Earthworks - ITP

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Subcontractor (if applicable)

ITP Details:

Client	Construction Process	Contract Number:	Specifications	Structure / Component	Prepared By	Approved By
Regional Roads Victoria	Earthworks		*Vicroads Specification Section 173, 175, 204, 205, 210, 290, 304, 702 and 720, VR Code of Practice 500.2*	*Pavements*		

Project Location

Lot Number

Lot Details

Lot size/Qty

Date Start: - End: -

Legend:

HP	Hold Point	Work shall not proceed past the HP until released by the Superintendent	**IP**	Inspection point	Formal Inspection to be done and recorded
IHP	SWA Internal Hold Point	Work shall not proceed past the IHP until released by SWA	**TP**	Test Point	Product compliance test to be undertaken and recorded/ reported

WP	Witness Point	An inspection which must be witnessed by the Superintendent	**SCP**	Survey conformance point	A qualified surveyor to check product/section/structure and report
AP	Approval Point	Written or verbal approval given by the Superintendent			

1. Preliminary Works

Task/Activity Description	Acceptance Criteria	Reference Documents	Method & Record of conformity	Responsibility	Signature 1	Reports	Pictures	Comments
1.1 Check for correct documentation **Frequency** Prior to commencing any activity	Ensure that all employees and subcontractors are: -using the correct and complete set of drawings -all drawings are the latest revision	IFC Drawings	**Method**: Visual Inspection **Record**: Signed ITP	IHP SWA Project Manager				

Task/Activity Description	Acceptance Criteria	Reference Documents	Method & Record of conformity	Responsibility	Signature 1	Reports	Pictures	Comments
1.2 Implementation of all measures and controls **Frequency** Prior to commencing any activity	All necessary measures and controls are being implemented, that is: EMP, TMP & SWMS.	EMP, TMP & SWMS	**Method**: Visual Inspection **Record**: Signed ITP	IHP SWA Project Manager				

2. Construction works

Task/Activity Description	Acceptance Criteria	Reference Documents	Inspection method & Record of conformity	Responsibility	Signature 1	Reports	Photos	Comments
2.1 Survey Set-Out **Frequency**:Prior to commencement of excavation.	Area has been set out in accordance with the drawings	Work Procedure	**Method**: Verify **Record**: Signed ITP	IP SWA Project Manager				

Task/Activity Description	Acceptance Criteria	Reference Documents	Inspection method & Record of conformity	Responsibility	Signature 1	Reports	Photos	Comments
2.2 Excavation Permit **Frequency**:Each Lot	An excavation permit or DBYD must be issued prior to any excavation commencing. Plant and equipment shall be appropriate for the task. Excavation operations shall not disturb areas outside the limit of excavation	Excavation Permit	**Method**: Verify **Record**: Signed ITP	IHP SWA Project Manager IP SWA SEQ Adviser				
2.3 Sub grade Material Properties **Frequency**:Each Lot	In situ material within 400mm of cut floor level to be consistent with Type B. i.e. CBR>assigned value (must be greater than 2), Swell < 2.5%. If parameter met, rip and re compact 150mm. If parameters not met remove 400mm of material and replace with conforming type B.	VcRoads Std Specs 204.06 (e)	**Method**: Site Inspection/Test Report **Record**: Signed ITP & Test Report	**TP** SWA Project Manager External testing Company representative **AP** RRV Superintendent				

Task/Activity Description	Acceptance Criteria	Reference Documents	Inspection method & Record of conformity	Responsibility	Signature 1	Reports	Photos	Comments
2.4 Inspection of Subgrade Material **Frequency**:Each Lot	Prior to commencing excavation in any area and during excavation work, the Superintendent and the Contractor shall inspect each type of material encountered and subject to verification by appropriate laboratory testing, agree on the category of the material in accordance with Clause 204.04	VcRoads Std Specs 204.06 (e)	**Method**: Visual Inspection **Record**: Signed ITP	IHP SWA Project Manager **AP** RRV Superintendent				
2.5 Material Classified as Silt **Frequency**:Prior to commencing	Material classified as silt, either before or after compaction, is not acceptable as Type A material without stabilisation to the satisfaction of the Superintendent.	VcRoads Std Specs 204.04 (e)	**Method**: Visual Inspection **Record**: Signed ITP	IHP SWA Project Manager **AP** RRV Superintendent				

