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|  | |  | | INSPECTION AND TEST PLAN | | | | | ITP no: | Z1-SR-PAV | | |
| Project: NZTA 5363 CIP SH30 Te Ngae Road Corridor-Iles Rd to Coulter Rd | | | | | Associated Docs |  | | |
| Construction Process: Side Road Pavement | | | | | Rev number: | V1 | | |
| Client: NZTA | | Head Contractor Subcontractor | | Specification: 600 - Pavement | | | | |  |  | | |
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| **Item** | **Task/Activity/Description** | **Inspection/Test** | | | | **Acceptance Criteria** | **Record Document** | **Responsibility** | **Comments** | **Checked by** | | |
| **Detail of Activity** | **Action (Hold, Monitor, Witness)** | **Minimum Test Frequency**  **(Lot = 1 day’s production or 2,500m2)** | **Inspection / Test method** | **Engineer** | **Contractor** | **Date** |
| 600 | Pre-construction / Preliminary Compliance Requirements | | | | |  |  |  |  |  |  |  |
| 600.1 | Method Statement Development / Job Safety Analysis / Enviro Site Specific Plans |  | H | Prior to Construction |  | Method Statement and JSEA Completed and signed by relevant authority |  | Downer |  |  |  |  |
| 600.2 | Drawings and Specification |  | H | Prior to Construction |  | DWG’s and Specifications are of For Construction and latest revision. Reviewed and  approved by Designer and Client. |  | Downer |  |  |  |  |
| 600.3 | Set out |  | H | Prior to Construction |  | Set out as per latest Design Model / For Construction Drawings. |  | Designer |  |  |  |  |
| 600.4 | Material Approvals | Submit testing data for the following materials:  - AP65 | H | Prior to Construction | Quarry Testing Data | Material approvals to be sent to the Engineer. Refer Project Specs and Drawings;   * AP65:   o Crushing Resistance < 100kN  o Weathering Quality Index of A,AB, AC, BA, BB or CA o Sand Equivalent ≥ 25 if > 4% passing 75um sieve  o CBR minimum 40 using heavy compaction  o Grading |  | Designer |  |  |  |  |
| 600.5 | Material Approvals | Submit testing data for the following materials:  - AP40 | H | Prior to Construction | Quarry Testing Data | Material approvals to be sent to the Engineer. Refer Project Specs and Drawings;   * AP40:   o Crushing Resistance <10% fines passing 2.36mm under 130 KN load o Weathering Quality Index of AA,AB, AC, BA, BB or CA  o Sand Equivalent ≥ 40 o Soaked CBR ≥ 80%   * Solid Density > report value only * Determination of MDD & OWC > report value only * Broken Face Content: each of the three aggregate fractions between the 37.5mm and 4.75mm sieves shall not be less than 70% by weight and shall have two or more broken faces * Particle size distribution / Grading   100% passing 37.5mm  66 - 81% passing 19mm  43 - 57 passing 9.5mm  28 - 43 passing 4.75mm  19 - 33 passing 2.36mm  12 - 25 passing 1.18mm  7 - 19 passing 600µm  3 - 14 Passing 300µm  0 - 10 passing 150µm  0 - 7 passing 75µm  **Plasticity Index:** Basecourse passing the 425μm  sieve shall not be greater than 5 when the aggregate is tested according to NZS 4407 : 1991, Test 3.4 Plasticity Index Test.  **Clay Index**: Basecourse passing the 75μm sieve |  | Designer |  |  |  |  |
| 600.6 | Identification of Underground Services |  | H | Prior To Construction |  | Ensure underground services are positively identified and asbuilt. Where this interferes with design permanent works, Service provider and Designer to be notified immediately. | InEight Records | Contractor |  |  |  |  |

