|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Process Step | Reference documents | Criteria/Test Method/Spec | Record for conformity/Inspected by | Type of Record | Responsible Position | Acceptance/Comments | Process Step |
| 1. Cold milling of work area. | R101.3 | Submission of verification documentation, the marking of milling depths and locations of all Hidden Objects on site, records and calculations of the areas to be measured under Pay Item R101P6 | The PV will consider the submitted documents prior to authorizing the release of the Hold Point. | HP | PE/PV |  | Initials: 🞎 |
| 1. Milling to achieve depth of cut and PV inspection | R101.4.2 | Depth of cut and other associated terminology is shown in Figure R101.1  Covering of milled work area and the removal of the cold milling machine and cleaning plant from the site (after milling to specified depth of cut).  Written notice to the Principal at least 24 hours in advance of the time when the floor of the milled area will be available for inspection. | The PV will inspect the completed work prior to authorising the release of the Hold Point. | HP | PE/PV |  | Initials: 🞎 |
| 1. Survey check level of cutting | R101.4.1  R101.4.3 | Depth of cut and other dimensions must comply with the tolerances specified in Table R101.1.  Report levels to the nearest 5 mm | will inspect the completed work and view the Survey Report (if required by Annexure R101/A) prior to authorising the release of the Hold Point. | HP | PE/PV |  | Initials: 🞎  **Sign:**  **Date:** |
| **MILLING OF ASPHALT OVER CONCRETE STRUCTURES** |  | | | | | | |
| 1. Investigation of thickness of asphalt over concrete structure | R101.4.6.1 | Carry out the investigation as follows:  (a) Determine the proposed pattern of milling works and mark on the pavement the lines of movement of the depth sensing foot on each side of the milling machine.  (b) Investigate the thickness of asphalt by taking small diameter cores (e.g. 25 mm), at 3 m intervals (over concrete bridge elements) or 20 m intervals (over other concrete structures) along each line of movement of a depth sensing foot, at least 24 hours prior to the commencement of milling. | Submit the findings of the investigation to the PV at least 24 hours before commencement of milling. | IP | PE |  | Initials: 🞎  **Sign:**  **Date:** |
| 1. Revised scope of work based on investigation | R101.4.6.2 | Milling of asphalt, including trials, over each Concrete Structure or where the planned base of cut is within 40 mm of the top surface of a Concrete Structure and/or waterproof membrane that is to be retained. | Notify the PV not less than 24 hours prior to milling of the time and date of commencement of milling and the time and date the proposed depths of cut will be marked on the surface. | HP | PE/PV |  | Initials: 🞎  **Sign:**  **Date:** |
| 1. Milling operators | R101.4.6.3 | Milling operators must have adequate training and experience in the operation of the cold milling machine (including automatic sensing equipment).  provide three suitably trained and skilled milling machine operators at the cold milling machine at all times  as follows:   1. one on the driving platform; 2. one on each side of the machine generally in the vicinity of the sensor/cutting mandrel. | VOC or tickets | AP | PE |  |  |
| 1. Equipment requirements | R101.4.6.4 | Equipment should Comply with the following:  (a) Maintain the milling machine in “as new” condition and, unless approved otherwise by the Principal, fit the milling machine with a “fine” cutting drum which provides for tooth cut spacing not exceeding 10 mm;  (b) Conduct a cutting trial using the same machine at the commencement of each working shift and after any repair or adjustment to the machine during the works. The trial must include the operation of depth sensing feet and depth adjustment equipment;  (c) Equip each operator with a gauge to measure the depth of cut in millimetres. | Visual check | IP | PE/Forman |  |  |
| 1. Milling procedure | R101.4.6.5 | Written notice to the PV together with proposed procedures for the work at least 7 days (except for Clauses 4.6.1 and 4.6.2 where it is 24 hours) prior to the commencement of milling work. | The PV will assess the submission, and may require submission of further details on the effects of milling on the bridge structure, prior to authorising the release of the Hold Point. | HP | PE/PV |  |  |
| 1. Non-conformity due to contact between the cutting teeth of machine and concrete structure | R101.4.6.6 | After the cutting teeth have contacted the concrete, notify the PV immediately of the incident and submit details of the cause and the proposed course of action. | The PV will assess the submission prior to authorising the release of the Hold Point | HP | PE/PV |  |  |
| 1. Further Milling of Pavement | R101.4.6.6. | After any change to the pattern of the cut surface due to broken or worn cutting teeth, notify the Principal immediately of the incident and submit details of the cause and the proposed course of action. | The PV will assess the submission prior to authorising the release of the Hold Point | HP | PE/PV |  |  |
| 1. Unsuitable materials | R101.4.8 | Written notice to the PV of the time that the removal of the unsuitable material will be completed and be available for inspection. | PV will inspect and consider the depth of excavation of unsuitable material, to determine whether a sufficient depth of unsuitable material has been removed, prior to authorising the release of the Hold Point. | HP | PE/PV |  |  |
| **TEMPORARY TREATMENT AT EDGES OF MILLING** |  | | | | | | |
| 1. Transverse Joints | R101.4.9.i | A minimum taper length of 2.5 m for each 50 mm variation in levels or part thereof for areas where the speed limit exceeds 60 km/h and a minimum taper length of 1.5 m for each 50 mm variation in levels or part thereof for areas where the speed limit is less than or equal to 60 km/h | Visual inspection | IP | PE |  |  |
| 1. Longitudinal Joints | R101.4.9.ii | Where traffic is required to travel on a longitudinal edge, provide a ramp of minimum 1.0 m length for each 50 mm variation in levels (or part thereof) | Visual inspection | IP | PE |  |  |
| 1. Interface with Structures | R101.4.9.iii | Form and compact asphalt ramps around manholes, gully grates, utility covers or other similar structures unless otherwise directed by the PV. The ramps must have a minimum taper length of 1.5 m for each 50 mm depth of cut (or part thereof). | Visual inspection | IP | PE |  |  |
| 1. Clean up and dispose foreign items | R101.4.10 | After the completion of cold milling, remove all loose milled material. The material removed will become your property unless otherwise specified in Annexure R101/A.  If the milled material remains the property of the Principal, deliver the milled material to the stockpile site(s) nominated in Annexure R101/A. Shape the milled material in uniform stockpiles with regular sides and, where appropriate, slope the top to promote water runoff. Clearly identify the milled material by signposting.  If the milled material becomes your property, remove it from the site in accordance with the Waste Management Plan | Visual inspection | IP | PE |  |  |

|  |  |
| --- | --- |
| REVIEW BY PROJECT MANAGER |  |
| Have all hidden objects been identified? | YES/NO |
| Is milled depth within location and level tolerances? | YES/NO |
| Has any unsuitable material been identified, removed & recorded? | YES/NO |
| Have all RMS Hold Points been released? | YES/NO |
| Any nonconformances? | YES/NO Sign: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ For Closed Out: YES/NO |
| All work has been satisfactorily completed. | YES/NO |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Project Manager \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Prepared By:** | **Mohammed Almalome** | **Approved By:** |  | **Date Approved** |  |