



GOVERNMENT OF BERMUDA
Ministry of Public Works
Department of Works and Engineering

(2nd April 2019)

Dear Proponent

Ref: 44-11-76 Watford Bridge – Waterproofing and Expansion Joint Replacement

This Addendum 1 contains 20 pages including this front page.

The following addendum supersedes information contained in the RFX to the extent referenced.

This addendum forms part of the RFP documents and will be subject to all of the conditions set out in the contract conditions.

Revisions of Appendixes

Part 1 Annex B Rev01 - 4 pages
Watford Bridge Pricing Form

Part 2 Annex D Rev01 - 9 pages
Watford Bridge General Requirements and Construction Spec

Part 3 Questions (Q) and Government's Responses (R). - 6 pages
Watford Bridge - Response to questions

END OF ADDENDUM 1

Note: Amendment/addenda will be posted at <https://www.gov.bm/procurement-notices>. Respondents should visit the Government Portal website on a regular basis during the Procurement process.

FIXED PRICE SCHEDULE

CONTRACT PRICE BREAKDOWN

(TO BE COMPLETED BY THE PROPONENT)

All prices (in Bermuda dollars) are to be all inclusive of all other associated works as shown on the Contract Documents, including materials, related accessories, storage, transport, assembly, placement, coordination w/ MPW, and overhead and profit. These rates may be used for determining additions and deletions from the contract sum and for interim payment valuation.

ITEM	DESCRIPTION	LUMP SUM
1.	Mobilisation, including all preparatory work and operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site. Establishment of temporary facilities necessary for the work. Premiums on insurance for the work; and for other operations performed or costs incurred before the beginning of the work.	
2.	General Conditions/ Preliminaries, including maintenance of site facilities for the duration of the works and site safety. Any other operations performed or costs incurred for the duration of the works necessary to satisfy the Construction Specifications, but which do not form part of it.	
3.	Traffic management	
4.	Removal of the bridge deck overlay	
5.	Removal of the existing waterproofing membrane	
6.	Removal of 4 No. sections of the concrete sidewalk	
7.	Removal of 2 No. expansion joints	
8.	Clean and prepare concrete surface to receive new liquid membrane	
9.	Make good areas where end of bridge meets public road at Somerset and Watford abutments	
10.	Supply and installation of the Liquid Waterproofing System	
11.	Supply and installation of 2 No. Expansion Joints; inspect and make good after asphalt is applied to deck	
12.	Reinstatement of 4 No. sections of concrete sidewalk with a minimum concrete compressive strength of 4350 psi; including surface treatment to match existing	

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13.	Supply and installation of 4 No. sidewalk cover plates; inspect and make good after asphalt is applied to deck	
14.	Supply and installation of Joint Filler	
15.	Maintenance and reinstatement of public utility ducts, including precast covers, fittings and components (repair/replace if damaged)	
16.	Demobilisation, including removal from site of all plant, equipment, waste and facilities brought to site to facilitate the works, but which do not form part of the Works.	
17.	Provisional Sum to be used for repairs to the concrete deck that may be revealed after the existing waterproofing is removed	\$20,000.00
18.	Removal of existing bridge kerbs	
19.	Supply and installation of bridge kerbs	
20.	Supply and installation of existing damaged concrete kerb on West side of bridge (the 2 areas requiring attention are shown on Addendum 1)	
	TOTAL	

NOTE: All work detailed on the Contract Documents shall be covered completely by the Total Lump Sum. Individual lump sum items are all-inclusive. If a specific task is not identified separately in the above list, the Contractor shall assume that it is included as part of another related listed item or items, and shall base his lump sum amounts on this assumption. The price shall include, indicate separately, the cost of any work permits, and taxes.

UNIT RATE SCHEDULE

(TO BE COMPLETED BY THE CONTRACTOR)

All prices (in Bermuda dollars) in the schedule are to be **inclusive of materials, tools and related accessories, storage, transport, plant and equipment (staging, platforms etc. to work on deck edge) assembly, placement, access, wastage, coordination with MPW and overhead and profit.** These rates may be used for determining additions to, and deletions from, the contract sum.

