

**Client:** Melbourne Airport (APAM)

**Contract No:** CP14038

**Prepared By:** Marianne Sales

**Project:** Taxiway Zulu 2.0 Project

**Reviewed By:** Jonathon Rock

**Date:** 13/05/2024

**Construction Process:** Unbound Pavements (FCR & RCC)

**Approved By:** Jonathon Rock

**Date:** 13/05/2024

**Specifications:** Taxiway Zulu 2.0 Program Works Specification ZULU-BECA-002-SPC-00002[C01]

**Structure / Component:** Pavements

**Lot No:**

**Lot Details:**

**Lot size/Quantity:**

**Date:**

Item No.	Task/Activity Description	Inspection/Test					HP/ WP/ AP/ IP/ TP/ SCP	Responsibility	Checked by:				
		Frequency	Acceptance Criteria	Reference Documents	Inspection/ Test Method	Record of conformity			Principal's Representative	Fulton Hogan	Other	Date	
1.0	Preliminary Activities – Permits, Documentation, Approvals, Survey Documentation												
1.1	The current revision drawings are being used including subcontractors copy.	Prior to commencing works	Current revision drawing is being used including the subcontractors copy. Current Revision to be obtained via Aconex	Aconex	Visual inspection	This signed ITP	HP*	Project/Site Engineer					
1.2	Implementation of all measures and controls, weather, and material properties.	Prior to commencing works	All necessary measures and controls are being implemented, that is: PSP, EMP, TMP, SWMS & WP  Check weather prior to starting any works.  FCR material used for the works in accordance to VicRoads Class 2 Crushed Rock.  RCC material to be used for the Works in accordance with VicRoads Class 3 Crushed Rock.  Checking underlying layer ITP's (subgrade ITP008 and select fill ITP004 has been completed)	PSP, EMP, TMP, WP SWMS, Spec Cl 4.19  Spec cl. 4.1  VicRoads Technical Note 107  Spec cl. 4.6	Visual inspection	This signed ITP	HP*	Project/Site Engineer Foreman					
1.3	Material Report - Fine Crushed Rock (FCR) Material	7 Days - Prior to works	Material Report to be submitted 7 days prior to works to include; <ul style="list-style-type: none"><li>Source and Quarry location</li></ul>	Spec cl 4.20.1	Verify	This ITP signed	HP	Project/Site Engineer Principles Rep	Aconex Ref: Holcim RCC Class 3 - DCWC Mat-				

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	& Recycle Crushed Concrete (RCC)		<ul style="list-style-type: none"> <li>Quarry material is sourced from.</li> <li>Material rock type and petrographic description</li> <li>Historical test results</li> <li>Method of processing and transportation</li> <li>Material summary of the results of recent test on samples of the material from the source</li> </ul>						GCOR-009582  Holcim FRC Class 2 - DCWC Mgt- GCOR-009581  Stirling Class 3 - DCWC Mgt-GCOR-009565			
1.4	Reference Samples	5 Days prior to works	Reference samples to be submitted 5 days prior to works commencing. Two bags to be taken each weighing 25kg. One bag submitted to Client, one retained by Contractor	Spec cl. 4.20.2	Verify	This ITP signed	HP	Project/Site Engineer Principles Rep				
1.5	Trial Section	Prior to works	Trial section to be completed with Principles Representative approving the use of the spreading machine.	Spec cl. 4.7	Verify	This ITP signed	HP	Project/Site Engineer Principles Rep				

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1.6	Compaction Equipment	Prior to works	Pneumatic tyred rollers having a weight of 27t (min roller weight can be 7t spread across 7 wheels). Tyre inflation pressure to be checked.  A 15t to 20t smooth drum roller to be used	Spec Cl 2.4.3 Item 84 Tender Clarifications	Verify	This ITP signed	WP	Project/Site Engineer Principles Rep				
2.0	Placement of Sub-basecourse and Basecourse											
2.1	Layer Placement Parameters	Every Lot	Summary of Parameters for each Lot; <ul style="list-style-type: none"> <li>A lot is defined as one layer placed in a single days production of uniform material</li> <li>Max Layer is 200mm</li> <li>Min Layer is 75mm</li> <li>Final Surface Level +0mm, -10mm (excluding intermediate layers)</li> <li>Shape: every 10m intervals, &lt;7mm deviation over 3.5m straight edge (excluding intermediate layers)</li> <li>Material to be batched within 1% of OMC</li> </ul>	Spec Cl 4.8, cl 4.21.2 cl 4.13	Verify	This ITP signed	IP	Project/Site Engineer				
2.2	Placement Checks	Every Lot	During placement of the material check; <ul style="list-style-type: none"> <li>Deliveries do not disturb underlying layer</li> <li>Spreading starts from crown / high side where practical.</li> <li>Material does not get contaminated during placement / delivery</li> <li>Watercart is present to condition material as required</li> </ul>	Spec Cl 4.8	Verify	This ITP signed	IP	Project/Site Engineer				

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			<ul style="list-style-type: none"> <li>Edges are cut / removed if dry of not compacted with abutting lots</li> </ul>									
2.3	Compaction Check	Every Lot	During Compaction check; <ul style="list-style-type: none"> <li>Heavy smooth drum roller of 15t to 20t is used for initial compaction</li> <li>Pneumatic roller of 27t will compact material for final consolidation.</li> <li>A heavy smooth drum roller (in static mode) may also be used for final consolidation</li> <li>Watercart Present onsite for conditioning</li> <li>Materials are trimmed to required shape and level</li> </ul>	CI 4.10	Verify	This ITP signed	IP	Project/Site Engineer				
2.4	Services & Culverts	Every Lot	Check if any culverts or services are with the influence zone for compaction.  A general rule, FH will seek advice from the Principles Representative if any culverts, duct banks or RCP pipe are identified closer than 1m from pavement layer surface. If identified, Fulton Hogan will maintain a 1m exclusion zone either side from centre of service for vibrating compaction activities. Hand held DPU's/whacker plate to be used in lieu of rollers in restricted areas.	CL4.10	Verify	This ITP signed	IP	Project/Site Engineer				

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2.5	Protection of Layer	Every Lot	Protect area from undue deterioration by; <ul style="list-style-type: none"> <li>Section off area for at least 12 to 48 hours to allow material to dry back.</li> <li>If unable to do so, keep traffic to a minimum</li> <li>Or ensure any traffic that has to cross pavement layers, do not follow the same driving line.</li> </ul>	CL4.17	Verify	This ITP signed	IP	Project/Site Engineer				
2.6	Proof Rolling	Every Lot	Proof rolling will be undertaken at the top layer surface of the imported select fill material for under pavements using a 16T smooth drum roller (minimum), or a 15kL watercart (minimum).  Principles Representative to be invited to proof roll 24 hours prior to inspection.  Principles Representative must witness the proof roll.  Following completion of the successful Proof Roll, Principles Representative will approve Fulton Hogan to place the next layer.  Placement of next layer can occur once lot is accepted following proof roll. Proof roll inspection will satisfy pre-placement CTB inspection	CL 4.11 CL 4.8 CL 4.16 CL 5.9	Verify	This ITP signed	IP HP WP HP HP	Project/Site Engineer				

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2.7	Completion of Remedial Works (if required)	As required	Completion of remedial works or nonconforming Sub-Basecourse and/or Basecourse to be approved by Principal's Representative before proceeding with the next layer of pavement Works.	Spec cl. 4.21.3	Verify	This ITP signed	HP	Project Engineer Principal's Representative	(if required)			
3.0	<b>Testing, Lot Size and Compliance</b>											
3.1	Survey Conformance	Every Lot	Final survey level to be checked in a 5mx5m grid to conform with -10mm to +0mm.  Survey report not provided for intermediate layers of the same material type (i.e. for PT2 where multiple layers of same material type placed).	CI 4.13	Survey Report	This ITP signed	SCP	Project/Site Engineer				
3.2	Surface Smoothness	Every Lot	Surface smoothness to be checked every 10m by placing a 3.5m long straight edged on the ground a checking any deviations over 7mm. Complete within 7 days of completion of each section. Document results.  Intermediate layers and shoulder pavements are not required to be checked.	CI 4.14	Verify	Report	TP HP	Project/Site Engineer Principles Rep				
3.3	Layer Thickness	Every Lot	Check thickness of layer using survey at the frequency of field dry density determinations. Thickness shall not be less than what is shown on the design documentation other than allowable construction tolerances.	CL 4.12 CL4.21.1	Survey	Survey Report	SCP	Project/Site Engineer				

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			Total pavement thickness is to be checked. Intermediate layers, no check is required.									
3.4	Degree of Saturation - Sub-Basecourse or Basecourse	Every Lot	<ul style="list-style-type: none"> <li>Degree of Saturation to be tested for information.</li> <li>Target less than 70% Mean Moisture Ratio.</li> <li>Test to be taken the shift prior</li> <li>If lot gets impacted by significant wet weather, tests to be re-taken</li> </ul>	CI 4.9	Test	Test Report	TP	Project/Site Engineer				
3.5	Field Dry Density	Every Lot	Dry density for <b>basecourse</b> layer has the following acceptance criteria: <ul style="list-style-type: none"> <li>Average of 5 consecutive tests exceeding 100% MMDD.</li> <li>No individual test result less than 98% MMDD.</li> <li>Principal's Representative approval based on the results of proof rolling.</li> </ul> Dry density for <b>sub-basecourse</b> layer has the following acceptance criteria: <ul style="list-style-type: none"> <li>Average of 5 consecutive tests exceeding 98% MMDD.</li> <li>No individual test result less than 95% of MMDD.</li> </ul> Principal's Representative approval based on the results of proof rolling.	CL4.10 CI4.21.1	Test	Report	TP HP	Project/Site Engineer				
3.6	Quality Assurance Records	Each Lot	Submit test results on Aconex for every lot of Sub Base and Basecourse. Results to summarise each	CI4.21.2	Verify	Summary of results	HP	Project/Site Engineer	Aconex Ref:			

	Inspection and Test Plan - Control and Supervision of the Works	Doc ID: FH-ZU2-QU-ITP009 Rev: 0
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			test (Moister content, field dry density and layer thickness).  Aconex ref to be submitted as Hold Point sign off.									

<b>Final Inspection</b> On behalf of Fulton Hogan it is hereby certified that the Works represented by the items of work listed have been tested in accordance with the Project Quality Plan and conform in all respects with the requirements of the Contract.			
Print Name:	Position:	Signature:	Date:        /        /

Legend:

HP	Hold Point	Work shall not proceed past the HP until released by the Principal's Representative	IP	Inspection point	Formal Inspection to be done and recorded
HP*	Fulton Hogan Hold Point	Work shall not proceed past the HP* until released by Fulton Hogan	TP	Test Point	Product compliance test to be undertaken and recorded/reported
WP	Witness Point	An inspection which must be witnessed by the Principal's Representative	SCP	Survey conformance point	A qualified surveyor to check product/section/structure and report
AP	Approval Point	Written or verbal approval given by the Principal's Representative			

Notes:
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