INSPECTION & TEST PLAN

Project Name:	**Otaki to North Levin Project (O2NL)**	**Prepared by:**	**Marco Edwards**	**Rev. No.**	**A**
ITP No.:	**O2NL-STH-000-CN-ITP-0008**	**Project Engineer:**	**Nico Aandewiel**		
Construction Process:	**North Manakau Temporary Diversion Road**	**Approved by:**			

LEGEND

Verification Activity

H	Hold Point	Work shall not proceed past the Hold Point until released by the organisation imposing the Hold Point.
W	Witness Point	An inspection point that may be witnessed by the organisation imposing the Witness Point.
I	Inspection	Formal inspection activity to be undertaken and recorded.
S	Surveillance	An activity that is subject to ongoing monitoring.
R	Review	Review of text reports/records or other evidence of compliance.

Responsible Inspectorate (RI) *(may be modified to meet site specific requirements)*

SA – South Alliance
PM – Project Manager
CM – Construction Manager
ENG – Responsible Engineer
SUP – Supervisor
SQN – Subcontractor Quality Nominee
QMR – Quality Management Representative
SMR– Safety Management Representative
EMR– Environment Management Representative

REFERENCE DOCUMENTS

Development:
O2NL- Pavement Design DWGs - Rev2
Ō2NL-STH-000-CN-CEP-0008 - North Manakau Temporary Diversion Road
Implementation:
Ō2NL-STH-000-CN-ITP-0008 - North Manakau Temporary Diversion Road

APPROVAL/REVISION

Rev	Date	Details	App'd (Alliance)	App'd (Owner)
A	25/7/2025		☒	☐
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Construction Process:	North Manakau Temporary Diversion road					ITP No.:	XX			Rev A	
Item	Basic Job Step	RI	Acceptance Criteria	Applicable Standard	Inspection Test		Verification Activity by			Verifying Records	Sign-off
					Method	Frequency	SubCon	Alliance	Client		
1.0 Preliminaries											
1.1	JSEA Approved Prior to Start	ENG	Alliance Approved prior to construction start	Alliance Best Practice				H		Signed JSEA	
1.2	ESC Plan Approved	ENG	Alliance Approved prior to construction start	Alliance Best Practice				H		ENV Manager Approval	
1.3	Alliance Excavation Permit	SUP	As required for scope of works, in place prior to any excavation	Alliance Best Practice				H		Signe Permit to Work	
2.0 – Material Compliance											
2.1	SIL GAP65 Approval	ENG	Material complies to TNZ M/3	TNZ M/3 1986	N/A	Prior to Construction		H		Email Approval from QMR	
2.2	Subbase GAP65 Approval	ENG	Material complies to TNZ M/3	TNZ M/3 1986	N/A	Prior to Subbase Construction		H		Email Approval from QMR	
2.3	Basecourse AP40 Approval	ENG	Material Complies to TNZ M04	TNZ M04 2024	N/A	Prior to Basecourse Construction		H		Email Approval from QMR	
2.4	Subgrade CBR	ENG	Soaked CBR: Min. 3 per section (IANZ-accredited laboratory), Unsoaked CBR: Min. 3 per section, Moisture Content: Min. 3 per section	Design notes	N/A	Minimum 3 tests per site		R		Lab Reports to Design Verifier	
2.5	Culvert Pipe & Rubber Ring Joints	ENG	Approved through Alliance Engineering/Quality Team			Prior to Constructio n		R		Email Acceptance from QMR	
2.6	Culvert Bedding Material	ENG	Complies to NZTA F/3 Pipe Bedding and Backfilling for Flexible Pipes – Class A	Pipe Bedding and Backfilling for Flexible Pipes	N/A	Prior to Constructio n		R		Email Acceptance from QMR	
3.0 Construction – Subgrade											
	Topsoil Strip	SUP	Area stripped of all topsoil and organic material	Alliance Best Practice	Excavation	Prior to Subgrade cut		W		Site Record Sheet, Photos	
	Cut to subgrade level	ENG	Cut to design levels – Topographic survey 5m x5m Grid	Alliance Best Practice	Survey	Post subgrade cut		I		As-built Survey Record	