Unit Rate Schedule

ITEM	DESCRIPTION	Unit	Rate
1.	Site Supervisor	per hour	
2.	Skilled Labour	per hour	
3.	Unskilled Labour	per hour	
4.	Supply and install waterproofing membrane system	sq foot	
5.	Supply and install expansion joints	LF	
6.	Saw cut	LF	
7.	Supply and install reinforcement rod T10	LF	
8.	Supply and install reinforcement rod T12	LF	
9.	Supply and install reinforcement rod T16	LF	
10.	Supply and install reinforcement rod T20	LF	
11.	Supply and install reinforcement rod T24	LF	
12.	Clean and apply galvanized paint to damaged rebar	LF	
13.	Supply and install concrete grade 4350 psi	yd ³	
14.	Make good areas where end of bridge meets public road at Somerset and Watford abutments	sq foot	
15.	Carry out concrete repairs, up to 10 mm deep	sq foot	
16.	Carry out concrete repairs, over 10 mm and less than 50mm deep	sq foot	
17.	Carry out concrete repairs, over 50mm deep	sq foot	
18.	Supply and install stainless steel checker plates	LF	
19.	Traffic Management Labour	per hour	
20.	Traffic Management Equipment	per day	
21.	Equipment/ truck	per hour	

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22.	Equipment/platforms/scaffolding or similar	per day	
23.	Supply and installation of concrete kerb	LF	
24.	Supply and installation of precast concrete hatches	Per unit	
	Other items not listed above		

All unit rates above shall be considered fully inclusive of labour, materials, tools, and equipment, wastage and overheads and profit, including, delivery, storage, preparation, placing and finishing.
 For variations to the contract not covered in the preceding price break down rates or the above schedule of unit rates, the price may be determined on the basis of the base material and installation cost plus _____% for overhead and _____% for profit and applied separately to the base cost.

GENERAL REQUIREMENTS

Part 1 GENERAL

1.1 Work Covered By Contract Documents

.1 Project Identification:

This project consists of the supply and installation of a waterproofing membrane on a prepared concrete bridge deck, supply and installation of expansion joints, sidewalk covers and joint fillers.

.2 Project Location:

Watford Bridge, Bermuda.

.3 Project Owner:

Ministry of Public Works,
56 Church Street,
Hamilton, Bermuda, HM12.

.4 Project Engineer:

Ministry of Public Works,
Department of Works and Engineering
3rd Floor, 56 Church Street,
Hamilton, Bermuda, HM12.

1.2 Form of Contract

.1 Project will be constructed under the FIDIC Short Form of Contract First Edition 1999.

1.3 Work Sequence

.1 Contractor shall schedule the works coordinating all tasks and elements.

1.4 Contractor Use of Site

.1 Ascertain boundaries of Site within which work must be confined.

.2 Use of Site is to be coordinated through the Ministry of Public Works.

1.5 Drawings and Specifications Furnished

.1 Owner Responsibilities:

.1 One electronic copy of drawings and specifications to Contractor.

.2 Contractor Responsibilities:

.1 Pay for additional copies of drawings and specifications if required.

- .2 Maintain at Site one complete set of up to date drawings and specifications. Make available to Engineer at any time.

1.6 Supplementary Drawings

- .1 Engineer may furnish supplementary drawings to assist proper execution of work. Such drawings will be issued for clarification only and will have same meaning and intent as if included with plans referred to in Contract Documents.

