

**MINISTRY OF PUBLIC WORKS**  
**DEPARTMENT OF WORKS AND ENGINEERING**  
**CONEY ISLAND BRIDGE REPLACEMENT**  
**Project No. 44-26-100**  
**SPECIFICATION**

## TABLE OF CONTENTS

Section 01010 – Summary of Work.....	1
Section 01025 – Measurement and Payment .....	3
Section 01040 – Project Coordination .....	4
Section 01050 – Work Restrictions .....	5
Section 01200 – Project Meetings.....	6
Section 01300 – Submittals .....	8
Section 01400 – Quality Control .....	12
Section 01500 – Temporary Facilities .....	14
Section 01541 – Health and Safety .....	16
Section 01561 – Environmental Protection .....	17
Section 01570 – Traffic Control .....	20
Section 01650 –Testing and Commissioning .....	23
Section 01710 – Making Good and Final Cleaning.....	25
Section 02075 – Demolition.....	26
Section 03000 – Concrete .....	27
Section 03100 – Concrete Formwork .....	28
Section 03200 – Concrete Reinforcement .....	30
Section 03300 – Cast in Place Concrete.....	32
Section 05121 – Structural Steel .....	38
Section 09917 – Structural Steel Surfaces Coating .....	39

## **Section 01010 – Summary of Work**

### **1 General**

#### **1.1 WORK COVERED BY CONTRACT DOCUMENTS**

.1 Project Identification:

Coney Island Bridge Replacement

#### **1.2 CONTRACT METHOD**

- .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.  
.2 The schedule shall be submitted to the Engineer for approval no less than 7 days prior to intended commencement.

#### **1.4 CONTRACTOR USE OF PREMISES**

- .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.  
.3 The Contractor shall not cause any disruption to traffic other than as permitted in Section 01570 Traffic Control.  
.4 Access to pedestrians working in nearby offices shall be maintained.

#### **1.5 DRAWINGS AND SPECIFICATIONS FURNISHED**

- .1 Contractor Responsibilities:  
.1 Maintain at Site at least one complete set of drawings and specifications. Make available to Engineer at any time.  
.2 The Contractor shall abide by and comply with the true intention and meaning of the drawings and specifications taken as a whole,

and shall not perform any work knowing it involves any errors or omissions, should any exist.

## **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.

## **1.7 PUBLIC NOTIFICATION**

- .1 The Contractor is responsible for providing informational signs regarding the nature and duration of the Works prior to commencement of works on site. Notifications of any possible road closures shall also be posted, a minimum of 1 week prior to such closures.

**END OF SECTION**

## Section 01025 – Measurement and Payment

### 1 General

#### 1.1 PROGRESS CLAIMS

- .1 Contractor's Responsibilities:
  - .1 Progress claim to show estimate of percentage of work completed against each item of Form of Tender.
  - .2 Progress claim to include all labour and materials incorporated in the Work and all materials stored at the Site.
  - .3 Progress claim to include all agreed extras and deductions.
  - .4 Supply documentation to support claim for materials on site in the form of itemized lists or unpriced purchase orders showing quantities.
  - .5 Supply other evidence required by Engineer in support of progress claim.
- .2 Engineer's Responsibilities:
  - .1 Review Contractor's claim; prepare Progress Payment Certificate and issue to Owner within 28 days following receipt of Contractor's claim.
  - .2 Engineer's estimate of percentage of work completed will govern calculation of payment on all Progress Payment Certificates.
  - .3 Inform Contractor of amendments to claim by copy of Progress Payment Certificate.

#### 1.2 CHANGE ORDERS

- .1 Complete and promptly return all change price requests issued by Engineer, quoting unit and/or lump sum prices as requested. Include appropriate supporting documentation to verify prices.
- .2 Do not proceed with work affected by price request until authorized to do so by Change Order.
- .3 Make no change in Work unless Change Order issued. Change Order is only valid when signed by Engineer, Owner and Contractor.

