

	Inspection & Test Plan - Cycle Railing (Supply & Installation)			
	Document No.: 1145-C200-FUL-QAC-ITP-0020			Revision: 00
	Specification:			Date: 5/06/2024
	Other Referenced Documentation: AS5100.2-2017, BTN 006 January 2018, BTN 008 June 2018 Austroads Guide to Road Design, Part 6A: Paths for Walking & Cycling			



Legend: **HP**: Hold Point, **HP*** Internal Hold Point, **WP**: Witness Point, **IP**: Inspection Point, **SP**: Surveillance Point

Item	Task/Activity Description	Reference	Acceptance Criteria	Inspection / Test			Responsibility	Verifying Documents	Date Completed	Sign-off
				Method	Frequency	Category				
1	Preliminaries - Materials									
1.1	Railing Components	IFC Drawings Manufacturer's Drawings & Installation Recommendations AS5100.2 AGRD, Part 6A, Clause 5.5.3 Fulton Hogan Quality Management Plan	Where applicable, product to be selected based on the following criteria: Mounted on SUPs and veloways: i. height to rail between 1.2m & 1.4m Mounted on bridges and culverts: ii. able to withstand the load conditions iii. height to rail 1.4m minimum (on bridges and culverts) Details of the nominated proprietary system to be submitted for review to the Superintendent. Enter: Teambinder Material Approval number [free text box]	Document Review	Each component	IP	PE/SE/SPE	This ITP		
1.2	Fixing Detail	IFC Drawings BTN 006, Clause 2.3 BTN 008, Clauses 2.4.3 & 2.4.4 Manufacturer's Drawings & Installation Recommendations	Fixing detail to be either positive connection via cast-in ferrules or similar. Bonded anchors are subject to approval from the Superintendent on new structures. Changes to the above shall be accompanied with a PE Certificate. Note: Mechanical anchors shall not be used as they will be subject to tensile loads. Enter: Teambinder Approval number [free text box] or Attach: PE Certificate of Compliance	Document Review	Each component	IP	PE/SE/SPE	This ITP		
1.3	Base Plate Bedding (non-structural) Grout or Mortar	IFC Drawings Manufacturer's Drawings & Installation Recommendations	Where applicable, product to be selected based on the following criteria: i. have a trowelable consistency ii. have the characteristics capable of being applied to the minimum and maximum thickness as noted on the IFC drawings Enter: Teambinder Material Approval number [free text box]	Document Review	Once, for each product, prior to placement of product	IP	Superintendent	This ITP		

 	Inspection & Test Plan - Cycle Railing (Supply & Installation)			
	Document No.: 1145-C200-FUL-QAC-ITP-0020			Revision: 00
	Specification:			Date: 5/06/2024
	Other Referenced Documentation: AS5100.2-2017, BTN 006 January 2018, BTN 008 June 2018			
Austroads Guide to Road Design, Part 6A: Paths for Walking & Cycling				

Legend: **HP**: Hold Point, **HP*** Internal Hold Point, **WP**: Witness Point, **IP**: Inspection Point, **SP**: Surveillance Point

Item	Task/Activity Description	Reference	Acceptance Criteria	Inspection / Test			Responsibility	Verifying Documents	Date Completed	Sign-off
				Method	Frequency	Category				
2	Preliminaries - Procedures									
2.1	Certification of Installers	BTN 006, Clause 3 680.06	Where applicable, all bonded anchor installation crews and direct supervisory personnel shall either be: i. listed on the "AEFAC Certified List of Installers"; or ii. trained by the Supplier of the bonded anchor system. Evidence of either is to be submitted to the Superintendent. Enter: Teambinder Approval number [free text box]	Document Review	Where applicable, once, prior to commencement of Works	WP	Superintendent	This ITP		
3	Pre-installation Activities									
3.1	IFC Drawings	Fulton Hogan Quality Management Plan	Check the revision of the IFC drawings are current as per the drawing register (on Teambinder)	Document Review	Prior to starting Works and at regular intervals	HP*	All	This ITP		
3.2	Materials Inspection Checklist	IFC Drawings Fulton Hogan Quality Management Plan	General inspection of railing components for defects including cracks, handling and storage damage & distortion. Bolts, nuts and washers shall be the size, material, strength grade and coating as noted on the IFC Drawings. Galvanised coating - no loss of adhesion, damage, blisters, roughness, sharp points and flux residues. Complete: Materials Inspection Checklist in ConQA	Measure Visual	Each component	IP	SE/PE/SPE	This ITP		

 			Inspection & Test Plan - Cycle Railing (Supply & Installation)			
			Document No.:	1145-C200-FUL-QAC-ITP-0020	Revision:	00
			Specification:		Date:	5/06/2024
			Other Referenced Documentation:	AS5100.2-2017, BTN 006 January 2018, BTN 008 June 2018		
				Austrroads Guide to Road Design, Part 6A: Paths for Walking & Cycling		

