INSPECTION AND TEST PLAN – FABRICATION

Job No: 18478 **Client:** United Civil Construction

Project Name: Tangiteroria Bridge Strengthening

ACTIVITY DEFINITIONS: ***C****=Check;* ***R****= Review;* ***P****=Perform;* ***H****=Hold Point;* ***W****=Witness Point;* ***M****=Monitor Point*

REV	REV DESCRIPTION	APPROVED	DATE
0	Issued for Construction	Grant Withers	11/4/2025
A	Issued for Approval	Grant Withers	27/2/2025

ITEM	PROCESS DESCRIPTION IN SEQUENCE	QUALITY CONTROL ACTIVITY & RESPONSIBILITY	ACCEPTANCE CRITERIA		VERIFICATION	INSPECTION ACTIVITY					
			REFERENCE/STANDARD	CLAUSE	RECORDING DOCUMENT	ACTIVITY	PRODUCTION	ACTIVITY	QA/QC INSPECTOR	ACTIVITY	CLIENT /TPI
1.0	PRE-START										
1.1	Technical specifications & Construction drawings	Review the Technical Specification(s) and client supplied construction drawings for requirements	Structural Specification Client IFC drawings	All		P		P			
1.2	Receipt of Approved Construction Drawings	Shop drawings (fabrication drawings) showing details for all steel elements shall be prepared and submitted to the Clients Engineer no less than 14 working days prior to commencing fabrication, the review process shall be completed prior to commencement of fabrication	AS/NZS 5131 AS1100, AS 1101.3 Structural Specification	4.4 All 9.6	Drawings and document revision review	R		R		H	
2.0	PROCEDURES AND DOCUMENTS										
2.1	Quality Management System	ISO 9001 & AS NZS 3834 certification is current	ISO 9001 AS/NZS ISO 3834	All All				R			
2.2	SFC Certified	SFC Certification to be current and minimum CC2 as per construction category, if non SFC contractors are to be utilised for structural steel fabrication, approval from the design engineer is required	AS/NZS 5131 Structural Specification	4.1 10.2.1 / 9.8				R			
2.3	ITP	ITP to be developed and approved, ITP to be submitted to design engineer for review prior to commencement of fabrication	AS/NZS 5131 Structural Specification	 9.3		H		H		H	
3.0	MATERIALS										
3.1	Procurement of materials	Structural steel material is to be procured from mills with third party product certification schemes such as ACRS accredited mills with ILAC accreditation, any steel that does not meet this criteria shall have verification testing completed in accordance with the requirements of SCNZ report 111:2018 section 5, all steel conformity paths and verification testing results shall be submitted to the design engineer/construction reviewer for approval	AS/NZS 5131 NZS 3404: 1997 Structural Specification	5.3.1 2 9.8.1		H		H		H	
3.2	Inspection of delivered materials and test certificates	On delivery of materials, Inspection of materials will be undertaken to ensure they match the purchasing requirements and that the material	AS/NZS 5131	4.7 & 5.2		P		H			

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		certificates comply with project specific requirements									
3.3	Marking	After checking incoming materials, the materials will be marked with the PO number, The Project/Job number and heat number	AS/NZS 5131	Section 5.2		P		C			
3.4	Traceability	Construction Category CC2 'Basic traceability' is required, material certificates and nests to be collated and supplied in the MDR with associated material certificate register providing traceability requirements	AS/NZS 5131	4.7 & 5.2		P		P			
4.0	Production										
4.1	Cutting	Steel may be cut by sawing, shearing, cropping, machining, or thermal cutting. All corners and edges on steelwork to be painted or galvanized shall be ground to a minimum radius of 2mm. No edges are to be sheared in areas designated as yielding regions for seismic design. Site cutting and hand gas cutting is not permitted, unless approved by the Engineer.	AS/NZS 5131 Structural Specification	6.5 10.2.2		P		C			
4.2	Holing	Holes for bolts shall be drilled or machine cut, slotted holes are not to be used for connections other than those documented in approved drawings	AS/NZS 5131 Structural Specification	6.7, 6.13 10.2.8		P		C			
4.3	Re-entrant corners	Re-entrant corners to have a minimum 10mm radius, a re-entrant corner being any corner in which the open angle between cut faces is less than 180 degrees	AS/NZS 5131	6.5.3		P		C			
4.4	Splicing of members	All members shall be cut to the lengths required and to be of one length without welding, unless approved by the Engineer.	Structural Specification	10.2.2							
5.0	ASSEMBLY										
5.1	Fit up and dimensional checks	Checks are to be made prior to any cutting or welding taking place and on completion of welding of individual items and completed fabrication	AS/NZS 5131	6.9, 6.10, Appendix F		P		R			
5.2	Weld Access holes	Weld access holes shall be in accordance with AS/NZS 5131 section 6.7.7 and approved by the	AS/NZS 5131	6.7.7		P		C			