### END OF SECTION

**Section 01040 – Project Coordination****1 General****1.1 DRAWINGS**

- .1 During the course of construction, the Contractor shall maintain an accurate record of all deviations and changes between the works indicated on the drawings and the actual construction on site.
- .2 Prior to Substantial Completion of the works, the Contractor shall prepare and deliver Record Drawings (as-built drawings) to the Engineer's Representative in digital form.
- .3 Should the Contractor fail in his obligation to supply such Record Drawings, the Owner shall have the right to employ the Engineer's Representative or any other competent person to produce the said drawings and to recover the costs of such services from the Contractor.

**2 Products (not applicable)****3 Execution****3.1 ANCHORING WORK:**

- .1 Work to be fixed in place shall be securely and properly located by measured line and level and isolated from non-compatible materials sufficiently to prevent deterioration.
- .2 Individual units of work shall be mounted at industry-recognised mounting heights, if not otherwise indicated; uncertainties shall be referred to the Engineer's Representative before proceeding.

**3.2 CLEANING AND PROTECTION:**

- .1 Installed elements of work shall be cleaned at the time of installation, and provided with sufficient maintenance and protection during construction to ensure freedom from damage and deterioration until the time of Substantial Completion.

**END OF SECTION**

**Section 01050 – Work Restrictions****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. Responsibility of MPW established survey stations remains with MPW.
- .2 The Contractor shall be responsible for the maintenance of all bench marks on the site.
- .3 The Contractor shall provide accurate location records 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.

## Section 01200 – Project Meetings

### 1 General

#### 1.1 CONTRACTOR TO ADMINISTER

- .1 With the exception of the preconstruction meeting, which will be administered by the Engineer prior to the start of the Works, the Contractor will administer progress meetings to be held weekly.
- .2 Contractor's Project Manager to attend all meetings.
- .3 Representatives of all contractors attending meetings shall be qualified and authorised to act on behalf of the party each represents.

#### 1.2 PRECONSTRUCTION MEETING

- .1 Engineer will establish time and location of meeting and notify parties concerned minimum 5 days before meeting.
- .2 Contractor's Project Manager to be in attendance.
- .3 Agenda to include the following:
  - .1 Appointment of official representatives of participants in the Work
  - .2 Schedule of Work, progress scheduling
  - .3 Schedule of submission of submittals, work plans
  - .4 Requirements for temporary facilities, site sign, storage sheds, utilities, fences
  - .5 Site security
  - .6 Administrative procedures
  - .7 Appointment of inspection and testing agencies or firms

#### 1.3 PROGRESS MEETINGS

- .1 Progress meetings will be held at a regular scheduled time and day each week, as agreed by all parties.
- .2 Agenda to include the following:
  - .1 Review, approval of minutes of previous meetings
  - .2 Review of Work progress since previous meetings
  - .3 Review of progress against Works schedule
  - .4 Field observations, problems, conflicts



- .5 Review submittal schedules: expedite as required
  - .6 Review Traffic Management Plan for subsequent weeks work
  - .7 Maintenance of quality standards
  - .8 Review proposed changes for effect on Works schedule and on completion date.
  - .9 Other business.
- .3 **Contractor to prepare minutes of all meetings, and distribute to all in attendance within 2 working days.**

**END OF SECTION**

## Section 01300 – Submittals

### 1 General

#### 1.1 REQUIREMENTS INCLUDED

- .1 Works schedule
- .2 Work Plans including but not limited to the following:
  - .1 Drawings and calculations showing details of any staging required.
  - .2 Methods for handling and disposal of waste materials
- .3 Quality Control Plan
- .4 Traffic Control Plan
- .5 Risk Assessments and Health and Safety Plan
- .6 Environmental Method Statements
- .7 Product data
- .8 Samples
- .9 Certificates
- .10 Record Drawings
- .11 Commissioning Reports

#### 1.2 ADMINISTRATIVE

- .1 Provide to 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 WORKS SCHEDULE

- .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 trade or operation. Show proposed progress of all activities for main work items and sub trades of Contract. Where applicable, indicate labour, Works 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 With schedule updates, provide written explanations to Engineer as to why previously reviewed schedule is not being met (if applicable).
- .5 Show changes in operations proposed (if required), to complete construction works within Contract Time.
- .6 No progress payments will be approved until a schedule acceptable to the Engineer is received.