Legend: **HP**: Hold Point, **HP*** Internal Hold Point, **WP**: Witness Point, **IP**: Inspection Point, **SP**: Surveillance Point

Item	Task/Activity Description	Reference	Acceptance Criteria	Inspection / Test			Responsibility	Verifying Documents	Date Completed	Sign-off
				Method	Frequency	Category				
4	Installation Activities									
4.1	Bearing / Mounting Surface Preparation	Manufacturer's Drawings & Installation Recommendations	As a minimum, ensure that the bearing surface is clean and free from loose particles and laitance.	Visual	Each post location	IP	SE/PE/SPE	This ITP		
4.2	Railing Handling	Manufacturer's Drawings & Installation Recommendations	The method of handling and erection of the steel railing shall ensure that the components are not stressed or deformed beyond the design limit and that there is no damage to the protective coating during these operations. Where damage exists, it shall be repaired using an approved repair procedure for both steelwork and coatings.	Visual	Each component	IP	SE/PE/SPE	This ITP		
4.3	Railing Erection	Manufacturer's Drawings & Installation Recommendations	Place steel component into position, ensuring that it is plumb, level, square and within tolerances shown on the IFC drawings or Manufacturer's Drawings and installation recommendations. Where mounting to supports or foundations, adjust RL accordingly using suitably sized shims, levelling or jacking nuts (where applicable). Where steel to steel connections exist, holes shall be aligned so that a drift pin equal in diameter of the bolts can pass through freely. Where a misalignment is found, heating of bolts, hand flame-cutting of holes or (heat) drifting of holes shall not be permitted, only reaming, milling, drilling or machine flame or plasma cut. Internal surface of the hole to remain smooth and free from burrs. Holes shall not exceed the greater of: 1.25 x bolt dia. OR bolt dia. + 8mm Slots shall not exceed the greater of: 1.33 x (bolt dia. + 10mm) OR 2.5 x bolt dia	Measure Visual	Each component	IP	SE/PE/SPE	This ITP		

Inspection & Test Plan - Cycle Railing (Supply & Installation)

Document No.: 1145-C200-FUL-QAC-ITP-0020

Revision:	00
-----------	----

Specification:

Date:	5/06/2024
--------------	-----------

Other Referenced Documentation:	AS5100.2-2017, BTN 006 January 2018, BTN 008 June 2018 Austroads Guide to Road Design, Part 6A: Paths for Walking & Cycling
--	--

Legend: **HP**: Hold Point, **HP*** Internal Hold Point, **WP**: Witness Point, **IP**: Inspection Point, **SP**: Surveillance Point

Item	Task/Activity Description	Reference	Acceptance Criteria	Inspection / Test			Responsibility	Verifying Documents	Date Completed	Sign-off
				Method	Frequency	Category				
4	Installation Activities (Continued)									
4.4	Fastener Tightening - Snug Tight Condition (4.6/S & 8.8/S)	IFC Drawings Manufacturer's Drawings & Installation Recommendations	Place bolts, washers and nuts as detailed on the drawings. Washers shall cover the hole or slotted hole completely by 0.5 x bolt diameter. Tapered washers shall be positioned if the surfaces are on a slope of 1:20 or greater. Tighten from the stiffest section working towards the free edges with a few impacts of an impact wrench or the full effort of a person using a podger spanner. Protrusion to be at least 1 clear thread shows beyond the nut but no greater than 12mm.	Measure Visual	Where applicable, each bolted connection	IP	SE/PE/SPE	This ITP		
5	Post-installation Activities									
5.1	Inspection of Coating	IFC Drawings Manufacturer's Drawings & Installation Recommendations	After installation Works are complete, inspect the steel element for damage to the coatings. Where damage exists, it shall be repaired using an approved repair procedure.	Visual	Each component	IP	SE/PE/SPE	This ITP		
5.2	As-built Survey	IFC Drawings Manufacturer's Drawings & Installation Recommendations AS5100.2 AGRD, Part 6A, Clause 5.5.3 Fulton Hogan Quality Management Plan	Provide record of dimensional measurements to demonstrate that all Works meet level and location requirements within the tolerances below: Mounted on SUPs and veloways: i. height to rail between 1.2m & 1.4m Mounted on bridges and culverts: ii. height to rail 1.4m minimum (on bridges and culverts) Attach: Survey As-builts / Survey Report	Document Review	Each component	IP	Surveyor SE/PE/SPE	This ITP		
5.3	Non-conformance Report (NCR) Closure	Fulton Hogan Quality Management Plan	Ensure that any NCRs pertaining to the lot / element / Work area that this ITP covers, have been closed.	Document Review	Once, prior to closure of this lot / element / Work area	HP*	SE/PE/SPE	This ITP		
	Final Inspection									
On behalf of Fulton Hogan, it is hereby certified that the Works represented by the item 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:		/	/			