END OF GENERAL REQUIREMENTS SECTION

SCOPE OF WORK

Part 1 General

- .1 The Works consists of:
 - .1 Coordination of works with Works and Engineering crews,
 - .2 Removal of existing bridge kerbs; removal of the existing bridge deck surfacing, removal of the waterproofing membrane and associated repairs to the concrete bridge deck
 - .3 Removal of a portion of the concrete sidewalk.
 - .4 Removal of the existing expansion joints and associated repairs to concrete deck and joint bed,
 - .5 Supply and installation of a bridge deck waterproofing membrane system.
 - .6 Protection of the waterproofing membrane when the new asphalt pavement is being placed by Works and Engineering crews,
 - .7 Supply and installation of new polysulphide joint filler,
 - .8 Supply and installation of new expansion joints,
 - .9 Supply and installation of the new stainless steel sidewalk cover plates,
 - .10 Maintenance/reinstatement of public utility ducts within the existing sidewalk and bridge deck locations.
 - .11 Replacement of precast concrete damaged access hatches.
- .2 Removal of the arising shall be in accordance with the latest editions of the Ministry of Public Works Waste Management Plan.
- .3 The Contractor shall pay particular attention to the environmental requirements of this Specification.
- .4 The Contractor shall phase their works to minimize disruption to traffic through a safe and effective traffic management methodology. One vehicular and pedestrian lane shall be maintained at all times.
- .5 The Contractor shall submit method statements to demonstrate how they intend to undertake the removal of the existing waterproofing membrane safely without risk to the existing concrete deck, statutory utilities and public vehicular and pedestrian traffic.
- .6 All areas to receive new bridge deck joints and waterproofing shall be inspected by the Engineer and repaired as necessary with an approved high strength concrete repair mortar. Any steel fixings

- from the existing joint mechanism shall be cut back to give a minimum of 50 mm cover prior to reinstatement of the concrete deck profile.
- .7 Changes to the deck joint bed profile to receive the new joint, if required, shall be undertaken with an approved high strength concrete repair mortar.
 - .8 Waterproofing shall be with an approved proprietary spray applied system that can be used under the asphalt overlay. Installation shall be by contractor trained and approved by the product manufacturer and shall carry a service warrantee.
 - .9 Deck expansion joints shall be asphaltic plug joints, or equal, detailed with joint drainage.
 - .10 Deck surfacing shall be preceded by a coloured warning layer, or similar, over the waterproofing membrane. Some waterproofing systems include colouring and in this case the additional warning layer will not be required.
 - .11 Surfacing of the deck with wearing course shall be performed by the Ministry, mix design shall be approved by the Engineer. Installation of road markings on completion of the scheme shall also be performed by the Ministry.

Part 2 Restrictions

- .1 Noise: Propose a plan to mitigate noise, including methods of drilling and probing, equipment to be used, and acoustical treatments.
- .2 Blockage of channels: All work is to be completed without blocking the channels or disrupting normal marine traffic.
- .3 Traffic: All work is to be completed while one lane of traffic is being maintained. Traffic control shall be maintained 24/7.

END OF SCOPE OF WORK SECTION

WORK RESTRICTIONS

Part 1 GENERAL

1.1 Utilities and Services

- .1 Existing Cables are known to exist within the site.
- .2 The Contractor is responsible for locating and protecting these and any possible other services within the works area.

1.2 Setting Out Stations

- .1 The Ministry of Public Works will establish sufficient survey stations for the Contractor to undertake the works.

1.3 Setting out and Dimensions

- .1 The Contractor shall be solely responsible for the accurate setting out of the works and shall employ a qualified surveyor whenever necessary. Any damages which may be incurred as a result of the incorrect setting out of the works shall be the responsibility of the Contractor.
- .2 The Contractor shall be responsible for the maintenance of all bench marks on the site.
- .3 The Contractor shall provide accurate locations for all rock anchors installed.

1.4 Use of Site

- .1 Limit use of site to work in areas indicated. Do not disturb portions of site beyond areas in which the Work is indicated. Confine construction and operations to within the boundary shown on drawings.
- .2 Keep driveways and entrances serving all adjacent premises and public property clear and available to the public, owners, owner's employees, guests, and both service and emergency vehicles at all times. These areas shall not be used for parking or storage of materials.

1.5 Water and Power

- .1 Water and power should be supplied by the Contractor.

1.6 Working Hours

- .1 Normal working hours shall be Monday to Saturday 8.00am through to 6.00pm and Sunday working shall be permitted within the hours of 9.00am and 6.00pm.

