transporting, any necessary temporary propping and strutting and bedding, jointing and pointing.

## CLASS I - PIPEWORK

- I.1. Class I includes provision (supply), laying and jointing of pipes, excavation and backfilling pipe trenches with selected excavated materials.
- I.2. Coverage rule C1 shall exclude supply of pipes and jointing materials if separate supply bill is included or pipes are supplied by the Employer. If supply of pipes is included, BOQ item shall specify as **supply and laying of pipes** and coverage rule C1 is entirely applicable.
- I.3. If separate BOQQ are provided for supply of pipes and laying of pipes in the same contract, BOQ for supply of pipes shall be provided without CESMM3 codes and supply cost shall include all costs upto the site stores. Cost of transportation, loading, unloading, handling and any other costs to transport pipes from site store to the site shall be included in the laying rates.
- I.4. In case the Employer shall provide pipes and jointing materials, the Contractor shall include cost of transportation, handling, loading, unloading and other expenses to transport pipes and jointing materials from Employer's store to the Site in the laying rates.
- I.5. Pipe diameters shall be as specified in the relevant Standards in the Specifications and it shall be specified in the BOQ. The second division of CESMM3 code shall be selected according to the nominal bore (internal diameter) of the pipe.
- I.6. Supply of Joint protection materials for mechanical joints shall be measured separately. Application of Joint protection materials and wrapping the entire mechanical joints as per specification shall be measured under Class L (other than culvert crossing under Class K).
- I.7. The laying length for common trench, means the length of larger bore through fittings. Laying of all pipes in same trench stated in the description to be included.
- I.8. Pipe Cutting means cutting, grinding and surface preparation of pipes as per the specification.
- I.9. In the case of earth roads, finished surface shall be well compacted and trimmed upto motorable level and maintained until handing over the roads to the relevant Road Authority.

- I.10. In soft shoulders (earth shoulders), finished surface shall be well compacted and trimmed in accordance with the relevant Road Authority requirements and maintained until handing over to the relevant Road Authority unless otherwise stated in the Bill of Quantities.
- I.11. All costs for protection of staked pipes/ fittings/ accessories, protection of open trench or pits including decking and road barricades unless otherwise stated in the BOQ, and follow all related safety procedures as per the specification deemed to be included in the rate.
- I.12. All costs of prevent or mitigate any risks of Work execution are deemed to be included in the rate.
- I.13. Pipe laying shall include pressure testing, cleaning and disinfection of pipelines.
- I.14. The all materials, accessories, labour, Plant & Equipment including potable water necessary for carrying out hydrostatic pressure testing shall be included to the rate.
- I.15. 70% of pipe laying rates shall be paid on successful laying of pipes as per the Specification. Balance 30% shall be paid on satisfactory completion of cleaning, testing, disinfection of pipelines and pass in pressure test as per the Specification.
- I.16. Pipe laying shall not include manholes, other chambers which are measured separately under Class K, and shall not be paid under Class I.
- I.17. Pipe laying shall not include bridge crossing, culvert crossing except Type A, railway crossing, river or canal crossing and any other crossing which are measured separately under Class K, and shall not be paid under Class I.
- I.18. Road crossings for byroads shall be considered as road crossings when road width of the byroad at the street line of the main road exceeds 4m and shall be measured in length for the width of byroad at the street line of the main road. Other road crossings for byroads which does not come under the category of road crossings for byroads shall be paid under item of pipe laying.
- I.19. Road crossings for opposite side byroads measured upto the edge of the main road in linear metre.

- I.20. Road crossing between two lines on both side of road shall be the distance between the two lines.
- I.21. Dewatering shall be included in the rates and prices of pipe laying.
- I.22. Supply and laying of marker tape as specified in the Specification for different pipe materials shall be included in the rates and prices of the pipe laying.
- I.23. Allcost deemed to be included to the ratefor removal of the excavated material and store it elsewhere, until it is used for backfillingif directed by the Engineer or the Road Authorities where permission is not granted for dumping excavated material on the location.