#### **1.4 WORK PLANS**

- .1 Provide Work Plan for each key activity, as requested by Engineer, to show methods and general methodology for carrying out the Work. Relate Work Plan to activities shown on Works Schedule.
- .2 Work Plans shall identify, among other things:
  - Sequencing of works
  - Access details
  - Temporary works
  - Events affecting traffic and public access to nearby buildings.
  - Tasks involving lifting, hoisting, and/or specified crane set-ups.
  - Methods to ensure appropriate environmental protection including containment and disposal of lead paint debris (if any).
  - Safety procedures for working at height.
  - Other key tasks as requested by the Engineer.
- .3 Work plans must include, where necessary, drawings and calculations.

#### **QUALITY CONTROL PLAN**

- .4 Submit a Quality Control Plan, per Section 01400.

#### **TRAFFIC CONTROL PLAN**

- .5 Submit a Traffic Control Plan, per Section 01570.

#### **RISK ASSESMENT AND HEALTH AND SAFETY PLAN**

- .6 Submit a Risk Assessment and Health and Safety Plan, per Section 01541.

#### **ENVIRONMENTAL METHOD STATEMENT**

- .7 Submit an Environmental Method Statement, per Section 01561.

**PRODUCT DATA****SAMPLES**

- .1 Submit for review samples as requested in respective specification Sections. Label samples as to origin and intended use in the Work.
- .2 Deliver samples prepaid to Engineer's or testing company's business address as directed.
- .3 Notify the Engineer in writing, at the time of submission, of deviations in samples from requirements of Contract Documents.
- .4 Adjustments made on samples by the Engineer are not intended to change the Contract Amount. If adjustments affect the value of Work, state such in writing to the Engineer prior to proceeding with the Work.
- .5 Make changes in samples which the Engineer may require, consistent with Contract Documents.

**CERTIFICATES**

- .1 Immediately after award of Contract, submit certificates of insurances.

**RECORD DRAWINGS**

- .1 Records of construction activity and deviations from the original design will be kept.
- .2 Record drawings (as-built drawings) will be produced immediately and submitted to the Ministry of Public Works no more than 20 business following completion of the Works.

**COMMISSIONING REPORTS**

- .1 All testing and commissioning activities in accordance with Section 01650 shall be recorded and reported to the Ministry of Public Works upon completion of the commissioning procedure.

**END OF SECTION**

## Section 01400 – Quality Control

### 1 General

#### 1.1 QUALITY CONTROL

- .1 The Contractor is responsible for all quality control on the project including inspection, testing, laboratory services and supervision, as well as carrying out special quality control test setups and measures, as described herein with exception of concrete testing which will be performed by the MPW.

#### 1.2 INSPECTION, TESTING AND LABORATORY SERVICES

- .1 Particular requirements for inspection and testing to be carried out by testing laboratory are specified under various sections
- .2 Contractor will be responsible for arranging, appointing and paying for all costs including costs for independent testing firms, laboratories and personnel for all testing, including travel costs to inspect the work. In addition, the following testing and inspection are the Contractor's responsibility:
  - .1 Inspection and testing required by Bermuda and local laws, ordinances, rules, regulations or orders of public authorities.
  - .2 Inspection and testing performed for Contractor's convenience.
- .3 Where tests or inspections reveal work not in accordance with contract requirements, Contractor shall pay costs for additional tests or inspections as Engineer may require to verify acceptability of corrected work.
- .4 The Contractor responsibilities also include:
  - .1 Furnish labour and facilities to:
    - .1 Provide access to work to be inspected and tested.
    - .2 Facilitate inspections and tests.
    - .3 Make good work disturbed by inspection and test.
  - .2 Notify Engineer sufficiently in advance of operations.
  - .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in the Work.
  - .4 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by Engineer.

**1.3 TEST RESULTS**

- .1 Furnish all test results and certificates.

**END OF SECTION**

## **Section 01500 – Temporary Facilities**

### **1 General**

#### **1.1 TEMPORARY STAGING AREA**

- .1 The Contractor shall make arrangements for a temporary staging area for carrying out the works. Staging area is for trailers, storage, parking, and all other Contractor activities required for the works.
- .2 Entry to and exit from the staging area shall be in accordance with the Contractor's traffic Control Plan, per Section 01570.

