Corporate Finance Department
Materials Management Division

16-2010 ADDENDUM 1

Branch I Aqueduct Valve Chamber at McPhillips Street Pumping Station

ISSUED: February 26, 2010
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URGENT

PLEASE FORWARD THIS DOCUMENT TO WHOEVER IS IN POSSESSION OF THE BID OPPORTUNITY

THIS ADDENDUM SHALL BE INCORPORATED INTO THE BID OPPORTUNITY AND SHALL FORM A PART OF THE CONTRACT DOCUMENTS

Template Version: A20070419

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Bid Opportunity, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 10 of Form A: Bid may render your Bid non-responsive.

PART E – SPECIFICATIONS

Revise E6 to read:

E6. CONDITION, PROTECTION OF AND ACCESS TO THE AQUEDUCT

E6.1 Description

E6.1.1 This Section details operating constraints for all work to be carried out in close proximity to the 1220 millimetre Branch I Aqueduct and 900 millimetre West End Feedermain. Close proximity shall be deemed to be any construction activity within a 5 m offset from the centreline of the Feedermain or Aqueduct.

E6.2 General Considerations for Work in Close Proximity to the Branch I Aqueduct and West End Feedermain

E6.2.1 The Branch I Aqueduct and West End Feedermain are critical components of the City of Winnipeg Regional Water Supply System and work in close proximity to either pipeline shall be undertaken with an abundance of caution.

E6.2.2 Work around the Aqueduct and Feedermain shall be planned and implemented to minimize the time period that work is carried out in close proximity to them and to ensure that the pipelines are not subjected to excessive construction related loads, including excessive vibrations and/or concentrated or asymmetrical lateral loads during backfill placement. Work over the West end Feedermain is generally not required, except for sections within the Logan right-of-way. In other areas, equipment is prohibited from crossing the pipe unless otherwise approved by the Contract Administrator.

E6.2.3 The Branch I Aqueduct is a 1220 millimetre reinforced concrete pressure pipe, constructed in approximately 1918. The joints are made watertight by a grouted, crimped copper waterstop in the middle of the wall thickness. This style of pipe joint is prone to the development of leaks of varying magnitude if exposed to excessive vibration.

E6.2.4 The West End Feedermain is constructed of Prestressed Concrete Cylinder Pipe (PCCP) conforming to AWWA Standard C301. PCCP made in accordance with AWWA C301 generally has very limited structural capacity to withstand increased earth and live loading. Therefore, every precaution must be undertaken to ensure that applied loading during all phases of construction is within accepted loading parameters.

E6.3 Submittals

E6.3.1 Submit proposed construction equipment specifications intended to work in proximity to Aqueducts and Feedermains, to the Contract Administrator for review seven (7) days prior to construction. Submittal shall include:

(a) Equipment operating weight and dimensions including wheel or track base, track length or axle spacings, track widths or wheel configurations

(b) Payload weights

(c) Load distributions in the intended operating configuration

E6.3.2 Submit a Construction Method Statement with proposed construction plan including haul routes, excavation equipment locations, loading positioning and base construction sequencing to the Contract Administrator for review seven (7) days prior to construction. Do not commence construction until the Construction Method Statement has been reviewed and accepted by the Contract Administrator.

E6.3.3 The Contractor shall ensure that all work crew members understand and observe the requirements of these work procedures and constraints. Prior to commencement of on-site work, the Contractor shall jointly conduct an orientation meeting with the Contractor Administrator with all superintendents, foremen and heavy equipment operators to make all workers on site fully cognizant of the limitations of altered loading on the Aqueduct and Feedermain, the ramifications of inadvertent damage to the pipelines, the constraints associated with work in close proximity to the Aqueduct and Feedermain and the specific details of the Construction Method Statement in instances where a Construction Method Statement is in effect.

E6.3.4 Employees of the Contractor or any Subcontractor that fail to comply with the conditions for working in close proximity to the Aqueduct and Feedermain shall be promptly removed from the Site.

E6.4 Construction Procedures

E6.4.1 Pre-work, Planning and General Execution

(a) No work shall commence at the site until a Construction Method Statement has been reviewed and accepted. The Method Statement is to be a formal submission from the contractor as to his proposed construction methodology, including procedures, equipment and timing, in order for him to demonstrate to the Contract Administrator his understanding of the scope and limitations on the work and conformance to project specifications and these recommendations.

(b) Aqueduct and Feedermain centreline and outside of pipe locations shall be clearly delineated in the field.

(c) Contact the City of Winnipeg WWD Department, Construction Services Coordinator (Andy Vincent – Ph: 986-3823) prior to construction.