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					Method	Frequency	SubCon	Alliance	Client		
3.1	Subgrade CBR Verification	ENG	Scala Penetrometer (NZS 4402:1986 Sec. 6.5.2) at 50 mm intervals to 1000 mm depth, every 10 m chainage	NZS 4402:1986 Sec. 6.5.2	Test	10m x 10m grid		I		Scala Record Sheet	
3.2	Subgrade Proof Rolling	ENG / SUP	Visual inspection & roller observation - No soft spots, deflection, or pumping	TNZ B/02: 2005	Test	Continuous		I		Site Records	
3.3	Backfill Undercuts	ENG	Unsuitable subgrade material removed, and excavation backfilled in 200mm layers (GAP65) to 95% MDD	Alliance Best Practice	Excavation	As required		H		Site Records / NDM test sheet	
3.4	Subgrade Approval	ENG	Approval to proceed with Subbase	Alliance Best Practice	N/A	On completion of Subgrade testing		H		Approval to proceed from Design Verifier	
4.0 – Subgrade Improvement Layer (SIL)											
4.1	Layer Thickness	ENG	SIL Thickness as per SIL Design note, 200mm – 300mm	Design notes	Excavation	During Sil constructio n		I		Site Records	
4.2	Density	ENG	Mean percentage of MDD not less than 95% with no single result less than 92%	TNZ B/02	NZS 4402 – Test 4.1.3	Not less than one test per 150m2		I		Site Records / NDM test sheet	
4.3	SIL Proof Roll	ENG	Visual inspection & roller observation - No soft spots, deflection, or pumping	TNZ B/02: 2005	Test	One pass on each lane		I		Site Records	
5.0 Construction – Subbase											
5.1	Density	ENG	Mean percentage of MDD not less than 95% with no single result less than 92%	TNZ B/02	NZS 4402 – Test 4.1.3	Not less than one test per 150m2		I		Site Records / NDM test sheet	
5.2	Surface Level	ENG	+15mm/-15mm from design level. Thickness of subbase shall be within 15mm of design thickness	TNZ F/1	Survey	5m x5m Grid		I		As-built Survey Record	

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					Method	Frequency	SubCon	Alliance	Client		
5.3	Subbase Proof Roll	ENG	Visual inspection & roller observation - No soft spots, deflection, or pumping	TNZ B/02: 2005	TEst	One pass on each lane		I		Site Records	
6.0 Construction - Basecourse											
6.0	Density	ENG	Mean percentage of MDD not less than 98% with no single result less than 95%	TNZ B/02	NZS 4402 – Test 4.1.3	Not less than one test per 150m2		I		Site Records / NDM test sheet	
6.1	Surface Level	ENG	+5mm/-15mm from design level. Thickness of subbase shall be within 15mm of design thickness	TNZ F/1	Survey	5m x5m Grid		I		As-built Survey Record	
6.2	Surface tolerance	ENG	Finished surface shall not vary more than +-15mm when tested with a 3m straightedge	TNZ B/02	Test	20m grid		I		Site Records / Photos	
6.3	Basecourse Approval	ENG	Approval to proceed with Surfacing	Alliance Best Practice	N/A			H		Approval to Proceed from Design Verifier	
7.0 Construction – Culverts											
7.1	Survey Set-Out	ENG	Culverts shall be set out and laid where shown in the drawings	Alliance Best Practice	SUrvey	Before excavation of drain lines					
7.2	Culvert Trench Excavation	SUP	Trench Excavated to subgrade level, If excavation exceeds 1.5m trench battered at 1:1 or benched as required, 600m cover to top of pipe.	JSEA	Excavation	During Trench Excavation		H		Site Records	
7.3	Subgrade Suitability	ENG /SUP	Assumed subgrade CBR 4%, visual inspection on site, organic material removed, geotextile prior to Bedding placement	Alliance Best Practice	Inspection	Prior to placing Bedding material		I		Site Records	
7.4	Bedding Material	SUP	Min 100mm thickness	TNZ F/03	N/A	Check during bedding placement		I		Site Records	
7.5	Placing Culvert Pipe	ENG	As per design levels and grades	N/A	Survey	Post pipe placement		I		As-Built Survey Record	

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					Method	Frequency	SubCon	Alliance	Client		
7.6	Pipe Jointing	ENG	As per manufacturers specification	N/A	N/A	Inspection post jointing		I		Site Records	
7.7	Trench Backfill	ENG	Approved material compacted in 150mm lifts to 95% MDD	TNZ F/03	N/A	Backfill post pipe placement		I		Site Records / NDM Report	
4.0 Post-Construction											
4.1	As-Built Records	ENG	All As-Builts provided Alliance Quality Team within one month of completion	Alliance Best Practice				R		As-Built Data	
4.2											
4.3											
4.4											