#### **1.2 ACCESS**

- .1 Provide and maintain adequate access to project site.
- .2 Maintain roads and construction area in safe and clean condition for duration of Contract and make good any damage resulting from Contractor's use.

#### **1.3 STORAGE SHEDS**

- .1 Provide adequate weatherproof sheds with raised floors if necessary, for storage of materials, tools and equipment which are subject to damage by weather.

#### **1.4 ENCLOSURES**

- .1 Where required for protection of adjacent property and traffic, erect temporary barriers or enclosures. Any damages to adjacent property, vehicles and public shall be made good by the Contractor at his own expense to the satisfaction of the Engineer.

#### **1.5 POWER**

- .1 The Contractor shall make all necessary arrangements for the temporary supply of electricity necessary for the proper completion of the Contract and he shall be responsible for paying all charges and fees in connection therewith.

#### **1.6 WATER SUPPLY**

- .1 The Contractor shall be responsible for an adequate supply of water for the Works and pay and bear all costs associated therewith.



**1.7 SITE SIGNS AND NOTICES**

- .1 Except for notices related to traffic control, instruction, public safety, etc. as required elsewhere in these specifications, no signboards or other advertising will be permitted on this project.
- .2 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by Engineer.

**1.8 SCAFFOLDING**

- .1 Design, construct and maintain scaffolding in rigid, safe and secure manner.
- .2 Remove promptly when no longer required.

**1.9 REMOVAL OF TEMPORARY FACILITIES**

- .1 Remove temporary facilities from site when directed by Engineer.
- .2 When project is closed down at end of Work, keep temporary facilities operational until close down or removal is approved by Engineer.
- .3 Make good all surfaces, including roads, walls, permanent buildings, parking areas and lawns which have been affected by temporary facilities, to the satisfaction of the Engineer.

**END OF SECTION**

**Section 01541 – Health and Safety****1 General**

- .1 Meet or exceed the requirements of all Bermuda Occupational Safety and Health Regulations 2009 and the Occupational Safety and Health Act 1982, including all amendments up to project date provided that in any case of conflict or discrepancy, the more stringent requirements shall apply with the objective to maintain a safe and injury/illness free construction site.

**2 Products**

- .1 Not Applicable

**3 Execution**

- .1 Not Applicable

**END OF SECTION**

## Section 01561 – Environmental Protection

### 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.

### 2 Products

- .1 Not Applicable

### 3 Execution

#### 3.1 FIRES

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

#### 3.2 DISPOSAL OF WASTES

- .1 Do not bury rubbish and waste materials on site.
- .2 Collect all rubbish and waste material and dispose of in accordance with the current requirements of the Solid Waste Management Section of the Ministry of Works and Engineering and Housing.
- .3 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.
- .4 If cleaning with needle scalers or grit blasting, provide enclosures, screens and traps to confine and contain all material and paint debris and other extraneous material.

#### 3.3 DRAINAGE

- .1 Provide temporary drainage and pumping as necessary to keep site free from water.
- .2 Do not pump water containing suspended materials into sewer or drainage systems.

- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with Bermuda authority requirements.

### **3.4 PLANT PROTECTION**

- .1 When, in opinion of Engineer, negligence of Contractor results in damage or destruction of vegetation, or other environmental or aesthetic features, the Contractor shall be responsible, at his expense, for complete restoration including replacement of trees, shrubs, grass, etc. to satisfaction of Engineer.

### **3.5 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 Bermuda regulatory requirements. Spills should be reported forthwith to the Engineer.
- .4 Noise levels emitted from Work activities are subject to Bermuda government requirements.

### **3.6 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 paints and other hazardous substances will be undertaken to prevent their entry into land or water. Substances are to be stored and mixed on protected surfaces away from site to prevent their entry into waterways and contamination of soils.

