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| **Project** | J235 Mary and William Streets Blackstone Traffic Signalisation | **Date Developed** | 28/03/2024 | **Developed By** | Shaheen Ahmed | **Reviewed By** |  |
| **Process** | EX - Excavation | **Contract No.** | 22284 | **Client** |  | **Approved By** |  |

| **Ref No.** | **Inspection / Test / Approval Point** | **Inspection / Test Method / Standard / Specification** | **Stage or Frequency of Sampling** | **Acceptance Criteria** | **Method** | **Level of Inspection** | **Verification By** | **Record** |
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| 1 | Underlying Lots conform (if applicable) | Lot Register  Relevant Lots | Prior to commencement of works | Works cannot commence until underlying lots are conforming | QBC QA Records | Inspection | CQR | Verification Checklist Sheet EX |
| 2 | Services identified and protected | DBYD | Prior to commencement of works at each location | Check DBYD Plans to ensure all services have been located.  Locate underground services with a qualified locator and mark with survey pegs or marker paint to identify services with close proximity to the works | Visual Check | Inspection | CQR | Verification Checklist Sheet EX  DBYD Plans |
| 3 | Cultural Heritage Monitor (if required) | MRTS51.1 CL3.1 | As required | MRTS51.1 Clause 3.2 notes that No known Indigenous Cultural Heritage within and adjacent to the site were identified.  In case of an unexpected heritage find, then prior to commencing ground disturbing activities, the Contractor shall ensure that all staff involved in, or supervising, these activities, have attended the Principal’s Cultural Heritage Induction or an alternative Cultural Heritage Induction course deemed suitable by the Administrator. This includes, as a minimum, all Site management staff, employees and subcontractors working on activities which disturb the natural ground surface. The Principal’s Cultural Heritage Induction shall be arranged through the Administrator.  This shall be communicated at Pre-start/ tool-box meetings. | QBC Environmental Strategies | Inspection | CQR | Verification Checklist Sheet EX |
| 4 | Erosion and Sediment controls in place | MRTS52 CL6.1  **HOLD POINT 1**  MRTS52 CL6.2  MRTS52 CL7  **HOLD POINT 2** | Submit Erosion and Sediment Control design to Administrator prior to undertaking work | The Contractor shall be responsible for the installation of measures for the control of erosion and sediment throughout the worksite to ensure construction works do not result in erosion and sedimentation that cause environmental nuisance or harm outside the worksite.  The Contractor shall consider at least the following erosion and sediment control strategies:   * Minimise clearing. * Minimise the extent and duration of soil exposure. * Divert clean waters from areas of disturbance. * Early installation of all drainage, erosion and sediment control measures * Protect exposed soil surfaces from erosion. * On-site capture of sediment * Manage topsoil. * Progressive stabilisation and revegetation of disturbed areas   Prior to the natural surface is disturbed on a section of the Works, the Contractor shall submit an Erosion and Sediment Control Plan (ESCP) for that section. Clearing and grubbing shall not start until the ESCP has been assessed as suitable by the Administrator.  **MRTS52 Cl 6.1 –** **HOLD POINT 1**  Erosion and sediment control measures shall comply with the following requirements:   * Early installation of all drainage erosion and sediment control measures * All erosion and sediment control measures shall be installed and maintained in good working order * Any runoff from the site shall comply with the provisions of the *Environmental Protection (Water) Policy 1997* * There shall be no erosion resulting from construction practices unless there are provisions within worksite to manage resulting sediment.   As soon as practicable and prior to initial earthworks operations (clearing and grubbing) for any stage or section of the works, the Contractor must install erosion and sediment controls (including sediment traps, catch banks and diversion drains) associated with drainage paths flowing through the works area. The completion of these activities will be a Hold Point for any further earthworks.  **MRTS52 CL7 –** **HOLD POINT 2** | QBC QA Records  Receipt of Notice to Contractor confirming approval of Erosion and Sediment Control Plan  Administrator Surveillance On-Site | **Hold Point** | CQR  Administrator | Notice to Contractor  Verification Checklist Sheet EX  Hold Point Release |
