



ADDENDUM 2 BID OPPORTUNITY NO. 153-2005

WINNIPEG WATER TREATMENT PROGRAM – CONSTRUCTION OF YARD
PIPING AND VALVE CHAMBERS - CONTRACT 1

URGENT

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

ISSUED: May 6, 2005
BY: Larry Smith, C.E.T., UMA Engineering Ltd.
TELEPHONE NO. (204) 204-0580

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

Template Version: A20050301

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 11 of Form A: Bid may render your Bid non-responsive.

PART A – BID SUBMISSION

Replace: 153-2005_Addendum_1-Bid Submission with 153-2005_Addendum_2-Bid_Submission.

PART B – BIDDING PROCEDURES

Replace: B2.1 with "The submission deadline is 12:00 noon Winnipeg time, May 13, 2005."

PART E – SPECIFICATIONS

Add: The following report references to E2.4 (a):

- (vii) Observations of Northerly Excavation Slope Failure and Shoring Collapse Deacon Booster Pumping Station Winnipeg, Manitoba W-0624 by Hardy Associates (1978) Ltd.
- (viii) Geotechnical Investigations For the deacon Reservoir Interconnections and Proposed Quarry by KGS Group.
- (ix) Geotechnical Site Investigation For Deacon reservoir and Pumping Station by KGS Group

Add: E.2.5 Previous Excavation Failures

Bidders are advised that slope failures occurred during construction of the Booster Pumping Station in 1977. The original excavation was cut with 1H:1V sideslopes to a depth of approximately 10m. The initial failure involved the south side of the excavation which was subsequently flattened to about 3H:1V. The second failure was a deep seated rotational slide that involved the strutted excavation for the suction chamber to a depth of approximately 4m below the base of the initial excavation (14m from grade) along the north edge of the Booster Pumping Station. The north slope of the excavation was subsequently flattened to about 6H:1V.

Following construction of the Booster Pumping Station, the excavation was backfilled with clay. Cross sections through the original excavation illustrating the extent of the fill, and test hole logs describing the nature of the fill, are included in Section 15 of the Preliminary Design Report which is available for viewing at the offices of UMA Engineering.

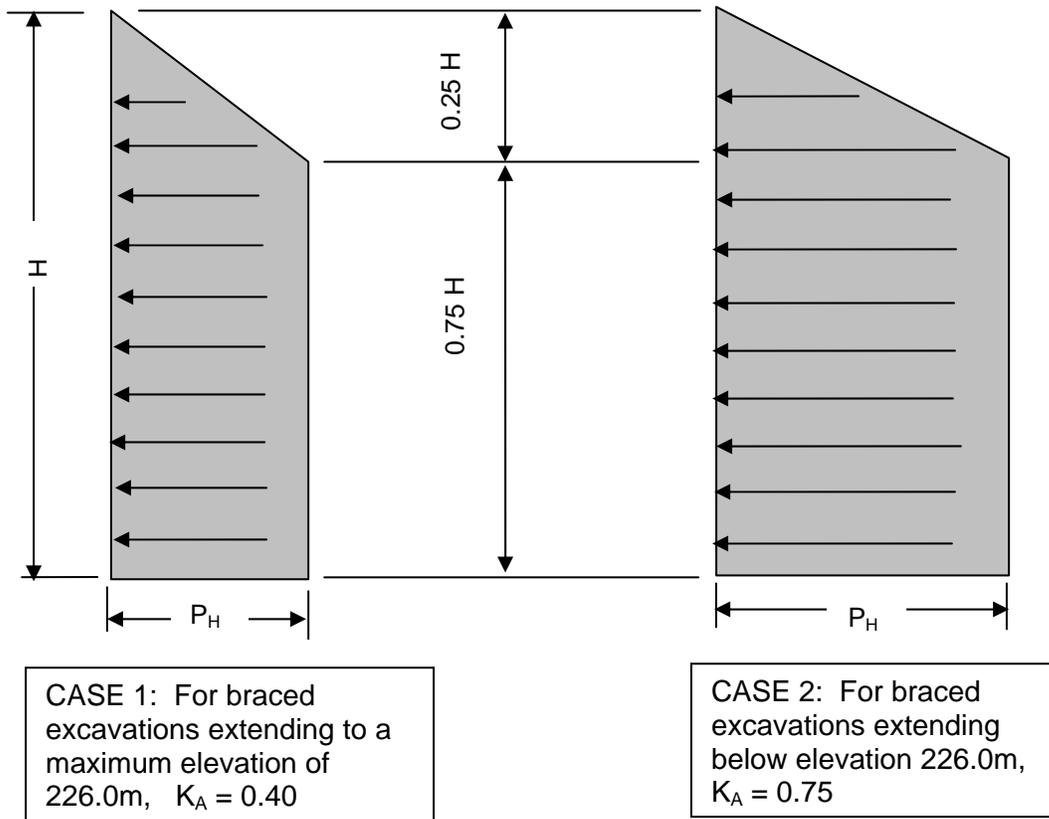
Add: E.9.3 c) (ii) The 2100 millimetre Cell 1 Raw Water tee within the Cell 1 Raw Water valve chamber shall incorporate a 500 millimetre flanged access port on the top of the tee.

Revise: E11.2.2 (Addendum 1):

Bidders are advised that the consistency of the clay profile generally ranges from firm to soft with increasing depth. Shoring designs shall account for the variability in soil strengths in the assessment of earth pressures, and the potential for basal instabilities. In this regard, undrained shear strengths of 35 kPa are typically encountered below elevation 226.0m.

Add: E11.2.4 Earth Pressures

To aid Bidders in determining the shoring requirements for this project, the following geotechnical parameters and earth pressure distributions are provided. For more information, Bidders are referred to the geotechnical information presented in Section 15 of the City of Winnipeg Water Treatment Plant Preliminary Design Report (2005) available for viewing at the offices of UMA Engineering Ltd., 1479 Buffalo Place, Winnipeg, MB.



Earth pressure distributions for both Case 1 and Case 2 are calculated using the following general equation:

$$P_H = K_A \gamma H$$

Where: P_H = Lateral Earth Pressure (kPa)
 K_A = Active Earth Pressure Coefficient (use values shown above for Case 1 and Case 2)
 γ = Soil Unit Weight = 17.5 kN/m³
 H = Depth of Excavation (m)

The submission of shop drawings and loading diagrams will be required for all designs that include these or any other earth pressure distributions.