### **END OF SECTION**

## **Section 01570 – Traffic Control**

### **1 General**

#### **1.1 DESCRIPTION**

- .1 This section specifies requirements and procedures for traffic control to ensure protection of work and safety of public to the satisfaction of the Engineer.
- .2 The work in this Contract shall be so carried out that it shall not interfere with road traffic other than as permitted in this section.
- .3 The Contractor shall be responsible for the staging of the work and the control of traffic within the Contract limits.
- .4 The Contractor shall prepare and adhere to a Traffic Control Plan which describes all details for the staging of the Traffic Control work, and communications with Emergency Services.
- .5 The Contractor shall supply the personnel for the traffic control and shall supply, install, maintain and remove traffic control devices as required for the staging of the work, in accordance with these specifications and the approved Traffic Control Plan.

### **2 Products**

#### **2.1 TRAFFIC CONTROL DEVICES**

- .1 Signs, barricades, delineators, warning lights, traffic lights, and other devices may be used as needed. Signs, barricades, delineators, and other devices shall be reflectorized to show same shape and colour by night as by day.

### **3 Execution**

#### **3.1 GENERAL**

- .1 Conduct operations so as to create an absolute minimum of inconvenience to traffic.
- .2 Where necessary, provide traffic control through use of an approved Traffic Control Plan.

### 3.2 TRAFFIC CONTROL PLAN

- .1 The Contractor shall submit to the Engineer for approval a document describing in detail the proposed staging, traffic control and traffic maintenance operations as well as plans showing the location of all traffic control devices and traffic control personnel at each stage of the Work. It should also include method of ensuring safe and clear passage of emergency vehicles during any lane closures.
- .2 A digital copy of the Traffic Control Plan shall be submitted to the Engineer for approval at least five (5) days prior to the commencement of activities on site that affect traffic.
- .3 The Contractor shall conduct traffic control operations in accordance with his Traffic Control Plan as approved by the Engineer. Modifications to the Contractor's traffic control operations will not be permitted without written approval from the Engineer.
- .4 For the duration of the works, the contractor shall adequately illuminate the area of works during the hours of darkness to ensure that public in the area is aware of the extent of the work area.
- .5 The Contractor shall name in the Traffic Control Plan a qualified individual who shall monitor and maintain the traffic control measures and ensure communications with Emergency Services are maintained.

### 3.3 OPERATIONAL REQUIREMENTS AND CONSTRAINTS

- .1 Maintain existing conditions for vehicular traffic throughout period of contract.
- .2 Existing conditions for vehicular traffic can be restricted as follows:
  - .1 All public access to Coney Island will be ceased for the duration of the work.
- .3 Obtain the Engineer's approval on period and timing of any traffic interruption. Notify the Engineer 5 days in advance of any period of traffic interruption.
- .4 No Work traffic shall stop or park on travelled lanes at any time, except under approved lane closures.
- .5 No equipment or loading operations shall be permitted to swing over operating traffic lanes at any time.

- .6 When lane closures are necessary, details of plans for accommodating safe and clear passage of emergency vehicles during this time should be provided.

### **3.4 INFORMATIONAL AND WARNING DEVICES**

- .1 Supply, erect, move and maintain all traffic control devices and other safety measures and provide staff to ensure the safe passage of all traffic over the project from the date of commencement of the work to the date of acceptance by the Engineer.
- .2 Supply and erect delineators, barricades, signs, marker buoys and miscellaneous warning devices. Traffic control measures will be monitored by the Engineer, and the Engineer may require modifications of these measures from time to time.
- .3 Provide competent supervision during non-working hours to ensure that lights, signs, etc. are in proper working order.
- .4 Supply, erect and maintain signs and other devices required for project. If situation on site changes, change the signs as required.
- .5 Continually maintain traffic control devices in use by:
  - .1 Checking signs daily for legibility, damage, suitability and location.
  - .2 Clean, repair or replace to ensure clarity and reflectance.
  - .3 Removing or covering signs which do not apply to conditions existing from day to day.

### **END OF SECTION**

## **Section 01650 –Testing and Commissioning**

### **1. General**

#### **1.1 CONTRACTOR RESPONSIBILITIES**

- .1 Prior to start of Testing and Commissioning Work, submit name of Contractor personnel proposed to perform services. Designate who has managerial responsibilities for co-ordination of entire testing, commissioning, and related tasks.
- .2 Provide specialist expertise from suppliers as required on site and operate systems and under conditions required for proper testing and commissioning, including personnel and instruments.

