WORK AREA:	CONTRACT NAME:	DESCRIPTION OF ACTIVITY:
Gillingham Road	N23041 Gillingham Road Bridge Replacement	Bridge Replacement Works
ITP No: 009		

Rev	Originator	Date	Approved	Date
0	Akash Nada	10/04/2025	GvdLinde	
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Item No.	ITEM	ACTIVITY TASK	ACCEPTANCE CRITERIA	FREQUENCY	CERTIFYING DOCUMENTATION, RECORD OR CHECKSHEET	VERIFICATION SIGN OFFS	
						INTERNAL VERIFICATION AUTHORITY OR RESPONSIBILITY	CRITICAL HOLD POINT AUTHORITY
1.	**Site Preparation**	Site Clearance and Excavation	General site clearance, removal of the trees	Once	Visual Inspection	R	R
		Demolition and removal of existing bridge	Removal of existing bridge including the bridge piles from the previous bridge. Structures to be salvaged and transported to WDC Yard	Once	Visual Inspection	R	R
2.	**Initial set out**	Survey	As per IFC drawings, and design model provided	Prior to start Bridge Construction	Visual inspection	H	H
3.	**Pile Installation**	Predrilling	As required – to ensure proper foundation conditions for the pile installation	Prior to Installation of Pile	Visual Inspection Subcontractors Documentation	H	H
		Dry Mix Concrete Driving Plug	Placed directly from the concrete truck into pile casing, ensuring accurate quantity and proper distribution.	Prior to placing casing into the ground	Visual Inspection, Suppliers' documentation Subcontractors Documentation	H	H
		Mobilising the pile	Gently tapped to mobilise the pile by tapping the dry mix charge.	Prior to diving pile	Subcontractors Documentation	H	W

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		Driving the pile casing	Drive the pile casing down to designed depths. Welded additional lengths of casing as per IFC Drawings and specification. Final splice completed to ensure piles are constructed to the specified depths and length.	Prior to install reinforcement pile cage	Suppliers' documentation Subcontractors Documentation	H	H
		Ultimate Geotechnical Strength Check	Hiely Formulae to estimate ultimate geotechnical strength to ensure specified value in IFC drawings.	Prior to installing reinforcement pile cage	Test record sheet	H	H
		Install pile reinforcement cage	Pile reinforcement cage prefabricated to as per IFC drawings and specification	Prior to installing in casing	Suppliers' documentation	H	H
		Pre-pour inspection	Pile casing and cage installed as per IFC drawings and specification	Prior to concrete pour	Pre-pour inspection check list	H	H
		Concrete Placement	Concrete poured at cut-off levels using concrete pump hose, lowered to the base of the pile. Concrete poured in stages to reach required depths	During concrete placement	Visual Inspection, Suppliers' documentation	H	H
		Final Inspection	Pile cage securely placed, and the concrete placement is complete	Upon completion of the concrete placement	Inspection check sheet	H	H
		PDA Testing	At minimum 20% of driven pile, with minimum of 1 pile at each abutment shall be tested. As per site technical specification section 8.3.2	At minimum of 72 hours after initial driving or as directed by the Engineer	Record sheet PDA test – obtain written approval from Engineer	H	H

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4.	**Abutment Construction**	Abutment footprint preparation	As per IFC drawings and design model provided to enable blinding concrete works.	Prior to placing blinding concrete – Pre-pour Inspection	Pre-pour inspection checksheet	H	H
		Place blinding concrete	50mm thick 10MPa blinding concrete as per IFC Drawings and Specification	Prior to installing subsequent works	Suppliers Documentation	H	W
		Survey Setout	Setout completed on blinding concrete, including offset dimensions to the abutment beams and RLs as per IFC drawings and design model provided	Prior to installing reinforcement works	Provided design survey model, Visual inspection	H	H
		Main abutment beam and pile caping – reinforcement install	Prefabricated reinforcement as per IFC Drawings and specification provided	Prior to installing subsequent work – as directed by the Engineer	Suppliers' documentation, Checksheet	H	H
		Pile starter bars	Flange and nuts epoxied to the pile starter bars as per IFC Drawings and specification	Prior to Prior to installing subsequent work	Suppliers' documentation, Checksheet	H	H
		Abutment Upstand starter bars	Positioned correctly and bars as per IFC drawings and specification	Prior to installing subsequent works	Suppliers' documentation, Checksheet	H	H
		Pre-Pour inspection	Formworks within tolerance and reinforcement and other fixings according to IFC drawings and specification	Prior placing concrete	Pre-pour inspection checksheet	H	H
		Place concrete	40MPa concrete as per IFC Drawings, Concrete compaction with vibrators and application of surface retarder to the construction joint at the base of the abutment upstand.	As directed by the Engineer	Suppliers' documentation	H	W