Task/Activity Description	Acceptance Criteria	Reference Documents	Inspection method & Record of conformity	Responsibility	Signature 1	Reports	Photos	Comments
2.6 : Acceptance of Rock Subgrade (when applicable) **Frequency :** Prior construction of the regulating layer.	Prior to construction of the regulating layer, the areas of rock subgrade shall be presented to the Superintendent for acceptance. Any necessary amendments to the subsurface drainage design including transverse subsurface drainage at the interfaces shall be presented to Superintendent for review.	VcRoads Std Specs 204.04 (f)	**Method**: Site Inspection/ Document Review **Record**: Signed ITP	IHP SWA Project Manager **AP** RRV Superintendent				
2.7 : Unsuitable Material **Frequency :** Each lot as required	Where unsuitable material is encountered, proposed in-situ treatment must be submitted to the superintendent for review	VcRoads Std Specs 204.07 (d)	**Method**: Visual Inspection **Record**: Signed ITP & Test Reports	IHP SWA Project Manager **AP** RRV Superintendent **TP** External testing Company representative				

Task/Activity Description	Acceptance Criteria	Reference Documents	Inspection method & Record of conformity	Responsibility	Signature 1	Reports	Photos	Comments
2.8: Groundwater **Frequency :** Each lot as required	Where groundwater is encountered the contractor shall notify the superintendent and submit proposed action for review. The Contractor shall submit any necessary approvals from relevant authorities for the treatment and disposal of this groundwater.	VcRoads Std Specs 204.07 (h)	**Method**: Visual Inspection **Record**: Signed ITP & Test Reports	IHP SWA Project Manager **AP** RRV Superintendent				
2.9: Trimming and level conformity **Frequency :** Each lot as required	The level at any point on the subgrade shall not lie more than 20 mm below a 3 m straightedge laid in any direction, except across a crown and water shall not pond at any point. **Level tolerances:** **Range** x (Mean value of all measurements) (Scale A) x = +5, -25mm (Scale B)x = +5, -15mm **Max S** (Standard deviation of all readings) (Scale A) = 12 mm (Scale B) = 15 mm **No. measurements** (Scale A) 80 per lot (Scale B) 40 per lot	VcRoads Std 204.03 (f,g,h) Table 204.031	**Method**: Survey **Record**: Signed ITP & Survey Report	**SCP** SWA Project Manager External Surveyor				

3. Testing Requirements

Task/Activity Description	Acceptance Criteria	Reference Documents	Record of conformity	Responsibility	Signature 1	Reports	Photos	Comments
3.1: Test Rolling **Frequency :** Each lot as required	No visible deformation or springing in presence of Superintendent's Rep. (Cl 173) Plant to comply with requirements of Cl 173.03. Pneumatic tyred plant nominated for test rolling procedures shall have a mass of not less than 20 tonne and shall have a ground contact pressure under either the front or rear wheels of not less than 450 kPa per tyre.	*Vicroads Specification Section*173.03 173.03 (ii)	**Method**: Visual Inspection **Record**: Signed ITP	IHP SWA Project Manager **WP** RRV Superintendent				
3.2: Compaction Testing **Frequency :** Each lot as required	Ripped and re-compacted material below Cut Floor Level = minimum compaction 98%. Type B Material placed within 400 mm of top of Type B Material = minimum compaction 98%. Type B material 400mm below the top of Type B material and Top 150mm of where fill is to be constructed = minimum compaction 95%.	*Vicroads Specification* Table 204.131	**Method**: Compaction Test **Record**: Signed ITP & Test Reports	IHP SWA Project Manager **AP** RRV Superintendent **TP** External testing Company representative				

Appendix
Tables:

Table 204.142 Minimum Frequency of Testing for Compaction and Moisture Content

Material	Acceptable Lot Size in a Single Layer of Work	Minimum Testing Frequency
Type A Material	One day's production or 5,000 m², whichever is the lesser	Every second lot of like material and work
Type B Material		
• ripped and re-compacted below Cut Floor Level	One day's production or 10,000 m², whichever is the lesser	Every second lot of like material and work
• placed within 400 mm of top of Type B Material	One day's production or 10,000 m², whichever is the lesser	Every second lot of like material and work
• placed more than 400 mm below top of Type B material	One day's production	Every third lot of like material and work
Type C Material	One day's production	Every sixth lot of like material and work

Table 204.161 Schedule for Surface Tolerance, Material Properties and Compaction Testing

Road Name	Chainage / Location	Scale of Surface Level Measurement (A, B or C)	Scale of Material Property Testing (A or B)	Scale of Compaction (A, B or C)
Birregurra - Forrest Road	Within Limits of Works	B	B	B
Colac - Lorne Road	Within Limits of Works	B	B	B
Deepdene Road	Within Limits of Works	B	B	B

Note: Where no level of testing is nominated, Scale A applies.

Table 204.031 Minimum Number of Level Measurements and Tolerances

Scale of Surface Level Measurement	Minimum Number of Measurements per Lot	Tolerance	
		$\bar{x}$ Range (mm)	Maximum S (mm)
Scale A	80	+5 to -15	12
Scale B	40	+5 to -25	15

Notes:
1. $\bar{x}$ is the mean value of all level readings taken in the lot
2. S is the standard deviation of all level readings taken in the lot
3. A negative value designates a measured departure below the design level and positive value designates a surface level above the design level

Table 204.131 Compaction Requirements

Material Type and Location	Scale A	Scale B	Scale C
	Minimum Characteristic Value of Density Ratio (%)	Minimum Characteristic Value of Density Ratio (%)	Minimum Mean Value of Density Ratio (%)
All Type A Material	99.0	98.0	100.0
Type B Material placed within 400 mm of top of Type B Material			
Ripped and re-compacted material below Cut Floor Level			
Type B Material placed more than 400 mm below top of Type B Material	97.0	95.0	95.0
The top 150 mm of areas where fill is to be constructed			
Type C Material	95.0	93.0	92.0

Table 204.141 Frequency of Testing for Material Properties

Material Properties	Material	Initial Testing	Reduced Testing Frequency (minimum)
CBR and percentage swell	Type A Material	1 Lot Test to determine Assigned CBR and swell	Single CBR test to confirm Assigned CBR and swell per every 2 lots
	Type B Material	1 Lot Test to determine Assigned CBR and swell	Single CBR test to confirm Assigned CBR and swell per every 8 lots
	In situ material in cuts within 400 mm below Cut Floor Level	1 Lot Test to determine Assigned CBR and swell	Single CBR test to confirm Assigned CBR and swell per every 4 lots
Grading	Type A Material	1 Test for each lot tested for compaction	1 test for every second lot tested for compaction
	Permeable Fill Material	1 Test per lot	1 Test per every 2 lots
PI and calculation of PI x % Passing 0.425 mm	Type A Material	1 Test per 2 lots	1 test per every 4 lots
LL and comparison of PI against LL, (identification of silt)	Type A Material Type B Material	1 Test per 2 lots	1 test per every 4 lots
Permeability	Capping and Verge Materials and Other Type A Material	1 Test per 2 lots	0.1 1 test per every 4 lots
Maximum Particle Dimension [1]	Type A Material, Type B and Type C Material containing rock greater than 150 mm	Every lot Every lot	Every lot Every lot
Note: [1] Visual inspection, assessment and measurement of larger rock particles.			

Final Notes

Photo and video

Final Inspection:
The signature below verifies that this ITP has been completed in accordance with the Fulton Hogan's Quality system Procedures and verifies lot compliance with specifications.

Project Team signature	-

Final Inspection:
The signature below verifies that this ITP has been completed in accordance with the Fulton Hogan's Quality system Procedures and verifies lot compliance with specifications.

Client Signature	-