#### **1.2 ENGINEER RESPONSIBILITIES**

- .1 Engineer to be notified of all testing and commissioning activities.
- .2 Witness commissioning.
- .3 Carry out final inspection for acceptance of completed works.

#### **1.3 WORK PLAN**

- .1 Describe nature of works to be carried out, methods and procedures for testing, and methods to prevent damage to components during testing.

#### **1.4 TESTING**

- .1 Trial operate all components. Make necessary adjustments.
- .2 Verify that all installations are complete, correct, and in accordance with applicable drawings and specifications.



- 2. **Products**
  - .1 Not Applicable
  
- 3. **Execution**
  - .1 Not Applicable

**END OF SECTION**

**Section 01710 – Making Good and Final Cleaning****1 General****1.1 MATERIALS**

- .1 Use only cleaning materials recommended for the purpose intended and use as recommended by the manufacturer.

**1.2 MAKING GOOD**

- .1 The contractor shall make good all work disturbed to match the existing work unless directed otherwise by the Engineer's Representative.

**1.3 FINAL CLEANING**

- .1 In preparation for partial or final acceptance of the project, perform final cleaning.
- .2 Remove grease, dust, dirt, stains and other foreign materials from all surfaces.
- .3 Remove debris and surplus materials.
- .4 Ensure that environmental regulations are respected.

**END OF SECTION**

## **Section 02075 – Demolition**

### **1. General**

#### **1.1 SCHEDULE**

- .1 The Contractor shall, if requested, submit a schedule indicating the proposed methods and sequence of operations for bridge demolition work to the Engineer's Representative for review prior to commencement' of work, including co-ordination for shut-off and continuation of utility services as required, together with details for dust and noise control protection.
- .2 The Contractor shall provide a minimum of 72 hours' notice to the Owner of activities which will make an impact on the Owner's normal operations.

#### **1.2 CONDITION OF STRUCTURE**

- .1 The Owner assumes no responsibility for the condition of items or structures to be demolished.

#### **1.3 PROTECTION**

- .1 The Contractor shall provide temporary barricades and other forms of protection as required to protect the Owner's personnel and the general public from injury due to demolition work.
- .2 Where applicable, the Contractor shall provide protective measures to provide free and safe passage of the Owner's personnel and the general public to and from adjacent buildings.
- .3 Where necessary, the Contractor shall provide shoring, bracing, or support to prevent movement, settlement, or collapse of the structure and adjacent facilities or work to remain.
- .4 The Contractor shall protect from damage any existing finish work that is to remain and becomes exposed during demolition operations.

#### **1.4 EXPLOSIVES**

- .1 The use of explosives will not be permitted.

## Section 05121 – Structural Steel

### 1 General

#### 1.1 DESCRIPTION

- .1 This section specifies requirements for supply and installation of structural steel for tower and related work.

### 2 Products

#### 2.1 MATERIALS

- .1 Structural steel materials are contractor supplied items. Additional bolts, nuts and washers that may be required for the pipe bridge
- .2 shall be galvanised in accordance with this Specification.

#### Execution

### 3

#### 3.1 GALVANISING

- .1 Galvanised structural bolts, nuts and washer:
  - .1 All bolts to be ASTM A325 Type 1 hot dip galvanised bolts.
  - .2 All nuts to be ASTM A563 Grade DH hot dip galvanised nuts. Nuts are to be lubricated to minimize galling. Lubricant to contain a coloured dye to provide obvious contrast with plain zinc galvanised nut. Plain zinc galvanised nuts not to be used.
  - .3 All washers to be ASTM F436 Type 1 hardened round structural flat washers mechanical galvanised and compatible with ASTM A325 Type 1 hot dip galvanised bolts.

#### 3.2 INSTALLATION

- .1 As indicated on the drawings and the Bridge Assembly/Launch Instructions

#### 3.3 SEQUENCE OF WORK AND STABILITY OF THE STRUCTURE

- .1 Ensure the stability and integrity of the structure during all stages of the work.

#### END OF SECTION