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5.	**Pre-cast Beams**	Installation of the Elastomeric bearings	Bearings and joint preparing as per IFC Drawings and specification	Prior to installing SHC beams, and as directed by the Engineer	Checksheet Suppliers' documentation	H	H
		Pre-cast Single Hollow Core Beam	Pre-cast completed and cured to archive designed strength at 28 days, free from damages and cracks. Northen beams dressed with steel pipe brackets, pipe hangers. as per drawings and specification	As directed by the Engineer	Suppliers' documentation	H	H
		Install 400mm&300mm sections of pipe	Prefabricated and braced on hangers as per IFC Drawings and specification	Prior to installing beam on the position	Checksheet, Visual Inspections	H	H
		Install SHC beams	Placed on beam locations setout on abutment beams including level check of the beam sills within tolerance level as per IFC drawings and specification	Prior installing subsequent works, and as directed by the Engineer	As-built data, Checksheet	H	H
		Transverse Stressing Duct	Ducts fed through SHC beams, ducts taped together as per IFC drawings and specification	Prior to start grout works	Check sheet	H	H
	Grout infill between SHC	Pre-grout	The sides of the beams sealed to contain grout	Prior to place onsite mixed Sika 212 grout	Pre-pour inspection checksheet	H	H
		Grout works	Sika 212 grout mixed on site and poured as per IFC drawings and specification	As directed by the Engineer	Suppliers Documentation, Checksheet	H	H
6.	**SHC Beam Post Tensioning**	Super Strand Anchor Heads	Installed at each end of Transverse Stressing Duct	Prior installing super strands	Suppliers Documentation, Visual Inspection	H	W

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		Super Strand Installation	The 7 super strands fed through all SHC beams at each PT locations as per IFC Drawings and specification	As directed by the Engineer	Suppliers Documentation,		
		Post Tensioning	Strands tensioned up to the design loads and locked in position with a wedge plate at the anchor heads, grouting ports are epoxied in position as per IFC Drawings and specifications	During and upon completion of post-tensioning	Subcontractor documentation, Record sheets	H	H
		Pre-Grout inspection	All tendon locations stressed and the epoxy at the grout ports has reached strength	Prior to grout filling	Pre-inspection checksheet	H	H
		Pumping grout into strand ducts	Grout pumped into the ducts under pressure until its bleed out of the breather ports at the far end which are then crimped until grout bleeds out of the pumping end ensuring all air voids are removed from the duct	As directed by the Engineer	Suppliers' documentation	H	H
		Post-Grout	Ends of strands are trimmed and the rebates for the anchor heads are mortar filled and finished flush with the edge of the beams at all locations	Upon completion of the grout works	Visual Inspections	H	W
7.	**Abutment Headwall**	Surface preparation	The day after the abutment beam pour, Pressure blasts the construction joints to a type B roughness	Prior to installing reinforcement	Visual inspection	H	W
		Reinforcement	Installed as per IFC Drawings including linkage bars and ducting for services accurately	Prior to placing formworks	Suppliers' documentation	H	H

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		Pre-pour Inspection	Formwork placed with in tolerance and as per IFC Drawings and specification	Prior to placing concrete	Checksheet	H	H
		Concrete pour	40MPa as per site specification and IFC drawings, Finished surface as per specification – B1	During and upon concrete placement	Suppliers' documentation	H	W
8.	**Walkway and service hanger**	Pre-cast walkway panels	As per IFC Drawings and Specification	As directed by the Engineer	Suppliers' documentation	H	H
		Installing Pre-cast panel	Positioned between the service brackets, the end in contact with the abutment headwalls are jointed with sealant, pipes are connected as per IFC Drawings and specification	As directed by the Engineer	Checksheet	H	W
		Reinforcement and formworks	As per IFC drawings and specifications	Pre-pour inspection	Inspection checksheet	H	H
		Concrete placement	As per IFC drawings and specification – Broom finished	As directed by the Engineer	Suppliers' documentation	H	W
9.	**Wingwall Construction**	Reinforcement and Formwork	As per IFC Drawings and Specification	Prior to placing concrete	Checksheet	H	H
		Pre-pour inspection	Inspected and accepted by the Engineer	Prior to placing concrete	Checksheet	H	H
		Concrete pour	As per IFC drawings and specification	As directed by the Engineer	Suppliers' documentation	H	W
10.	**Settlement Slab**	Subgrade prep	Trim subgrade to suit, Bedding metal placed and compacted as required	As directed by the Engineer	Checksheet	H	W
		Reinforcement and formworks	Installed with in tolerance as per IFC drawings and specifications	As directed by the Engineer	Checksheet	H	H
		Pre-pour inspection	As per IFC drawings and specification	Prior to placing concrete	Pre-pour inspection checksheet	H	H

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		Placement of concrete	Concrete and grade and finish surface as per IFC drawing and specification	As directed by the Engineer	Suppliers' documentation	H	H
11.	**As-Built Plans**	Survey – Final surfaces	As directed by the Engineer	Upon completion of the works	As-built plans	H	H

INSPECTION & TEST PLAN

INSPECTION & TEST PLAN (ITP)

The ITP defines the required inspections during various stages of fabrication, construction and installation work. It is also a method of communicating these requirements to those doing the work and a verifying record that they have been carried out.

The ITP defines 2 different levels of inspection according to the following criteria:

- **Internal Verification:** This inspection or verification activity is required internally by United Civil. A Designated Internal Authority- Project Manager, Supervisor, Foreman or other authorised person is determined for the given inspection point or verification activity. Where a signature required verification is notified by signing the designated check sheet.
- **Critical Hold Points:** These are ONLY inspections required by the contract. It requires the Foreman/ Supervisor or Subcontractors Representative to notify the United Civil Project Manager that the hold point stage of inspection has been reached. Fabrication shall not proceed past this point unless the inspection has been carried out or approval to proceed is given in writing & signed by the Engineer's Representative.

  The Engineer's Representative shall sign the Check sheet.

  A Contract Hold Point is a contractual requirement. Where the Engineer's Rep has not signed or for whatever reason cannot sign the Hold Point off the Project Manager must signify verification by the Engineer by other means such email sign off or other formal correspondence and note as such on the ITP.