| 5 | Dust control measures in place | MRTS51 CL8.7.1  MRTS51 CL8.7.2 | Works generating dust | The Contractor shall be responsible for managing work under the Contract to avoid and minimise Environmental Harm on air quality including from dust, smoke and offensive odours and other air pollutants.  Where specified in Clause 6.3 of Annexure MRTS51.1, the Contractor shall assess and manage construction related air quality in accordance with Chapter 6 of the Road Traffic Air Quality Management Manual. Construction related air quality complaints shall be managed in accordance with Chapter 7 of the Road Traffic Air Quality Management Manual  The Contractor shall consider at least the following air quality management strategies:   * Regular watering or temporary sealing of the site and access roads * Avoiding works (e.g., stripping, excavation, etc) during dry and windy conditions * Fitting equipment with dust collection/suppression devices * Stabilising/covering all materials stockpiled for longer than 1 month (excluding pavement materials & screenings) by grassing, erosion blanketing, emulsion spray or other approved method. * Covering loads * Maintaining clean roadways to and from worksite | QBC QA Records  QBC Environmental Strategies | Inspection | CQR | Verification Checklist Sheet EX |
| 6 | Level control in place | Contract Documents  Project Drawings  MRTS04 CL6.3.1 | Entire excavation process | Adequate level control being utilised by contractor to ensure excavation dimensions are being monitored.  The heights of earthworks measured anywhere on a layer surface shall not vary from those shown on the drawings, or calculated in accordance with Clause 6.1, by more than the tolerance stated in Table 6.3.1 unless specified otherwise. MRTS04 CL6.3.1 | QBC QA Records | Inspection | CQR | Verification Checklist Sheet EX |
| 7 | Superintendent advised of unsuitable material | MRTS04 CL 9.2  MRTS04 CL9.4  **HOLD POINT 4**  MRTS04.1 CL5 | Each location of unsuitable material | Unsuitable Material shall include:   1. Material from swamps, marshes, and bogs 2. Logs, stumps, and perishable materials 3. Material susceptible to spontaneous combustion 4. Excavated material that has a WPI greater than 4000 or a pi greater than 50 as stated in clause 14.2. 5. Dry or wet material to a depth of 300mm or the depth of subgrade treatment, whichever is greater, which in the opinion of the administrator cannot be reasonably worked or conditioned to achieve specified requirements. 6. All material removed, where the material below the depth defined in clause 9.2(e) is, in the opinion of the administrator, unsuitable for compacting subsequent layers. 7. Material forming the foundation for a structure which has an allowable bearing pressure less than that nominated on the drawings. 8. Material forming the foundation for an embankment which has an allowable bearing pressure or CBR less than that stated in clause 4 of annexure MRTS04.1 or, where not so stated, a CBR less than 3 based on dynamic cone penetrometer using test method Q114B. 9. Material containing noxious weeds and other matter which may adversely affect the local environment, except where these are treated in an appropriate manner. 10. Acid sulfate soils from within the site which cannot be treated or managed in accordance with CL 10 11. Stripped topsoil which is deemed not suitable as planting media and is not suitable for use elsewhere in the works. 12. Building rubble including concrete, asphalt and other materials, except where broken down or otherwise treated and proved to be suitable for use, and 13. Abandoned Public Utility Plant and any associated material.   It shall be the sole responsibility of the Contractor to prove that material is Unsuitable Material as defined in Clause 9.2. Where Unsuitable Material or potentially Unsuitable Material is encountered on the Site, the Contractor shall, before proceeding to remove or cover such material, notify the Administrator.  Where spoiling of excess and unsuitable material is to occur, the Contractor require to nominate the Stockpile locations and approved by the Administrator. The Administrator is not obliged to approve any stockpile location within the road reserve. MRTS04.1 CL5  Where Unsuitable Material or potentially Unsuitable Material is encountered on the Site, the Contractor shall, before proceeding to remove or cover such material, notify the Administrator, and provide any test results required to justify such a claim. **MRTS04 CL9.4** **HOLD POINT 4** | QBC QA Records | **Hold Point** | CQR  Administrator | Verification Checklist Sheet EX |