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		design engineer, where there is any doubt referral back to the design engineer is required									
5.3	Temporary attachments	Temporary attachments to be ground flush and tested with magnetic particle examination	AS/NZS 1554.1	5.9		P		C			
6.0	WELDING										
6.1	Welding procedures to be approved	CEC Welding Inspector shall review and approve welding procedure specifications to ensure they are suitable for the joint type, material, welding consumables and process to be used	AS/NZS 1554.1 Structural Specification	Section 4	WPS Register			H		H	
6.2	Welding Consumables	Welding consumables to be used as stated on the relevant WPS and stored in accordance with the requirements of AS/NZS 5131 and manufacturers recommendations as applicable	AS/NZS 5131 AS/NZS 1554 Structural Specification	7.5 All	Welding Consumables Register	P		R			
6.3	Welder Qualifications	CEC Welding Inspector shall review and approve welder qualifications to ensure they are suitable for the welding being undertaken	AS/NZS 2980:2018 AS/NZS ISO 9606: 2017 Structural Specification	All sections	Welder Qualification Register			H		H	
6.4	Welding Traceability	Welding traceability to be provided by welders ID recorded adjacent to the weld and on the workshop drawing in the production check point stamp, this shall then be transferred to the welding and fabrication inspection record by the welding inspector	AS/NZS 5131	7.4.2 & table 7.4		P		P			
6.5	Weld Category	All welds are category SP ‘structural purpose’	AS/NZS 1554.1 Project Drawings Client IFC Drawing	All General Notes		P		R			
7.0	POST WELD INSPECTION										
7.1	Welding Inspection Requirements	100% Visual examination of all welds	AS/NZS 5131 Structural Specification	Appendix I 10.2.5-Table 11	Visual Inspection Report			H		W	
7.2	In-House Visual Welding Inspection	CEC Welding Inspector to undertake all visual welding inspection requirements, with minimum qualifications as stated in section 7.2 of AS/NZS 1554.1 and the structural specification	AS/NZS 5131 AS/NZS 1554.1 Structural Specification	13.6.1.3 4.12, 7.2 10.2.5-Table 11				P			
8.0	NON-DESTRUCTIVE (NDT) and DESTRUCTIVE TESTING										
8.1	NDT requirements	10% Ultrasonic testing of all butt welds. Non-visual examination requirements as per AS/NZS 5131 and AS/NZS 1554.1.	AS/NZS 5131 AS/NZS 1554 Structural Specification	Appendix I Section 6 10.2.5-Table 12	NDT Request NDT Reports	H		H		W	

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		NDT to be supplied by an IANZ accredited test laboratory									
8.2	Weld Defects	All weld defects revealed by visual examination or NDT shall be repaired with the same process as used in the initial weld and subject to at least the same method/type of NDT method undertaken that revealed the defect	AS/NZS 5131 AS/NZS 1554	13.6 6.7		P		C			
9.0	FINAL INSPECTION AND DOCUMENTATION										
9.1	NCR	Non-conformances to be closed out prior to practical completion	ISO 9001	All		H		H			
9.2	Manufacturers Data Report (MDR)	Compile all quality documentation as required by the specification and submit to client	AS/NZS 5131	Appendix E		R		P		R	
10.0	SITE ERECTION	Refer to separate site erection ITP									