### **CLASS J – PIPEWORK – FITTINGS AND VALVES**

- J.1. Class J includes fittings and valves for pipework.
- J.2. Coverage rule C1 shall exclude supply of fittings, valves and jointing materials if separate supply bill is included or fittings and valves are supplied by the Employer. If supply of fittings and valves are included, BOQ item shall specify as **supply and laying of fittings and valves** and coverage rule C1 is entirely applicable.
- J.3. If separate BOQQ are provided for supply of fittings and valves and laying of fittings and valves, BOQQ for supply of fittings and valves shall be provided without CESMM3 codes.
- J.4. Supply of joint protection materials for restrained joints, flanged joints, mechanical joints shall be measured separately. Application of Joint protection materials and wrapping the entire mechanical joints as per specification shall be measured under Class L (other than culvert crossing under Class K).
- J.5. Diameters shall be as specified in the relevant Standards in the Specifications and it shall be specified in the BOQ. When selecting the third division it shall be according to the nominal bore (internal diameter) of the pipe.

- J.6. Fittings and valves on pipes in trenches shall be measured separately in extra over(extras). Fittings and valves on pipes not in trenches and valves installed in chambers shall be measured in separately in full value.
- J.7. Washouts, fire hydrants, air valves, associated fittings and specials shall be measured in full value and all necessary earthworks, dewatering and other necessary works shall be included in the rate where the valves branch off and deviated from the main line.
- J.8. Laying, jointing, fixing and installation of fittings and valves shall be included the cutting, grinding and surface preparation of pipes.
- J.9. Where inline valve with surface box and riser pipe combination, riser pipe, surface box, valve support concrete block and other components as depicted on drawings shall be included in item of valve.

#### **CLASS K - PIPEWORK – MANHOLES AND PIPEWORK ANCILLARIES**

- K.1. Class K includes manholes and other chambers, ducts, culverts, crossings and reinstatement, other ancillaries as listed.
- K.2. In case the Employer shall provide manholes and pipework ancillaries, the Contractor shall include the cost of transportation, handling, loading, unloading and other expenses to transport pipes and jointing materials from Employer's store to the Site in the laying rates.
- K.3. Dewatering shall be included in the rates and prices of manholes, chambers, gullies, ducts, culverts, crossings, connections to existing manholes and similar works under Class K.
- K.4. Cost of chambers shall include all pipe fittings, specials and accessories connected to the chamber and within the chamber including accessories which connect the pipelines. Valves shall be measured separately under Class J.
- K.5. In case precast chambers are used as air valve chamber above the pipeline, this chamber shall include all pipes, fittings and accessories including length of pipeline below the chamber. Valves shall be measured separately under Class J in full value. The length of pipeline below the chamber shall not be measured under Class I.

- K.6. In washout arrangements when washout chamber/ outfall structure is away from pipeline, pipeline between scour tee and the chamber / outfall structure shall be measured as pipeline under Class I. Similar arrangement for Air Valve (if any) or Fire Hydrant (if any) shall be measured as pipeline under Class I. Washout chamber / outfall structure/ air valve chamber shall be measured as a chamber.
- K.7. Outfall structure of washout arrangement shall be measured as a chamber.
- K.8. In fire hydrant arrangement, the pipeline between tee and the vertical bend shall be measured as pipeline under Class I. Pillar type fire hydrant shall include pillar, all vertical pipes and other associated accessories beyond the vertical bend in pipeline.
- K.9. Cost of crossings shall include for earthworks, diversion of waterways, coffer damming if necessary, breaking through abutments/wing walls if necessary, reinstatement of those, providing suitable thrust blocks/ anchor blocks where necessary, painting on all exposed pipes, fittings and other materials, supply and application of specified flange joint protections as per the Contract, supply and fixing of pipe strap where necessary, supply and fixing of specified protection covers for air valve as per the Contract and all other necessary works to complete the crossing.
- K.10. The length of culvert crossing shall be considered as the length between the two couplings/ flange adaptors/ bell ended sleeve joint when crossing is done with DI pipes.
- K.11. In case of PVC pipeline laid through the hume pipe (inside the hume pipe) the length of culvert is considered the length between two bell ended sleeve joints including sleeve joint.
- K.12. In case of HDPE pipe length of culvert crossing is considered as the length between concrete blocks supporting at the ends of the hume pipe.
- K.13. Type A culvert crossing irrespective of material considered as a pipeline and shall be measured under Class I.
- K.14. In Class K 6.1-3 river, stream or canal width shall mean the width of opening of the culvert.