END OF WORK RESTRICTIONS SECTION

SUBMITTALS

Part 1 GENERAL

1.1 Required Submittals (Selected Proponent)

- .1 The Contractor shall submit the following documents to the Engineers Representative:
 - .1 Schedule of Work
 - .2 Construction Method Statements
 - .3 Construction Safety and Health Risk Assessments
 - .4 Environmental Method Statements
 - .5 Traffic Management Plan
 - .6 Concrete hatch design or specifications
 - .7 Samples
 - .8 Waterproofing System Method Statement approved by manufacturer.
 - .9 Insurance Certificates

1.2 Administration

- .1 Provide to the Engineer for review the submittals specified. Submit with reasonable promptness and in an orderly sequence so as to not cause delay in the Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by the submittal until review is complete.
- .3 Review submittals prior to submission to the Engineer. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with the requirements of the Work and Contract Documents. Submittals not stamped, signed, dated and identified as to the specific project will be returned without being examined and will be considered rejected.
- .4 Verify that field measurements and affected adjacent Work are coordinated.
- .5 Contractor's responsibility for errors and omission in submission is not relieved by Engineer review of submittals.
- .6 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Engineer review.
- .7 Keep one review copy of each submission on Site.

1.3 Schedule of Work

- .1 Prepare schedule in the form of a linked bar chart. All events, activities and constraints shall be numbered and shall be given a title. Details to be given for each event, activity or constraint should include:

- .1 Its title
 - .2 Its scheduled start and finish dates
 - .3 Its duration
 - .4 Any relevant “must” start or finish dates
- .2 Provide a separate bar for each event, activity, operation or constraint, show proposed progress of all activities. Where applicable, indicate labour, construction crews, plant and equipment to be employed.
 - .3 The key milestones in the construction process shall also be identified. Schedule milestones will include but not be limited to the following:
 - .1 Start of construction
 - .2 Placement of orders for critical equipment items
 - .3 Delivery dates (to site) for critical equipment items
 - .4 Final handover (final completion)
 - .4 Revise and resubmit schedule every two weeks to reflect actual progress of the Works.
 - .5 With schedule updates, provide written explanations to Engineer as to why previously reviewed schedule is not being met (if applicable).
 - .6 Show changes in operations proposed (if required), to complete construction works within Contract Time.
 - .7 No progress payments will be approved until receipt of schedule updates acceptable to the Engineer.

1.4 Method Statements

- .1 Provide Method Statement for each key activity and additionally as requested by Engineer, to show construction methods, equipment and general methodology for carrying out the Work. Relate Method Statement to activities shown on Construction Schedule.
- .2 Method Statements shall identify, among other things:
 - .1 Sequencing of works
 - .2 Methods to ensure appropriate environmental protection
 - .3 Other key tasks as specified in the Contract Documents, and/or as requested by the Engineer.

END OF SUBMITTALS SECTION

ENVIRONMENTAL PROTECTION

Part 1 GENERAL

1.1 Environmental Measures

- .1 Meet or exceed the requirements of all Bermuda environmental legislation and regulations, including all amendments up to project date provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.

Part 2 EXECUTION

2.1 Fires

- .1 Fires and burning of rubbish on site will not be permitted.

2.2 Disposal of Rubbish and Waste Materials

- .1 Collect all rubbish and waste material and dispose of in accordance with the latest editions of the Ministry of Public Works Waste Management Plan.

2.3 Environmental Protection

- .2 When, in the opinion of Engineer, negligence of Contractor results in damage or destruction of local flora and or fauna, or other environmental or aesthetic features beyond work areas as shown on contract drawings, the Contractor shall be responsible, at his expense, for complete restoration including replacement to satisfaction of Engineer.

2.4 Pollution Control

- .1 Control emissions from equipment and plant to Bermuda authorities' emission requirements.
- .2 Prevent extraneous materials from contaminating air, land or water, by vacuum, temporary enclosures, screens, traps or other devices.
- .3 Spills of deleterious substances should be immediately contained and cleaned up in accordance with provincial regulatory requirements. Spills should be reported forthwith to the Engineer.