| 8 | Bottom of excavation (subgrade) | MRTS04 CL13.3.2.1  MRTS04 CL18.3.3.1  MRTS04.1 CL12.3, 12.4 | Notification to Administrator once excavation is complete | When the level of excavation has reached subgrade level plus a nominal allowance determined by the Contractor, the Contractor shall cease excavation until the subgrade treatment type has been determined in accordance with Clause 18.3.3. Hold Point 6 | QBC QA Records | **Hold Point** | CQR  Administrator | Verification Checklist Sheet EX |
| 9 | Bottom of excavation (Other than subgrade) | MRTS04 CL13.3.1  MRTS04 CL13.3.3  MRTS04 CL13.3.4 | Notification to Administrator once excavation is complete | The bottom of excavations shall be trimmed to the tolerances specified in Clause 6 and any loose material removed from the surface.  Excavations shall be constructed to the shapes, lines, dimensions, and other requirements shown on the drawings.  All permanent excavation batters shall be finished in accordance with Clause 16.  The bottom of excavations shall be trimmed to the tolerances specified in Clause 6 and any loose material removed from the surface.  **Confined Excavations:** MRTS04 CL13.3.3  Trench excavations and excavations for structures shall be carried out to the dimensions shown on the drawings or, where not so shown, to the minimum dimensions necessary to construct the Works accurately and safely under the Contract.  Prior to any excavation Works or trench excavations, an assessment is to be undertaken to identify cadastral marks that may need protecting as specified in MRTS56 Construction Surveying and notice of such Works provided to the Administrator.  The material in the bottom of Confined Excavations shall comply with the density requirements of Clause 15. Where the insitu material does not comply, it shall be compacted to a depth of at least 150 mm in accordance with the requirements of Clause 15.  **Excavation for structure foundations:** MRTS04 CL 13.3.4  Excavation for foundations of structures shall be carried out to the dimensions and depths shown on the drawings. All excavations for foundations shall be drained.  When competent material has been reached at or below the depth shown on the drawings, the Foundation Surface shall be trimmed to a generally horizontal plane or to generally horizontal steps as appropriate, completely dewatered and presented for final inspection by the Contractor’s Registered Professional Engineers of Queensland (RPEQ) geotechnical engineer. No work which will cover the surface of the foundation shall proceed until the foundation has been inspected and approved by the Contractor’s RPEQ geotechnical engineer and approved by the Administrator. Hold Point 7 The Contractor shall give the Administrator three days' notice of such inspection. Witness Point 1  If the Foundation Surface has deteriorated since the time the foundation was approved and before blinding concrete or Backfill material has been placed, additional material shall be removed until competent material is reached as described above and then Hold Point 7 shall be re-released.  No further work to cover the Foundation Surface shall proceed until the As Constructed Survey of the excavated area have been met as specified in MRTS56 Construction Surveying and notice of such Works provided to the Administrator. | QBC QA Records | **Hold Point** | CQR | Verification Checklist Sheet EX |
| 10 | Site Cleaned up | Applicable Standards (MRTS) | At completion of works | Site is cleaned and free from potential hazards. Finished works are as per drawings/specifications. | Visual Check | Inspection | CQR | Verification Checklist Sheet EX |
| 11 | Lot Closed | MRTS50 CL10.1, 11 | For this lot | Lot records conform to relevant specifications. Any NCRs have been actioned and closed.  **Final conformance requirements:**   * Verification Checklist Sheet EX * Compaction – min requirements as per MRTS04 Appendix A * Survey – including quantities (Volume, area, perimeter) as required. * Hold points released – where required | Review | Review | CQR | Verification Checklist Sheet EX |