- K.15. If width of the opening of the culvert is less than 1m, payment shall not be made as culvert and the cost for such culverts included in the rates and prices of the rates in Class I.
- K.16. Temporary and Permanent reinstatement of roads to be done accordance with specification and guidance of relevant road authorities. Rate to be included for maintaining road surface until handing over to relevant road authorities.
- K.17. Cost of crossing of sewer or drain, fence, wall, hedges and other underground services shall be included in the rates and prices of the pipeline under Class I.
- K.18. Connections to existing pipes, ducts and culverts shall include for cutting, grinding and preparation of edge of existing pipe, remove existing waste pipe, additional excavation and all other related works.
- K.19. Connections to existing manholes and other chambers shall include breaking out existing manhole or chamber and reinstatement of the item and removal of debris away from site and all other related works.

#### **CLASS L – PIPEWORK – SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION**

- L.1. This class includes extras to excavation and backfilling of trenches for pipework, ducts and metal culverts, manholes and other chambers, heading, thrust boring and pipe jacking, pipe laying in headings and by thrust boring and pipe jacking and provision of supports and protection to pipework, ducts and metal culverts.
- L.2. Cost of the extras to excavation and backfilling shall mean the additional cost to be incurred for the excavation and backfilling measured under Class I.
- L.3. Extras to backfilling with imported materials shall include the cost of disposal of relevant surplus excavated material.
- L.4. “Beds” are considered as a special filling below the invert level of the pipe and it deemed to be included earthwork and dewatering where necessary. If the material of the Bed and the Surrounds/haunches is same it is measured as Surrounds/haunches including the Bed.



- L.5. Items for Works of “Beds” shall be deemed to include excavation, preparation of surfaces (includes trimming and compaction), disposal of excavated material, upholding sides of excavation, de-watering and removal of dead services below the pipe invert level.
- L.6. In the case of Beds to be filled with selected excavated material, the cost of beds, earthworks and dewatering deemed to be included in pipe laying items in class I.
- L.7. In the case of haunches and surrounds, if sieved excavated material is used for backfilling, the cost of sieving, backfilling and compaction shall be deemed to be included in the rates and prices of the excavation and backfilling of the Class I.

### **CLASS M: STRUCTURAL METAL WORK**

- M.1. This class excludes metalwork in concrete, pipework, piles and fences and miscellaneous metalwork.
- M.2. Fabrication shall include off-site surface treatment unless otherwise specified in the Bill of Quantities.
- M.3. Fabrication shall include on-site surface treatment unless otherwise specified in the Bill of Quantities.

### **CLASS N – MISCELLANEOUS METALWORK**

- N.1. This class shall exclude as specified in the CESMM3.
- N.2. The length of the ladder shall be measured along the stringers as per the drawing.

### **CLASS O - TIMBER**

- O.1. This class includes timber components and fittings, timber decking and fittings and fastening to timber components and decking.

### **CLASS P - PILES**

- P.1. This class shall exclude boring for site investigation, piling ancillaries, ground anchors, walings and tie rods.
- P.2. All costs for protection of the Work, and all related safety procedures deemed to be included in the rate.
- P.3. All costs of prevent or mitigate any risk of work execution are deemed to be included in the rate.

### **CLASS Q - PILING ANCILLARIES**

- Q.1. This class includes work ancillary to piling.

### **CLASS R – ROADS AND PAVINGS**

- R.1. This class includes sub base, base and surfacing of roads, runaways and other paved areas, kerbing and light duty pavements, footways and cycle tracks, traffic signs and markings.

### **CLASS U – BRICKWORK, BLOCKWORK AND MASONRY**

- U.1. This class excludes brickwork in manholes, sewer renovation and other brickwork incidental to pipework.

### **CLASS V – PAINTING**

- U.2. This class includes all in-situ painting works.

## **CLASS W – WATERPROOFING**

U.3. This class includes damp proofing, tanking and roofing.

## **CLASS X – MISCELLANEOUS WORK**

U.4. This class includes fences, gates and their foundations, drainage to structures above ground and rock fill gabions.

## **CLASS Y – SEWER AND WATER MAIN RENOVATION AND ANCILLARY WORKS**

U.5. This class includes preparation and renovation of existing sewers and water mains, new manholes within the length of existing sewers and works to existing manholes.

## **CLASS Z – SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING WORKS**

U.6. This class includes carpentry and joinery, insulation, windows, doors and glazing, surface finishes, lining and partitions, piped building services, ducted building services and cabled building services.