2.5 Storage And Handling Of Fuels And Dangerous Fluids

- .1 Locate fuel storage facility a minimum of 100 m from any water body in an area approved by the Engineer and construct impermeable dykes so that any spillage is contained.
- .2 Prevent spillage of gasoline, diesel fuel and other oil products into the water and on land. Clean up spills promptly at own cost in accordance with Bermuda regulatory requirements. Report any fuel spills immediately to Engineer.
- .3 Proper use of primers, grouts, bonding adhesives and other hazardous substances will be undertaken to prevent their entry into the water. Substances are to be stored and mixed on protected surfaces away from site to prevent their entry into waterways and contamination of soils.

- .4 Collect and dispose of used oil filter cartridges and other products of equipment maintenance at industrial waste facility to satisfaction of Engineer.

END OF ENVIRONMENTAL PROTECTION SECTION

Questions (Q) and Government’s Responses (R)

	TENDER DOCUMENT REFERENCE	ANNEX	ISSUE	QUESTION	ANSWER
1	n/a	n/a	Tender Opening	Will this be a public Tender opening?	Yes.
2	RFP APPENDIX D – RFP PARTICULARS		Mandatory Requirements	Please clarify documents required at Proposal Submittal time (Mandatory Requirements).	Please find attached a Submittal Checklist FYI. The checklist also includes Pre-condition of Award requirements and requirements for Proposal Evaluation.
3	RFP Pricing Form Rev. 01	B	Mobilisation	Will mobilisation value be given at project award or commencement?	The contractor can submit a payment request at commencement of the works. Justification for payment such as plane ticket invoices for personnel coming from off island; bill of laden for materials; etc. would be required.
4	RFP Pricing Form Rev. 01	B	Scope of work - kerbs	1. Can we reuse existing concrete kerbs? 2. Addition to the scope of works	1. Please note that this tender requires that the waterproofing go beyond the kerbs, the waterproofing membrane should extend 100mm up the kerbs. Please refer to DRAWING BRIDGE JOINT DETAILS, Sheet S-2. Kerbs will need to be replaced. 2. W&E would like to add the replacement of a couple of broken kerbs outside the designated “Area of works” on the West side of the Bridge. Fig. 1 and Fig. 2 are attached herein for reference. Item was added in updated pricing form.
5	RFP Pricing Form Rev. 01	B	Scope of work – access hatches	1. Do we replace access hatches on sidewalk? 2. Will a detail be provided? 3. Or would you like to detail an allowance value for it?	1. Yes, please. Replacement of damaged precast concrete covers is included in the scope of works. Item was added in updated unit price schedule of the pricing form. 2. No. Design or specification to be approved by MPW. Regardless please ensure that rebar concrete cover is 2in (or 5cm) minimum. 3. Yes.
6	n/a	n/a	Scope of work - handrails	Are any handrail works included in the scope of works?	Handrails are not included in the scope of works. They have been recently repainted and are in good condition. Handrails should be protected during works and should any damage occur it should be repaired. A condition survey will be performed before construction.

7	RFP Pricing Form Rev. 01 And Drawings	B and C	Scope of Work - Traffic Management	<p>1. Please confirm that traffic management is in the scope of works.</p> <p>2. Do we detail total value for the supply and usage of traffic lights?</p>	<p>1. Yes, it is. A traffic management plan to be approved by W& E prior to commencement of the works. Peak hour traffic (morning 7:30am to 9:00am; afternoon from 4:30pm thru 6:30pm) should be manned by two men with STOP and GO signs. Non-peak hours will require traffic lights. Contractor should ensure that lights are in working order at all times and batteries are sufficiently charged to comply with this requirement.</p> <p>2. Yes. Pricing Form has been updated to clarify.</p>
8	Construction Specifications. Rev01	D	Power and water	Confirm that no water and no power will be provided for our use at no charge	Confirmed
9	n/a	n/a	Laydown area	Which laydown or staging area can be occupied for the entire duration of the project?	Please refer to Fig. 3 for available laydown area owned by WEDCo.
10	RFP Construction Specifications Rev.01	D	Waterproofing	Can you please provide us with Waterproofing Performance Specifications?	<p>Yes:</p> <p>The spray applied waterproofing system required for this bridge, to be used under the asphalt overlay, usually consists of a Primer, a waterproofing layer or membrane and a tack coat layer. The membrane should satisfy the following characteristics:</p> <ul style="list-style-type: none"> - Shore hardness>40 - Elongation>130% - Tensile Strength> 9MPa - Needs to pass Crack Bridging Standards such as ASTM C 1305, BD47/99 or equivalent. <p>The Primer and tack coat (if required) used should be part of the same system, hence the product recommended by the chosen manufacturer to go along with their membrane.</p> <p>Some examples of Waterproofing Membranes products existing in the market are:</p> <ul style="list-style-type: none"> - Bridge Deck Membrane (by Bridge Preservation) - Britdex MDP by USL Bridge Care - Matacryl WPM by Fosroc - Eliminator by gpc applied technologies.
11	RFP Construction Specifications Rev.01	D	Waterproofing	Must we use a proprietary spray applied system?	Yes

