

## Appendix S – Third Party Work in the Vicinity of City Bridge Structures

### Submission Requirements

Submission requirements for proposed Third Party Work in the vicinity of City structures are as follows:

- 1 Proposals to attach to City structures should be submitted to the City for conditional acceptance prior to commencing detailed design. As attachments to City structures are discouraged, the proposal must include an explanation of why attaching to the structure is the only feasible option.
- 2 Submissions for proposed work in the vicinity of City structures must be accompanied by a report prepared by an engineering firm with specialization in this field.
- 3 All submitted reports shall be signed and sealed by a Professional Engineer licensed in the province of Ontario.
- 4 The report shall describe the proposed work, construction methods, and temporary protection systems, making specific reference to the submitted design drawing numbers and revision date(s).
- 5 The report shall explicitly state that the temporary protection systems are in compliance with OPSS 539 – *Construction Specification for Temporary Protection Systems, Performance Level 1a*.
- 6 The report shall explicitly state that the work will not impact City structures. Vague statements such as "may not impact" or "unlikely to impact" are not acceptable.
- 7 The report shall include calculated predicted ground displacements such as vertical, horizontal and rotation due to the excavation or stressing of tie-back systems based on computer modelling.

- 8 The report shall include a monitoring plan for vibration and movements of the structures. The monitoring plan may include inclinometers, multi-points extensometers, pile target survey, precision survey, surface settlement survey and vibration.
- 9 The report shall provide thresholds and alert levels, and the actions to be taken if these levels are exceeded.
- 10 If dewatering is required, the report shall include an impact assessment of settlement on the adjacent structures due to dewatering.
- 11 All submitted drawings shall be signed and sealed by a Professional Engineer licensed in the province of Ontario.
- 12 The Applicant must obtain as-built drawings for City structures and show such structures accurately on the design drawings for the proposed work. City as-built drawings can be obtained by contacting EngDrawings@toronto.ca or 416-338-7954. A processing fee applies.
- 13 Proposals to attach to a City structure must be accompanied by detailed structural drawings prepared by an engineering firm with specialization in this field. Note: Structural drawings must be signed and sealed by two Professional Engineers licensed in the province of Ontario.
- 14 Temporary protection systems shall be shown on the drawings and the drawing notes shall explicitly state that the proposed Temporary Protection Systems are in compliance with OPSS 539 Performance Level 1a.
- 15 Monitoring recommendations and locations, review levels, and alert levels shall be shown on the drawings.
- 16 Horizontal and vertical clearances from City structures shall be shown on the drawings. Where applicable, the drawings shall show foundations, footings, approach slabs or other buried portions of the structure. Clearances shall be shown from the edge

of the existing infrastructure to the edge of the proposed excavation and also from the edge of the proposed infrastructure. All clearances shall be labelled on the drawing as "MINIMUM."

- 17 The dimensions of excavation and the excavation support system shall be shown on the drawings for all aspects of the proposed work. For trenchless installations and tunnelling, the drawings shall clearly show any shafts or pits.
- 18 Above-grade or at-grade installations shall achieve a minimum of 5.0 metres clearance from the outermost edge of the above-grade portion of the City structure.
- 19 Subsurface installations shall achieve a minimum of 5.0 metres clearance from outermost edge of the subsurface portion of the City structure.
- 20 Tiebacks or anchors are not allowed underneath the footprint of the structures footing or foundation.

## **Easement Requirements**

A 5.0 metre wide easement from the outermost edge of the City structure shall be provided, as required by Transportation Services division or other division(s), as applicable;

## **Letter of Credit**

For any work in the vicinity of City structures, the Applicant shall provide Engineering & Construction Services (ECS) division with a letter of credit in the amount of five million dollars (\$5M) payable to the City of Toronto.

## **Pre-Condition Structural Survey Report**

The Applicant shall submit a pre-condition structural survey report for all City structures within the work zone prior to the start of construction. The pre-condition survey report must document the condition of the structure to provide a source of reference in the event the structure is damaged during construction. The survey shall be

completed by an engineering firm with specialization in this field and the report shall be signed and sealed by a Professional Engineer licensed in the province of Ontario.

## **Monitoring Reports During Construction**

Monitoring of vibration and movements of the structures shall be conducted as per the monitoring plan until the construction is complete. Monitoring reports are to be forwarded weekly to ECS. In addition, ECS shall be advised immediately of any damage to the structure witnessed on site or through data recorded by the monitoring. ECS should be informed immediately if the actual ground movement measured due to excavation reaches or exceeds or both the predicted ground movements.

## **Post-Condition Structural Survey Report**

A post-condition structural survey report certifying that the work has had no impact on City structures shall be submitted to ECS when the construction is complete. The survey shall be completed by an engineering firm with specialization in this field and the report shall be signed and sealed by a Professional Engineer licensed in the province of Ontario.

## **Release of the Letter of Credit**

The letter of credit will be released by ECS when the construction is complete, and after the post-construction survey report and sign-off letter from the engineering firm have been received and accepted. If an Encroachment Agreement exists, all the terms and conditions related to City's structures within the encroachment must be met before the release of the letter of credit.

## **Exemptions**

Exemptions may be considered by ECS on a case-by-case basis subject to the Applicant demonstrating that it is impossible or impractical to meet all of the requirements above. The Applicant shall note that the review of exemption requests may result in significant delays, depending on the specifics of the proposed work, and may require submission of additional reports or studies. Further, the Applicant shall note that there is no guarantee that exemptions will be granted.