(d) Work shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications by the Contract Administrator.

(e) Vehicular traffic that is compliant to City of Winnipeg load restrictions will be permitted to cross the Aqueduct and Feedermain once suitable granular subbase is in place that will adequately support loads without rutting. Temporary Aqueduct crossings shall be constructed to the same grade as the proposed pavement.

(f) For transverse crossings of the Aqueduct and Feedermain in support of pavement construction activities, designate crossing locations and confine equipment crossing the pipe(s) to these locations. Reduce equipment speeds to levels that minimize the impacts of impact loading.

(g) For construction work activities either longitudinally or transverse to the alignment of the Aqueduct and Feedermain work only with equipment and in the manner stipulated in the accepted Construction Method Statement and the supplemental requirements noted herein.

(h) Subgrade, subbase and base construction shall be kept in a rut free condition at all times. Construction equipment is prohibited from crossing pipelines until subbase is constructed and the grade is sufficient to support the equipment without rutting.

(i) Granular material, construction material, soil or other material shall not be stockpiled on the pipelines or within 5 metres of the pipe centerline.

(j) Where work is in close proximity to the pipelines, utilize construction practices and procedures that do not impart excessive vibration loads on the pipelines or that would cause settlement of the subgrade below the pipelines. Only single live loads will be permitted on the pipelines at any one time until concrete pavements are in place.

E6.4.2 Underground Construction

(a) Asymmetrical water pressures shall not be permitted to build up on one side of the Aqueduct.

(b) Further to CW 2030-R6, only smooth edged excavation buckets, soft excavation or hand excavation shall be used for excavation adjacent to and over the Aqueduct.

(c) Install watertight bulkheads at all locations where the Aqueduct is exposed, or pipe is removed.

(d) Through wall cutting of existing pipelines must be employed prior to removal of sections of pipe.

(e) Demolition of structures adjacent to pipelines shall be carefully executed to prevent damage and movement to remaining and adjacent pipelines.

E6.4.3 Subgrade Construction

(a) Pavements shall be sawcut and removed. Use of pneumatic breakers over pipelines is prohibited. Hand operated breakers will be permitted.

(b) Subgrade compaction shall be limited to static (non- vibratory) compaction methods within 3 metres of the Aqueduct and Feedermain and only with equipment that are well within the rated loading capacity of the Aqueduct and Feedermain.

(c) Stage work activities to minimize the time period that unprotected subgrade is exposed to the environment and protect the subgrade against the impacts of adverse weather if subbase/ base course construction activities are not sequential with excavation.

E6.4.4 Subbase and Base Course Construction

(a) Subbase or base course materials shall not be dumped directly on pipelines. They shall be stockpiled outside limits noted in these recommendations and shall be carefully bladed in-place.

(b) Subbase compaction shall be either carried out by static methods (non- vibratory) or with smaller approved equipment such as hand held plate packers or smaller roller equipment.

Replace: Specification 29 10 01 with the attached Specification 29 10 01 – Addendum 1

Replace: Specification 29 15 01 with the attached Specification 29 15 01 – Addendum 1

Replace: Specification 29 30 11 with the attached Specification 29 30 11 – Addendum 1

Replace: Specification 29 40 21 with the attached Specification 29 40 21 – Addendum 1

Add: Clause 3.2.6 to Specification 31 23 33.01

3.2.6 Adequately support existing 900 millimetre bypass pipeline crossing over proposed 1220 millimetre Aqueduct during construction. Supports shall be design to support the pipeline and contained water.

DRAWINGS

Replace:

16-2010 Drawing D-11918-R0 with Addendum 1 Drawing D-11918-R1

16-2010 Drawing D-11919-R0 with Addendum 1 Drawing D-11919-R1

16-2010 Drawing D-11921-R0 with Addendum 1 Drawing D-11921-R1

16-2010 Drawing D-11924-R0 with Addendum 1 Drawing D-11924-R1

16-2010 Drawing D-11927-R0 with Addendum 1 Drawing D-11927-R1

16-2010 Drawing D-11928-R0 with Addendum 1 Drawing D-11928-R1

16-2010 Drawing D-11930-R0 with Addendum 1 Drawing D-11930-R1

16-2010 Drawing D-11932-R0 with Addendum 1 Drawing D-11932-R1

16-2010 Drawing D-11934-R0 with Addendum 1 Drawing D-11934-R1

16-2010 Drawing D-11935-R0 with Addendum 1 Drawing D-11935-R1

16-2010 Drawing D-11936-R0 with Addendum 1 Drawing D-11936-R1