12	RFP Construction Specifications Rev.01	D	Waterproofing	Must we use a licensed contractor even if there were none locally?	<p>The waterproofing system must be applied by installers who have been trained and approved by the manufacturer.</p> <p>One possible option is for the contractor to bring in a Certified trainer to train workers and then provide supervision and method statement. The method statement is to be approved by both the Manufacturer and the Ministry of Public Works.</p> <p>Please note that the product safety warnings and precautions might be hard to follow for an untrained professional. In addition the quality of the finishing might be affected if method is not precisely followed.</p>
13	RFP Construction Specifications Rev.01	D	Submittals - Samples	Can we NOT provide these samples (Waterproofing system and expansion joint) until project award?	Information Datasheets of products in agreement with the prescribed technical specifications as well as relevant references of where have they been successfully used should be sufficient at Proposal Submission time.
14	RFP Drawing S-2	n/a	Asphalt Overlay	Can old asphalt be reused?	No. Replacement asphalt overlay, performed by W&E shall use new materials.
15	RFP Drawing S-2	n/a	Asphalt Overlay	Can you please provide what the finish asphalt thickness will be from W&E	The contractor should not do any build-up to the concrete deck (only appropriate repairs) and the waterproofing thickness should be according to manufacturer's recommendations. The Ministry of Public Works should place asphalt depth to suit required joint thickness. However, the Contractor should aid in the coordination of the works. For clarity: asphalt depth shall be determined after expansion joint selection.

SUBMITTAL CHECKLIST

MANDATORY REQUIREMENTS		Notes	Tick if submitted
Mandatory Submittal Form			
Pricing Form			
Other MANDATORY REQUIREMENTS			
Certificate of Confirmation of Non-Collusion			
Certificate of Incorporation			
Joint Venture Submission Requirements	If Submitting as Joint Venture please refer to RFP documents - APPENDIX D RFP Particulars for special requirements		
Method Statement	Without this understanding of the Works and assumptions for pricing cannot be evaluated		
Timetable for deliverables	Without this understanding of the Works and assumptions for pricing cannot be evaluated		
Proposed equipment list	Without this understanding of the Works and assumptions for pricing cannot be evaluated		
PRE-CONDITIONS OF AWARD (only to be submitted by successful Proponent)			
Proof of Insurance			
Health and Safety Plan			
Financial Checks	This checks will be performed by the Government. There is no related submission.		
SUBMITTAL REQUIREMENTS FOR EVALUATION OF PROPOSALS (Not Mandatory but loose points if not submitted). The submittal will be evaluated on Price and non-price factors.			
Information required to demonstrate Experience and Capability			
Qualifications and References Form			
Information required to demonstrate availability and capacity to meet the schedule			
Professional References (3)			
Financial Reference (1)			
Local Benefit Form			
Safety and Health Record			

SCOPE ADDITION – Replacement of the following broken kerbs near bridge:



Figure 1. Broken kerb on West side of bridge



Figure 2. Additional broken kerb near Watford Bridge Ferry Terminal

LAYDOWN AREA:



Figure 3. Laydown area available (WEDCo)