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| **Detail of Activity** | **Action (Hold, Monitor, Witness)** | **Minimum Test Frequency**  **(Lot = 1 day’s production or 2,500m2)** | **Inspection / Test method** | **Engineer** | **Contractor** | **Date** |
|  | Subgrade Construction | | | | |  |  |  |  |  |  |  |
| 600.7 | Subgarde Inspection | Subgrade Levels | M | 20m centres | Visual Inspection | Cut subgrade to 355mm below finished level.  String line tolerance to be within +0mm/-30mm (i.e. 0mm high, 30mm deep) | QC Sheets | Contractor |  |  |  |  |
| 600.8 | Bearing Strength | H | Inferred CBR, 5 tests per 500m2.1 per 20lm | Scala Panatrometer | Scala (bearing Strength on insitu subgrade) to depth 500mm, with the following requirement to be achieved;≥  3 blows per 100mm - no undercut 2-3 blows per 100mm - 200mm  1-2 blows per 100mm - 275mm  <1 blow per 100mm - 500mm undercut | QC Sheets (Scala Sheet) | Contractor | Scala results to meet or exceed per below: 0mm - 100mm - ≥ 3 blows per 100mm 100mm - 200mm - ≥ 2 blows per 100mm 200mm - 300mm - ≥ 2 blows per 100mm 300mm - 400mm - ≥ 1 blow per 100mm 400mm - 500mm - ≥ 1 blow per 100mm |  |  |  |
| 600.9 | Proof Roll | H | One per lot | Visual Inspection | Proof roll – Check for uniformity, soft areas to be undercut 200mm and backfilled with  recycled pavement, AP40 Hardfill or AP65. | (Scala Sheet) | Contractor |  |  |  |  |
|  | Subbase Construction | | | | |  |  |  |  |  |  |  |
| 600.10 | Finished Level | String line or equivalent | H | 20m centres each side | Stringline, tape measure | Layer Finished Level – String Line, each lane, Tolerance: +5mm/-25mm | QC Sheets | Contractor |  |  |  |  |
| 600.11 | Compaction | Basecourse Compaction | M | Direct Transmission NDM (1 per 200m2) | NDM | Mean ≥ 95% MDD, Min ≥92% | QC Sheets | Contractor |  |  |  |  |
|  | Basecourse Construction | | | | |  |  |  |  |  |  |  |
| 600.12 | Finished Level | String line or equivalent | H | 20m centres each side | Stringline, tape measure | Layer Finished Level – String Line, each lane, Tolerance: +15mm/-5mm | QC Sheets | Contractor |  |  |  |  |
| 600.13 | Compaction | Basecourse Compaction | M | Direct Transmission NDM (1 per 200m2) | NDM | Mean ≥ 98% MDD, Min ≥95% | QC Sheets | Contractor |  |  |  |  |
| 600.14 | Degree of Saturation | Basecourse Compaction | M | Direct Transmission NDM (1 per 200m2) | NDM | < 60% (or 80% on consultation with the pavement designer) | QC Sheets | Contractor |  |  |  |  |
|  | Close Out | | | | |  |  |  |  |  |  |  |
| 600.15 | Collate above documentation | Document review | H | Each ITP | Review |  | N/A | Contractor |  |  |  |  |
| 600.16 | As-built drawings | Survey | H | At completion of construction | Asbuilts to be submitted at the completion of construction | -A s-built to be submitted at the completion of construction  -I nformation to be captured:  -Maintain Redline drawings through works. | N/A | Contractor |  |  |  |  |
| 600.17 | RAMM Data |  | H |  | Info to be submitted by the completion of  project construction | -Information to be captured: | N/A | Contractor |  |  |  |  |
| Client Final Inspection - the signature below verifies that this ITP has been completed in accordance with NZTA Specifications and verifies lot compliance. Contractor's Rep Name:  BBO Engineers Rep Name: | | | | | |  | | | | | | |
| Date:  Date: | H Hold Point | | | | | |
| W Witness Point | | | | | |
|  | M Monitor Point | | | | | |