Downner
Relationships creating success

Homai Train Station - Inspection and Test Plan

Project Area	Homai Train Station	Rev	1
Activity Title	Bearing Pad Grouting	Date	19/12/2024
Location	Piers 1 - 5 and Abutment A	Lot No.	3A-1
Ref #	DN1212-ITP-015		
DNZ Project Manager:	Dan Trotman		
AT Project Manager:	Werner Nel		
DNZ Project Engineer:	Grant Wallace		
Drawings/Reference Documents:	3235599-SP03-ST-3150 - PROPOSED ACCESS RAMP- SETOUT 3235599-SP03-ST-3200 - PROPOSED ACCESS RAMP- EXISTING PIER 1 DETAILS 3235599-SP03-ST-3201 - PROPOSED ACCESS RAMP- EXISTING PIER 2 DETAILS 3235599-SP03-ST-3202 - PROPOSED ACCESS RAMP- EXISTING PIER 2 DETAILS 3235599-SP03-ST-3250 - PROPOSED ACCESS RAMP- ABUTMENT DETAILS- SHEET1 3235599-SP03-ST-3252 - PROPOSED ACCESS RAMP- ABUTMENT BEARING		
Specifications:	NZS 3104: Specification for Concrete Production NZS 3109:1997 Concrete Construction NZS 3101: Concrete Structures Standard NZS 3121: Specification for Methods of test for Concrete NZS 3114: Specifications for Concrete Surface Finishes App 1C - 746-24-847-AC - Tech Spec - Geo & Struc		

Inspection and Test Codes:

- [R] Review — Review of reports, records or other evidence of compliance.
- [I] Inspection — In process check, work proceeds. Record the check if required.
- [W] Witness — Inspection to be witnessed on site and recorded. Record to be filed.
- [H] Hold — No work to proceed past Hold Point until this is completed, recorded and released

ITP Item #	Construction Activity or Material Element	Standard, Drawing or Specification Reference	Construction Activity Description, Test Type and Acceptance Criteria	Test Frequency	QA Record	Verification Method and On Site Responsibilities			DNZ Rep Sign and Date	
						DNZ Engineer	Engineers Rep	Designer Rep		
1	PRELIMINARY & GENERAL									
1.1	Method Statement Development & Safety Analysis	The Downer Standards (TDS)	Prior to construction: document review.	Once	Method Statement & JSEA Completed & signed by relevant authority	H [signature]	R	R	[signature]	24/01/25
1.2	Confirmation of superstructure position.	Signed ITP	Signed ITP required for the position of the superstructure before grouting.	Once	Signed ITP	[signature]	W	H	[signature]	24/01/25
2	MATERIAL APPROVALS									
2.1	Non Shrink Grout Approval	3235599-SP03-ST-3200 - PROPOSED ACCESS RAMP-EXISTING PIER 1 DETAILS 3235599-SP03-ST-3201 - PROPOSED ACCESS RAMP-EXISTING PIER 2 DETAILS 3235599-SP03-ST-3202 - PROPOSED ACCESS RAMP-EXISTING PIER 2 DETAILS 3235599-SP03-ST-3250 - PROPOSED ACCESS RAMP-ABUTMENT DETAILS- SHEET1 3235599-SP03-ST-3252 - PROPOSED ACCESS RAMP-ABUTMENT BEARING App 1C - 746-24-847-AC - Tech Spec - Geo & Struc Spec - C0602.10.04	Non shrink grout - sika 212 HP to be submitted to designer for review and approval as it obtains 85 Mpa after 28 Days > 50 Mpa as per 3252 - Note 1.4	Once	MDS, In Eight Ref CAN067	[signature]	R	H	[signature]	24/01/25
2.2	Glass Plate Trial	3235599-SP03-ST-3252 - PROPOSED ACCESS RAMP-ABUTMENT BEARING - Note	As per 3235599-SP03-ST-3252 - PROPOSED ACCESS RAMP- ABUTMENT BEARING - Note 1.4. Glass Plate trial to be undertaken to replicate bearing pad footprint of 230mm x 230mm x 20mm. Area is to be poured prior to installation of bearing grout to confirm voiding is less than 10% of area. Undertaken with MSQA observations Methodology to be submitted prior to commencement..	Once	Site Observation Report Written acceptance of material following trial.	[signature]	R	H	[signature]	24/01/25

