**Inspection and test plan – Trenching, Laying and backfill for Box Culverts and Headwalls**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project no.** | CC0408 | **Project name** | Melbourne Renewable Energy Hub (MREH) | | | **Date** | | 03/06/2024 | | **SGJV Approval** | MRH00B00-QAITP0005 |
| **Symal ITP no.** | CC0408-ITP-006 | **SGJV ITP no.** | MRH00B00-QAITP0005 | **Revision date** | 03/06/2024(C) | **Plant and equipment used** | | | Excavator, Roller, Posi-track, DPU, Hand Tools | | |
| **Lot no.** |  | **Location (chainages, detailed description or marked up plan)** | | | | |  | | | | |

Attach Dockets, Certificates and QA Documents to ITP

|  |  |  | |  | |  | **Verification of acceptance by** | | | | | | | **Remarks/record (e.g. Test frequency reports, certificates, checklist etc.)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | |  | |  | **Symal** | | | **SGJV** | | **Principal Witness**  **(If applicable)** | |
| **Item no.** | **Activity** | | **Ref docs** | | **Acceptance criteria** | **Acceptance** | **Key** | **Resp** | **Initial/ date** | **Key** | **Sign/ date** | **Key** | **Sign/ date** |
| **1.0 Preliminaries** | | | | | | | | | | | | | | |
| 1.1 | Safety and Environmental | | N/A | | Ensure all safety components includingSWMS, Plant prestart inspections andworkers inducted are completed prior toworks commencing.View and understand the applicable SiteEnvironmental Management Plans. | Yes ☐ No ☐ N/A ☐ | W | SE |  | S |  |  |  | N/A |
| 1.2 | Determine LotSize | | N/A | | Each line | \_\_\_\_\_\_\_\_\_\_\_\_  to  \_\_\_\_\_\_\_\_\_\_\_\_ | W | SE |  | S |  |  |  | ☐ Work Lot Map |
| 1.3 | **Survey Setout** | | MRH/A0/B/00-CV/DWG/0031 | | Prior to excavations being carried out, the contractor shall engage a suitably qualified surveyor to set out all drainage lines including manholes, temporary benchmarks, sewage wet wells etc. Clearly mark limits of works. Chainage, offsets, cut/fill level, cutting slopes, grades and cross sections specified or shown on the drawings, etc. Peg location of proposed underground services with levels from pit to pit. | Yes ☐ No ☐  N/A ☐ | H | SE |  | H |  |  |  | N/A |
| **2.0 Footing Compaction** | | | | | | | | | | | | | | |
| 2.1 | **Excavate to width and depth as per survey** | | MRH/A0/B/00-CV/DWG/0019 | | Trench depth shall allow for 600mm minimum cover from top of culvert, unless otherwise stated in Civil Drawings. Trench Width shall be 300mm each side of Culvert | Yes ☐ No ☐ N/A ☐ | W | SE |  | S |  |  |  | N/A |
| 2.2 | **Place Bedding** | | MRH/A0/B/00-CV/DWG/0046  MELBOURNE WATER DRAWING 7251/08/419 | | Compacted Bedding material shall be 100mm. When the pipe sections are in position, the bedding material shall be placed in the Haunch Zone and compacted to Density Index DI 50 | Yes ☐ No ☐ N/A ☐ | S | SE |  | S |  |  |  | ☐ Test Report, Material Certificate |
| 2.3 | **Lay culverts** | | MRH/A0/B/0 0-CV/DWG/00  45/46/47 | | Culverts alignments to comply with Melbourne Water and IFC tolerances. | Yes ☐ No ☐ N/A ☐ | S | SE |  | S |  |  |  | ☐ As-built |
| 2.4 | **Backfilling** | | IFC Drawings  MRH/A0/B/00-CV/DWG/0031  MELBOURNE WATER DRAWING 7251/08/419 | | Side Zone:  Class 2 or 3 Crushed Rock to 90% Relative density, or min density index of 60.  Overlay Zone: • Class 2 or 3 Crushed Rock to 0.3m above the top of Culvert to 98% SMDD  Backfill Zone: • Class 2 or 3 Crushed Rock to 98% SMDD | Yes ☐ No ☐ N/A ☐ | W | SE |  | S |  |  |  | ☐ Test Report |
| **3.0 Headwalls** | | | | | | | | | | | | | | |
| 3.1 | Geotextile | | MRH/A0/B/00-CV/DWG/0011  MRH/A0/B/00-ST/DWG/0020 | | Top Surface of the erosion control mat to match FSL  Needle-punched non-woven  Geotextile (mass > 250g/m2) to trimmed surface and buried to a depth of 300mm at the edges of  beaching with 300mm - 500mm Overlap or as otherwise specified by the Supplier Installation Guidelines | Yes ☐ No ☐ N/A ☐ | W | SE |  | S |  |  |  | ☐ Photos, if required |
| 3.2 | Rock beaching(Ungrouted) | | MRH/A0/B/00-CV/DWG/0047 | | Bedding Min. 250mm depth of size 20- 100mm graded Crushed rock  Rocks placed mechanically / by hand for uniform interlocking layer  Infill mix placed between rockwork (mix size 0-100mm) shall be graded crushed rock  All rocks shall have a mass 20 and 70 kg and at least 60% of the total by number shall be over 40 kg  Rocks shall be of such size that the layer of beaching is not less than 225 mm thick  Rocks shall be keyed into Ground surface one third Diameter of rock | Yes ☐ No ☐ N/A ☐ | S | SE |  | S |  |  |  | ☐ Photos, if required |
| **4.0 Conformance Check** | | | | | | | | | | | |  |  |  |
| 4.1 | Asset recording | | MRH/A0/B/00-CV/DWG/0031 | | Survey Pickup Redline markup of drawings: • Have all changes been approved and are within tolerance? | Yes ☐ No ☐ N/A ☐ | H | SE |  | H |  |  |  | ☐ As-built |

|  |  |
| --- | --- |
| **Comments** |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Works complete (signer SS)** |  | | | **Date works complete** | |  | | | |
| **Lot conforms (signer SE)** |  | **Date lot closed** |  | | **NCR/s no. raised** | |  | **Date NCR closed for this lot** |  |

**Client Representative signoff:**

**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Company\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Company\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Responsibility (Resp.) Key**: **PM**-Project Manager, **PE**-Project Engineer, **SE**- Site Engineer, **CS**-Civil Superintendent, **SS**-Site Supervisor, S**V**-Surveyor, **CR**-Client Representative

**Inspection Key : W –** Witness, **H –** Hold Point, **S -** Surveillance