[illegible] Revised to [illegible] Refer to CAN 067

2.3	Curing Method	App 1C - 746-24-847-AC - Tech Spec - Geo & Struc	According to MDS sheet for Sika 212 HP, See below, grout to be sealed with timber shutter, left to cure within small shutter and then treated with Sika Anti Sol as per data sheet attached.. **CURING TREATMENT** Formwork should be left in place for at least 5 days if possible, to prevent moisture evaporation and provide restraint to early age hardened expansion. Once formwork is removed a suitable curing membrane such as Sika Antisol® should be applied to any exposed faces. Refer to separate data sheet for further information.	Once	MDS Photos		R	R		24/01/25
3	CONSTRUCTION ACTIVITIES									
3.1	Construction Joint	3235599-SP03-ST-3252 - PROPOSED ACCESS RAMP- ABUTMENT BEARING	Formation of construction joint required on top of pier / abutment to the construction joint must be visible.	Once	Photos		R	I		24/01/25.
3.2	Grouting Pre-Pour Inspection	3235599-SP03-ST-3202 - PROPOSED ACCESS RAMP- EXISTING PIER 2 DETAILS App 1C - 746-24-847-AC - Tech Spec - Geo & Struc	No reinforcing requirements. Check to ensure that the surface is prepped, underside of bearing pad is in correct location prior to pouring. Nominal 20mm will be poured.	Each Structure	MSQA SVR Pre-Pour Checklist Photos			H		24/01/20
3.3	Grouting Pour	3235599-SP03-ST-3252 - PROPOSED ACCESS RAMP- ABUTMENT BEARING NS 3109 AS1012 Spec - C0602.10.04	Concrete to be poured as per manufacturers recommendations where 3,7 litres per bag. Samples to be taken from each batch using steel moulds where 1, 2, 3, 5, 14 and 28 day tests are to be taken to ensure that grout has reached necessary strength **MIXING** Place about 70–80 % of the premeasured clean water (depending on consistency required – refer to "Mix Ratio") into a clean container and gradually add the whole bag of SikaGrout®-212 HP into it while continuously mixing. Add the remaining water until the desired consistency is obtained. Mix for 3–5 minutes with a low speed drill (500 rpm max.). Allow to stand so any entrapped air can escape. Do not add more water to increase flow of the grout if a mix has stiffened due to time delays. If the grout is unworkable discard.	Once	Photos Test Report for Compressive Strength		R	R		24/01
3.4	Post Pour Inspection	App 1C - 746-24-847-AC - Tech Spec - Geo & Struc 3235599-SP03-ST-3003 NZS 3114	Joint inspection be undertaken with designer to inspect shutters of structure following removal of shutters and survey/ check dimension of structure have achieved stipulated tolerances stated in drawing suite and NZS 3109	Once	Visual Inspection Photos		R	W		24/01
4	FINAL RECORDS									
4.1	As-Built	N/A	Installed as per design drawings. All compliance recorded CAD files	Once	As-Built			R		24/01
4.2	Non-conformances	DN1212-DOW-PLA-PM-0005 QMP	Non-conformances reports to be raised when specification not met. All non-conformances within the area under review need to be listed on the NCR report. NCR Reference	Each NCR	NCR forms on InElght		H	R	R	N/A

Please note, this ITP is only in relation to the grouting of the bearing pads on each of the abutments and piers. This work will be done post installation of steel, Steel install will cover the bolt installation etc.

NCR03 raised for Sika Monotop 438R Abutment A Plinth East - For No test cylinders taken.

ITP APPROVAL PROCESS			
Prepared By: Project Engineer	Grant Wallace	Signed:	Date: 24/01/25
Reviewed By: Project Manager	Dan Trotman	Signed:	Date:
Reviewed by: Quality Eng./Mgr.	Nas Matar	Signed:	Date:
Reviewed By: Design Engineer	Daniel Cvitanich	Signed:	Date:
Reviewed By: AT Project Manager	Werner Nel	Signed:	Date:
Reviewed By: AT Engineer to Contract	Mike Robertson	Signed:	Date:

FINAL ITP CLOSE-OUT			
Downer Project/Site Engineer	Grant Wallace	Signed: Digitally signed by Nas Matar DN: cn=Nas Matar gn=Nas Matar c=NZ New Zealand l=NZ New Zealand o=T&T ou=Downer e=nas.matar@downer.co.nz Reason: I have reviewed this document Location: Date: 2025-02-13 13:39+13:00	Date:
QA Mgr/Engineer	Nas Matar	Signed: Nas Matar	Date: 13/02/2025
Engineer Rep(Assistant)		Signed:	Date: