PROJECT TITLE LaSalle Causeway Concrete Repairs
EQ754-2221279/A

AMENDMENT No.4, dated 2021-10-25

QUESTIONS AND ANSWERS

1. Part 1.2.1.2 of spec section 32 17 23 states "Pavement Markings- Permanent: Implementation of permanent pavement markings as indicated". For pricing purposes please provide the type and quantity of pavement marking as it is not indicated on the drawings.

   Answer: Any temporary pavement markings and signage required as part of the traffic control plan should be taken into consideration by the contractor when pricing this item for traffic control.

2. Please confirm that the new concrete slab 250+- thick, as shown on drawing S15 is to be priced in the lump sum item.

   Answer: Refer to Appendix 1.

3. The asphalt specification is for superpave FC1 Level D (PG 64-34). We expect that local asphalt plants will be closed for the winter, during this project. Our understanding is that the specified asphalt is not available in Winter (November to May). The closest available asphalt for this project may be from Toronto, and an alternate asphalt product is probably only available in winter. This asphalt will be expensive as there could be significant loss of material due to cold conditions during transport. Will PSGSC accept a alternate temporary asphalt for this winter, removal of the temporary asphalt and repaving with the specified asphalt in Spring 2022 when local asphalt plants reopen? We recommend that a unit price item for temporary asphalt for this winter season and final reinstatement in Spring 2022, be added to the contract. Please note that temporary paving with an alternate asphalt may be difficult and not to spec as the temperatures will be too low, particularly at night when the work is to be completed. Paving during the day may be a better option as it is more likely that the temperatures may be higher.

   Answer: Paving to be done according to specifications.

4. This project will run into winter. Our plan would be to complete as much of the work as early as possible before the coldest winter months. The tender is valid for 60 days. Please advise the expected date or approximate timeframe by which the notification of acceptance of the offer will be issued to the successful bidder.

   Answer: To be determined by tender results.

5. Typically, under the summary of work, there is a General List outlining the Lump Sum Amount Items. In order to accurately quote the LSA, we request that PWGSC provide a

breakdown of the General Lump Sum Items to be priced. We are aware that it is a requirement for the successful bidder to provide a breakdown, however in order to keep the procurement process competitive and fair, a breakdown of Lump Sum Items will keep all bidders on the same process.

Answer: Refer to Appendix 1.

6. Can you please confirm where line painting is to be paid under?

Answer: Part of contractor traffic control plans

7. Can you confirm if there will be a requirement to conduct a CCTV Inspections of the existing Sewer Infrastructure onsite as well for the repairs identified on the contract drawings.

Answer: See WSP report attached

8. We are also, requesting a 1 week extension of time to the contract.

Answer: Contract deadline will be addressed as required at the time of request for extension of time.

9. As per the contract docs, work on the roadway is to proceed between 20:00 and 06:00. All lanes are to be open to traffic at 06:00.

Answer: One lane will stay open during the weekend and most likely over a week and contractor **will be authorized** to use fast setting concrete.

Please clarify this as pouring concrete on the roadway for the approach will prohibit this as the concrete must be cured and must reach 70% strength before any loading can occur. This question is the same for any and all concrete near or on the roadway throughout the site including but not limited to sidewalks, curbs and gutters, expansion joints at the east bridge where temporary pedestrian walkway is to be provided but the road must be open at 06:00 to all traffic.

Answer: City of Kingston will need to be contacted for approval regarding **any deviation from the established scenarios in** the road closure protocol. The Traffic Control Plan shown is a proposed conceptual plan only. It is the responsibility of the contractor to develop their own plan, that may differ from the proposed plan as needed, and submit for approval by the Departmental Representative and City of Kingston with adequate lead time of 2 weeks. To be discussed with PSPC as required.

10. As per the specifications the work is to be performed during nightly single lane closures between 8pm and 6am. Has PWGSC considered how the lanes can be reopened to traffic, daily while the works are in progress particularly at the east and west approach removals and repairs, which require new reinforced concrete footings and slabs which

will require several days for concrete cure alone, probably with winter hoarding and heating and several weeks to complete? These work areas are too large to temporarily steel plate over for traffic on a daily basis. Please clarify –

Answer: Clarified under a previous query already answered.

11. Can you clarify what work is to be included in the LSA of the contract. Is this a lump sum or unit price contract?

Answer: Please refer to Appendix 1.

12. Is all of the work to be done at night, or just the work that impacts traffic flow?

Answer: Only the aspects of the work that will not impede vehicular and pedestrian traffic can be carried out outside the window of 20:00 and 06:00, however It is the responsibility of the contractor to develop their own plan, that may differ from the proposed plan as needed, and submit for approval by the Departmental Representative and City of Kingston. To be discussed with PSPC as required.

13. The dates on this tender seem to be incorrect. Can you have someone take a look and revise them please?

Answer:

a) Start of Work: To be determined by tender results. Note tender closes Nov 2 2021. Anticipated Start of Work: November 15, 2021
b) Completion of Work: May 30, 2022.

14. Please provide details of the tie back rod anchorages show in the backfill drawing S)& Bascule bridge east approach slab. What elevations are these anchor

Answer: Refer to Dwg. S07. Additional details are not available.

15. Please provide details of the ducts to be protected in sidewalk S07 are these duct in the sidewalk or below the sidewalk?

Answer: Details not available. All available details have already been provided. Contractor to secure locates prior to construction.

16. Please confirm that the granular A material under the Bascule Bridge east approach slab is being replaced

Answer: Refer to drawing S.08

17. Please confirm scope of work by this tender versus the Bell works being completed by others

Answer: E-27 MH and HDPE duct are by this tender, including coordination with BELL. Bell will complete conduit connection on the south side, and pull their own wires. Backfill and re-instatement as per this tender.

18. Given the short duration of the schedule the submission of the traffic control plan 4 weeks prior to start of work will not be possible

Answer: The submission of the traffic control plan for the High Impact closures per the Lane Closure Protocol, i.e. Full Lane Closures at any time during the week, must respect the 4 week notice and could be submitted at the beginning of the project, provided with the appropriate traffic control plan reviewed by the City of Kingston and PSPC DR.

19. Please confirm that the owner anticipates single lane closures for multiple days and that section 01-55-26 (pg 2) 1.4.5 cannot be met.

Answer: This clause must be met.

20. Please confirm concrete removal and repair detail above CB6 DWG C10 payment items?(removal and patch)

Answer: Refer to Appendix 1

21. Please confirm payment items for the concrete chipping removal(partial depth) of the sidewalk section detail D1 on DWG C10

Answer: Refer to Appendix 1

22. Please confirm the location of item 20 Removal and Salvage and Reinstatement of Post and Railings? Drawings show new handrail and Posts?

Answer: Refer to drawing S07 and S08.

23. Section Specification 02-41-13 Selective Demolition has a summary of items listed as included in the LS price. These are in conflict with pay items…Please confirm Summary 1.2.1.1 to 1.2.1.14 as all but three of the fourteen listed have pay items?

Answer: 1. Excess concrete/blockage in cast iron pipe between CD5 and CB6
2. Post anchorage at east end of south roadside barrier of Bascule Bridge
3. Removal of granular fill beneath east and west approach slabs of Bascule Bridge
4. Full depth concrete removals of sections of concrete slab at West Wharf and granular fill beneath slab
5. Core through footing at West Wharf

24. Section 01-71-00 Please confirm your requirements for the 2 permanent benchmarks required and conduct full topographic survey of the work area. Given this is patch work what is required here?

    Answer: Refer to Part 1.4 of Section 01-71-00 for survey requirements

25. 300mm Dia Cast Iron Pipe between CB6 to CB5 are we to assume CCTV cleaning only if pipe is damaged then we can assume repair as extra?

    Answer: Large debris is present, previous attempts to CCTV Clean pipe were unsuccessful. Per DWG C10, “storm sewer to be cleaned and unclogged by means of trenchless technologies (direction bore, pipe bursting or equivalent)”. Repair is part of this tender.

26. Schedule shows 10 weeks from award and the scope of work required for this tender has asphalt paving. How will the schedule be modified if we cannot get asphalt or we are exceeding ambient temperatures?

    Answer: Already answered in a previous query

27. is for Removal and Disposal of Railings around the control room. What Item shall be used for Supply and Install of New Railings around the control room?

    Answer: Refer to Appendix 1. Work included in the Lump Sum amount represents all work not included in the unit price table.

28. Please clarify what Item #20 is for.

    Answer: Refer to drawing S07 & S08

NOTE: Work on West Wharf must be completed by March 15, 2022

END OF AMENDMENT NO.4

MEMO

TO: Roger Gratl, P.Eng. - Public Service and Procurement Canada

FROM: Steve Davidson, P.Eng., OLS (Ret.), MBA &

Andy Huctwith, M.A.Sc., P.Eng., CAHP

SUBJECT: **LaSalle Causeway – Storm Sewer System Investigation & Remediation Review**

DATE: **March 25, 2021**

INTRODUCTION

WSP has been retained by Public Service and Procurement Canada (PSPC) to complete an investigation and remediation review of an existing storm sewer system situated directly in front of 386 LaSalle Causeway, Kingston, Ontario. The project was initiated by PSPC in response to concerns that the existing storm structures (referred herein as CB05 and CB06) may be structurally compromised (based on signs of erosion at the surface), as well as the discovery of 1937 drawings showing the structures where much larger then anticipated. This memo presents details related to the investigation, structural visual inspection, and subsequent recommendations for remediating the system with a primary focus on ensuring public safety. Refer to Figure 1 which shows the geographic location of the system.

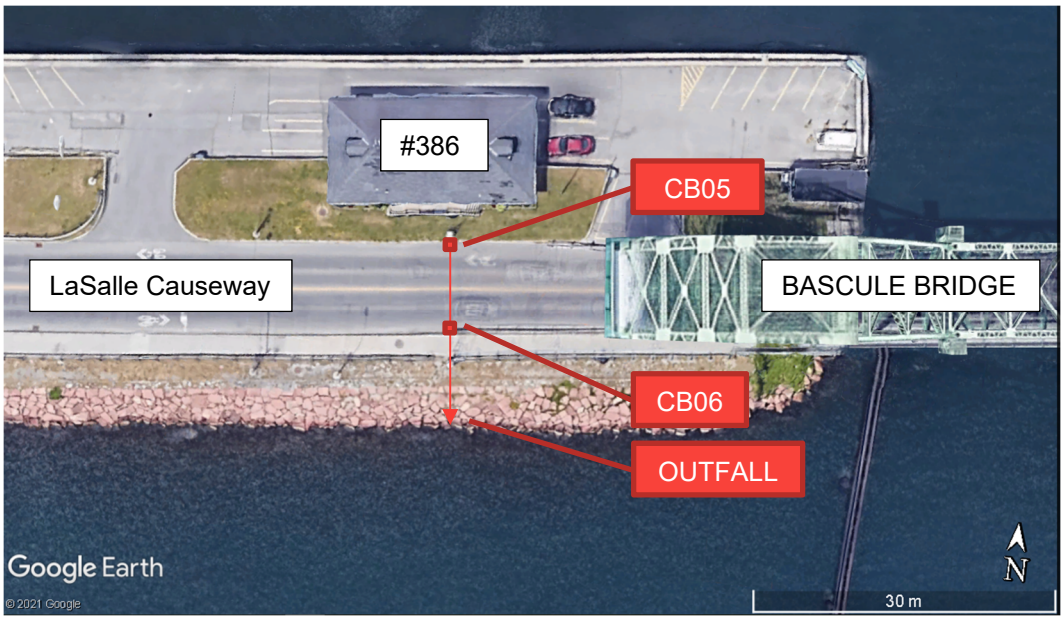

Figure 1: Storm System Geographic Location (Source: Google Earth)

201-1224 Gardiners Road
Kingston, ON
Canada K7P 0G2

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F: +1 613 634-3523
wsp.com

BACKGROUND

In early January 2021, PSPC engaged Tomlinson Group (Tomlinson) to execute the initial cleaning and inspection of the existing storm system. During this inspection, Tomlinson revealed that a blockage existed within the existing 300mm diameter cast iron storm sewer which connects catchbasins (CBs) CB05 and CB06 and spans the roadway. Tomlinson also removed several large pieces of concrete from the bottom of both catchbasins.

Between the timeframe when Tomlinson completed their inspection and WSP was retained, CB06's frame fell into the structure. Since then, PSPC has removed and salvaged the frame for future reuse, and installed a removable steel plate to protect motorists and pedestrians from the opening.

INVESTIGATION

In order for WSP to complete a structural visual inspection of the storm sewer system, CCTV inspections were carried out by Quinte Sewer Service (QSS). Two (2) separate inspections were required to obtain the information needed to complete the assessment; which took place on March 3, 2021 and March 11, 2021. The purpose of the second CCTV inspection was to capture areas not surveyed in the first inspection and improve resolution through better lighting.

The inspections included a 360-visual pan of structures CB05 and CB06. Inspection equipment was not able enter any of the pipes, however the camera was able to zoom into the pipe from CB05 and CB06 to capture evidence of the blockage under the roadway. Obstacles which impeded camera entry into the pipes were as follows:

- **CB05 Outlet**: 50% submerged and utility cables
- **CB06 inlet:** Utility cables
- **CB06 Outlet**: Mass of cured concrete blocking approx. 80% of pipe

In addition to the CCTV investigation, WSP was tasked with completing a high-level topographic survey to confirm the presence of low-lying areas along the existing eastbound curb line. This, along with other topographic information, was documented in an Existing Condition – Grading and Servicing plan.

Information pertaining to the investigation can be found in Appendix A. Such information includes QSS CCTV inspection data, WSP manhole inspection sheets, investigation photos, and the Existing Conditions – Grading and Servicing plan.

Given the inspections were being carried out in an active roadway, traffic control was necessary. Traffic control was carried out in accordance with the causeway's closure protocol and WSP's traffic control plan (approved by the PSPC and the City). A Site-Specific Health and Safety Plan was also developed by WSP. Refer to Appendix B for WSP traffic control plans and the Site-Specific Health and Safety Plan.

STRUCTURAL VISUAL INSPECTION

On March 11th, 2021, a video visual inspection was completed of CB05 and CB06. While a camera inspection has some limitations, the condition of the walls and most of the ceiling of the catchbasins are such that the condition could be assessed. WSP reviewed the video in order to evaluate the condition and provides the following remarks.

- The marks from the board forming of the catch basin walls are visible indicating little or no abrasion or deterioration of the surface. There are some small areas of spalling on the walls of CB06 where wood from the forming appears to be embedded in the wall. The wood likely retained water and spalled the surface when the water froze. The fact that the spall did not spread or increase in size suggests that the concrete of the walls is generally sound.
- Both catchbasins have a 6 inch (6 I 17.25#) steel beam between the catch basin grating and the roadway. The beams are critical as they support the edge of the roadway and the grating structure. The beams are encased in concrete and the underside of both encasements are in good condition showing no signs of rust staining, spalling or deterioration. In CB06, the top of the encasement is visible where the roadway asphalt and concrete is deteriorated and even though the material above the beam is deteriorated (presumably do to freeze thaw damage etc.), the edge of the encasement is sharp clean and undeteriorated, which suggests that the steel beans inside are sound. Refer to Figure 2

Figure 2: CB06 - Erosion of Roadway & Missing Frame (2021.03.11)

- The ceiling of CB05 has some exposed reinforcing steel, see Figure 3. From the video it appeared that there was little loss of section in the bars as they appeared to be of uniform width with little or no necking or staining. The fact that the concrete is missing is an indication that some rusting has occurred or that concrete was poorly consolidated around the bars. The bars were originally #4 bars. Poorly consolidated concrete is present in the opening around the catch basin grate, but by contrast the concrete surrounding the beam is well consolidated. The catch basin ceiling spans in the direction where the bars for the most part are still partially embedded, and the spalled area is adjacent to the steel beam.

Figure 3: CB05 - Ceiling - Exposed Rebar (2021.03.11).

- The overall condition of CB05, while not perfect, based on the visual inspection likely has little loss of capacity. A protective coating could be added to the bars, but any protective coating or polymer modified concrete patching material would likely trap water and could accelerate the deterioration of the original concrete and would have to be considered carefully if other work proceeds. Based on this review while the catch basin could just remain in service if someone is entering the catch basin the reinforcing loss of section should be verified and physically measured to confirm the observations.
- Based on the visual structural inspection, structures CB05 and CB06 are deemed safe structurally and should allow entry provided proper confined space entry procedures are followed. The first confined space entry into CB05 should be to perform the direct physical inspect of the exposed ceiling rebar (Structural Remedial Recommendation #1) to confirm the findings of the visual video inspection regarding loss of section. Subsequent inspections are recommended in the future to monitor the condition of the structures, especially if the structures are subject to excessive loading and/or vibrations from nearby activities.

REMEDIATION RECOMMENDATION

Recommendations for remediation have been divided into two (2) groups, Operational and Structural. Operational remedial recommendations are proposed measures of a non-structural nature which are necessary to re-establish the systems functionality, including the capturing and disposal of stormwater. Structural remedial recommendations are proposed measures to improve or protect the structural integrity of the storm sewer system.

OPERATIONAL REMEDIAL RECOMMENDATIONS

1. Rebuild CB06 frame and install grate. Existing frame and grate may be re-used if found to be in good condition and are operable.
2. Coordinate with utility owners and relocate utility cables out of storm system. Refer to Appendix A – Figure 1 for PSPC's preferred Bell service relocation alignment.
3. Remove blockage in pipe between CB05 and CB06.

4 Remove cured concrete blockage at CB06 outlet.
5 Inspect all pipes to review condition after blockages have been removed.
6 Revise roadway grading and/or introduce new stormwater collection measure (as required) to eliminate pond along eastbound shoulder.

STRUCTURAL REMEDIAL RECOMMENDATIONS

1 Confirm the condition of exposed rebar within ceiling of CB05 through direct physical inspection (confined space entry will be required). Depending on findings, WSP may recommend minor repair

BUDGETARY COSTING

An itemized budgetary cost estimate has been prepared to quantity the cost to remediate and further inspect the existing system, refer to Table 1.

Table 1: Budgetary Cost Estimate

ITEM NO.	DESCRIPTION	BUDGETARY COST (EXCL.HST)
1	Re-Build CB06 Frame and Install Suitable Grate	$4,000.00
2	Clear Blockage Between CB05 and CB06	$6,000.00
3	Clear Concrete Mass Blockage @ CB06 Outlet	$6,000.00
4	CCTV Inspection of Pipes	$4,000.00
5	Direct Inspection of Exposed Rebar in CB05	$4,000.00
6	Roadway Regrading and New Drainage Features	$20,000.00
	Total	**$44,000.00**

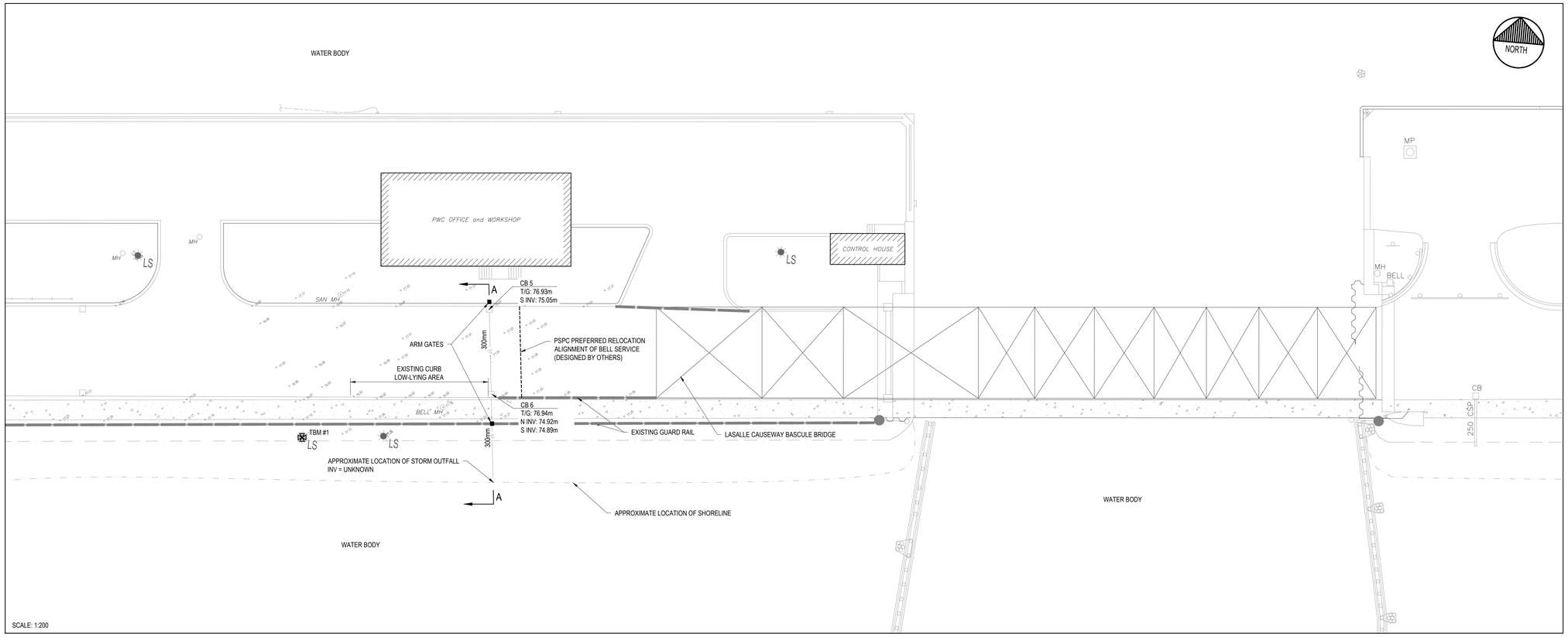
Notes:
- Assumes each item will require one (1) full day of traffic control (single lane closures) to complete works
- Item #6 assumes one (1) new catchbasin (located in low point - piped to CB06) and replacement of 25m of east bound lane (full depth).
- Excludes health & safety planning or protection measures related to confined space or shoreline work.
- Excludes for utility coordination and/or relocation.
- Excludes costs associated with design, permitting, or approvals.

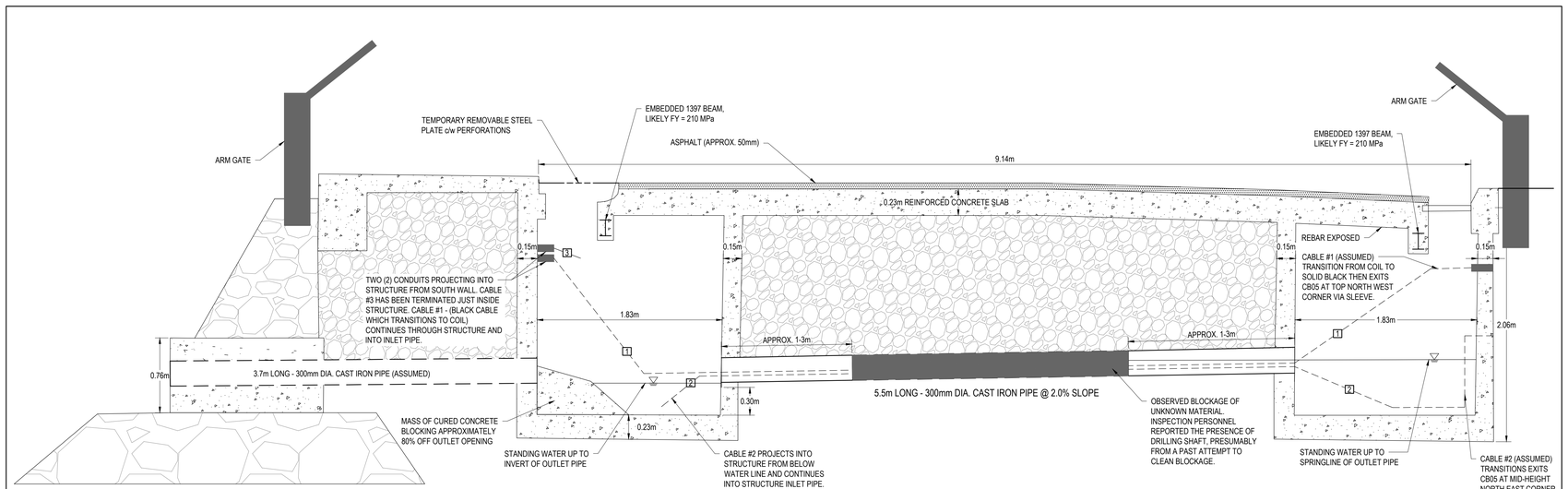
NEXT STEPS

WSP suggests proceeding with the implementation of all operational and structural remedial recommendations to re-establish proper system functionality and verify the condition of the system where previously inaccessible to WSP.

INVESTIGATION & MAPPING

A





SECTION DISCLAIMER:
CROSS-SECTION IS A DIGITAL TRACING OF THE PUBLIC WORKS CANADA - 1937 DRAWINGS (PLAN NO. 2915) AND SHALL BE CONSIDERED FOR INFORMATION ONLY. UNLESS OTHERWISE NOTED, DETAILS PROVIDED (INCLUDING DIMENSIONS) ARE APPROXIMATE AND CONCEPTUAL IN NATURE.

CABLE NOTES:
IDENTIFICATION OF CABLES OF EITHER SIDE OF BLOCKAGE IS ASSUMED BASED OFF CCTV REVIEW.
CONFIRMATION OF CABLE OWNERSHIP AND ROUTING IS REQUIRED AFTER BLOCKAGE REMOVAL.

1 FIG.1 SECTION A-A
SCALE: NTS

NOTES:

1. ELEVATIONS SHOWN HEREIN ARE GEODETIC AND DERIVED FROM GNSS OBSERVATIONS REFERENCING VERTICAL DATUM (CGVD28).
2. THE HORIZONTAL COORDINATE SYSTEM IS UTM ZONE 18 - NAD83 CSRS (GRID) -EPOCH 2010.
3. TOPOGRAPHIC SURVEY COMPLETED ON MARCH 3, 2021 BY WSP.
4. ALL UTILITIES ARE NOT SHOWN ON THIS PLAN. WHERE UTILITIES ARE SHOWN, THERE LOCATIONS ARE NOT GUARANTEED. LOCATION AND SIZES MUST BE CONFIRMED IN THE FIELD.
5. LEGAL BOUNDARIES SHOWN ARE NOT SHOWN. LOCATION OF SITE BOUNDARIES MUST BE CONFIRMED BY A LICENSED ONTARIO LAND SURVEYOR (OLS).
6. OPERATIONAL CONDITIONS IDENTIFIED IN SECTION A-A ARE REPRESENTATIVE OF CONDITIONS OBSERVED BY WSP DURING THE MARCH 3, 2021 AND MARCH 11, 2021 INSPECTIONS.

TEMPORARY BENCH MARKS

T.B.M. #	ELEVATION (m)	NORTHING	EASTING	DESCRIPTION
#1	77.23	4898979.5120	382172.88	CROSS CUT IN LIGHT STANDARD BASE

Public Services and Procurement Canada
Architectural and Engineering Services
Ontario Region

Services Publics et Approvisionnement Canada
Services d'architecture et de génie
Région de l'Ontario

wsp

LEGEND
- CATCH BASIN
- LIGHT STANDARD
- MANHOLE
- TEMPORARY BENCHMARK
- EDGE OF PAVEMENT
- CURB
- BOTTOM OF SLOPE
- TOP OF SLOPE
- GUIDERAIL
- SIDEWALK

revision		date
02	ISSUED FOR MEMO	2021.03.25
01	ISSUED FOR PSPC REVIEW	2021.03.17

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the engineer of all discrepancies.

Ne pas mettre à l'echelle les plans.
Vérifier les dimensions et conditions sur le site et en aviser l'ingenieur immédiatement de tous divergence.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet: Ontario
LASALLE CAUSEWAY — STORM SEWER CCTV INVESTIGATION

drawing title / titre du dessin: EXISTING CONDITIONS

drawn by / dessine par: C. ZANDER
designed by / conc par: D. SEARLE
approved by / approuve par: S. DAVIDSON
tender / soumission
project manager / administrateur de projets
project date / date du projet: 2021/03/17
project no. / no. du projet: 211–02327–00
drawing no. / dessine no.: FIG–1

CAD FILE LOCATION AND NAME:W:\2021\211-02327-00 - LaSalle Causeway Storm Investigation\Dwgs\01. Civil\01. Production\211-02327-00 - Existing Conditions.dwg
MODIFIED: 3/25/2021 8:53 AM BY: OACZDYAO35
DATE PLOTTED: 3/25/2021 8:24:32 AM BY: OACZDYAO35

GSC–B1 DATE PLOTTED: 1/26/2021 PLOT SCALE: 1:200 CAD FILE:

211-02327-00– LaSalle Storm Sewer Investigation

PHOTOS

CB05 – Surface Condition - 2021.03.03

CB05 – Upper west wall – 2021.03.11

CB05 – Ceiling – 2021.03.11

CB05 – Outlet Pipe – 2021.03.11

CB06 – Surface Condition - 2021.03.11

CB06 – South Outlet Concrete Blockage - 2021.03.11

CB06 – Inlet to the North – 2021.03.11

CB06 – East Wall – 2021.03.11

Manhole Inspection Report

Manhole ID : CB05

Client: Public Works & Government Services Canada (PSPC) **Contractor:** Quinte Sewer Services (QSS)

Operator: Michael Hunter, WSP **Date/Time:** March 3, 2021 9:30-10:20 AM

Address / Intersection: 386 LaSalle Causeway, Kingston ON

Location: *Roadway* ☒ *Boulevard* ☐ *Other:* _____

Flow Type: *Sanitary* ☐ *Storm* ☐ *Combined* ☐

Structure Type: *Catch Basin* ☒ *Catch Basin MH* ☐ *Manhole* ☐

Inspection Type: *Visual* ☐ *Zoom Camera* ☐ *CCTV Camera* ☒

Condition: *Good* ☐ *Average* ☒ *Poor* ☐ Remarks: _____

Cover Type: *Open* ☐ *2Holes* ☐ *Multi-Holes* ☐ *C/B* ☒ *Watertight* ☐ *Bolted* ☐

Chimney Material: *ConcBrick* ☐ *Brick* ☐ *Cast in Place* ☐ Other: No Chimney

Chamber Material: *ConcPrecast* ☐ *Cast in Place* ☒ *Clay Brick* ☐ Other: _____

Safety Platform: *Yes* ☐ *No* ☒ Remarks: _____

Pre-Cleaned: Yes ☒ *No* ☐

Manhole depth (m): 1.9m

Distance from Frame to ground (m): _____

Survey abandoned: *No* ☒ ☐ *Not Found* ☐ *Inaccessible* (reason) _____

Yes ☐ Remarks: ☐ *Buried* ☐ *Other* _____

Observations:

Manhole condition:

Structural	O&M
☐ *No Defects*	☐ *No Defects*
☐ *Cracks/Fractures (Location)* _____	☐ *Roots (Location)* _____
☐ *Missing Bricks (location)* _____	☒ *Debris (Location)* _____
☐ *Surface Wear (Location)* _____	☐ *Infiltration (Location)* _____
☐ *Other (Location)* _____	☒ *Other (Location)* Utility conduits

Condition of Cover: Average, Old

Condition of Frame: Average, Old

Condition of Ladder / Rungs: N/A

Condition of Chimney: N/A

Condition of Chamber: N/A

Condition of Benching: N/A

Condition of Channel: N/A

Other Comments : _____

Other Observations:

☐ *Gas Problems* ☐ *Chemical Problems* ☒ *Electrical Hazard* ☐ *Odor Complaints* ☐ *Frequent Vandalism*

Manhole Inspection Report

Manhole ID : CB06

Client: Public Works & Government Services Canada (PSPC) **Contractor:** Quinte Sewer Services (QSS)

Operator: Michael Hunter **Date/Time:** March 3, 2021 9:30-10:20 AM

Address / Intersection: 386 LaSalle Causeway, Kingston ON

Location: *Roadway* ☒ *Boulevard* ☐ *Other:* ____

Flow Type: *Sanitary* ☐ *Storm* ☐ *Combined* ☐

Structure Type: *Catch Basin* ☒ *Catch Basin MH* ☐ *Manhole* ☐

Inspection Type: *Visual* ☐ *Zoom Camera* ☐ *CCTV Camera* ☒

Condition: *Good* ☐ *Average* ☐ *Poor* ☒ Remarks: ____

Cover Type: *Open* ☐ *2Holes* ☐ *Multi-Holes* ☐ *C/B* ☒ *Watertight* ☐ *Bolted* ☐

Chimney Material: *ConcBrick* ☐ *Brick* ☐ *Cast in Place* ☐ Other: No Chimney

Chamber Material: *ConcPrecast* ☐ *Cast in Place* ☒ *Clay Brick* ☐ Other: ____

Safety Platform: *Yes* ☐ *No* ☒ Remarks: ____

Pre-Cleaned: Yes ☒ *No* ☐

Manhole depth (m): 2.1m

Distance from Frame to ground (m): ____

Survey abandoned: *No* ☒ ☐ *Not Found* ☐ *Inaccessible* (reason) ____

Yes ☐ Remarks: ☐ *Buried* ☐ *Other* ____

Observations:

Manhole condition:

Structural	O&M
☐ *No Defects*	☐ *No Defects*
☐ *Cracks/Fractures (Location)* ____	☐ *Roots (Location)* ____
☐ *Missing Bricks (location)* ____	☒ *Debris (Location)* ____
☐ *Surface Wear (Location)* ____	☐ *Infiltration (Location)* ____
☐ *Other (Location)* ____	☒ *Other (Location)* Utility conduits

Condition of Cover: missing

Condition of Frame: missing

Condition of Ladder / Rungs: N/A

Condition of Chimney: N/A

Condition of Chamber: N/A

Condition of Benching: N/A

Condition of Channel: N/A

Other Comments : Erosion of road structure around frame

Other Observations:

☐ *Gas Problems* ☐ *Chemical Problems* ☒ *Electrical Hazard* ☐ *Odor Complaints* ☐ *Frequent Vandalism*

HEALTH & SAFETY TRAFFIC CONTROL

B

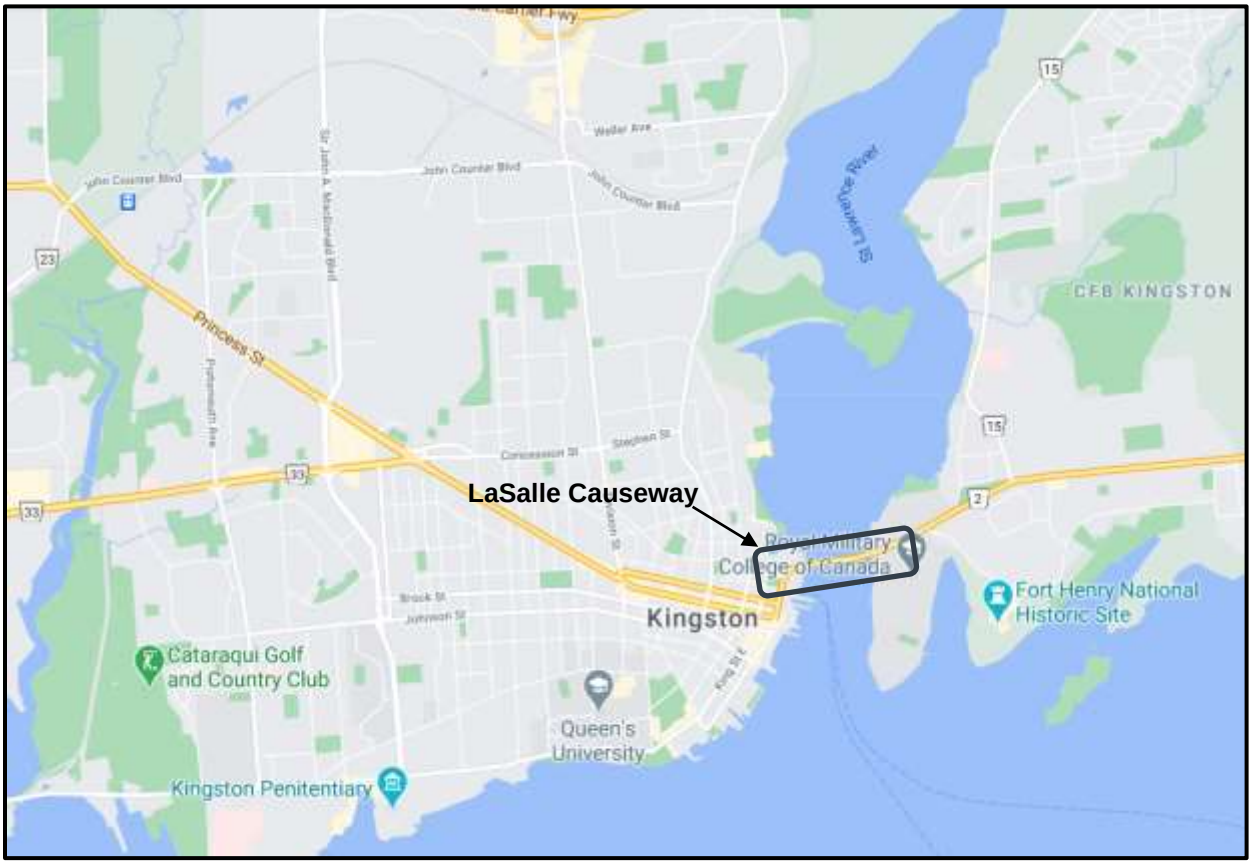
Public Services and Procurement Canada | Services publics et Approvisionnement Canada

LASALLE CAUSEWAY - 2021 STORM SEWER INVESTIGATION

HEALTH AND SAFETY PLAN

MARCH 2021

CONFIDENTIAL



wsp

LASALLE CAUSEWAY - 2021 STORM SEWER INVESTIGATION

HEALTH AND SAFETY PLAN

PUBLIC SERVICES AND PROCUREMENT CANADA

CONFIDENTIAL

PROJECT NO.: 211-02327-00
DATE: MARCH 03, 2021

WSP
201-1224 GARDINERS ROAD
KINGSTON, ON
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WSP.COM

TABLE OF CONTENTS

APPENDICES

1 GENERAL

1.1 PROJECT

This Health and Safety Plan is limited to the field verification activities required for investigation of current conditions, development of design options, and rehabilitation recommendations as part of the 2021 LaSalle Causeway – Storm Sewer Investigation.

1.2 LOCATIONS

The work covered by this plan is limited to the within the LaSalle Causeway, specifically the segment of roadway immediately west of Bascule Bridge. The LaSalle Causeway is located in Kingston, Ontario and crosses the Cataraqui River at the entrance to the Kingston Harbour from Lake Ontario, forming part of the Ontario Street vehicular transportation route (Hwy #2). The Causeway is frequently used by motorists, cyclists, and pedestrians alike.

1.3 SCOPE OF WORK

The proposed work consists of two phases: Investigation /Mapping, and Remediation Review. The Investigation/Mapping component of the project will include field inspection of existing storm sewer system using closed-circuit television (CCTV) equipment. In parallel with the inspection, WSP Canada Inc. (WSP) will record relevant topographic features within the working area. The results of this inspection will serve in the preparation of a remediation memorandum, while the topographic survey will supplement record drawing to prepare an existing condition grading and serving plan.

The CCTV inspection, along with all necessary traffic control measures, will be carried out by Quinte Sewer Service (QSS). It is understood that no confined space entry will be required as part of inspection works. Should confined space entry be required in the future, this plan will be revised to suit.

This document summarizes the Safety Plan for this assignment. Where QSS will be conducting field work, QSS will provide their own supervisor. All inspection activities will be completed under the additional supervision of personnel from WSP.

2 HEALTH AND SAFETY

2.1 GENERAL

This site-specific health and safety plan has been prepared to provide WSP employees with the necessary information to ensure that all field work is performed in a safe manner in accordance with standard safety practices and procedures. The plan also provides information for contingencies that may arise during site work related to health risks associated with environmental conditions and accidental injury during site work. This plan shall be available at the site during all field activities.

The contents of this Health and Safety Plan (Plan) are a minimum expectation and are to be exceeded where site-specific practice, government regulations or common sense dictates. A fundamental aspect of site safety is awareness and common sense. WSP employees shall abide by the Plan when on the inspection sites.

All work to be performed in the field shall be performed in accordance with the requirements of the Ontario Occupational Health and Safety Act (OHSA) and applicable WSP standard practices, procedures and policies.

2.2 REQUIREMENTS FOR WSP EMPLOYEES

WSP employees shall review and be fully aware of the following documented policies and procedures before site work begins:

- WSP Health and Safety Plan (this document);
- Applicable WSP health and safety practices and standards (Appendices A and B);
- Applicable Federal, Provincial and Local Government regulations that apply to the work being undertaken.

Employees shall complete a site safety meeting conducted by either Project Manager and/or a designated alternate. Once on site, the Project Manager and/or designated alternate shall review all actual and potential hazards and make the necessary adjustments to this plan to suit actual site conditions. Once all hazards and safety procedures are identified, reviewed and understood WSP employees may then commence site work.

Modifications to the hazards identified on-site may be required over the duration of the project. Should additional hazards be identified, the Project Manager and/or designated alternate shall conduct additional on-site meetings to ensure that all employees are aware of any changes.

2.3 LIMITATIONS OF USE

This Plan has been developed specifically for the site activities anticipated to be undertaken by WSP employees. Adequate provision may not be provided by the procedures outlined in this Plan for unanticipated activities which fall outside the range of anticipated site activities. The site worker shall inform the WSP Project Manager of any planned activities not believed to be covered by this Plan before undertaking said activity. Upon being brought to the WSP Project Manager's attention, they shall review the matter, update the Plan and ensure any revisions are communicated to the site workers.

2.4 HAZARD ASSESSMENT – GENERIC

This section presents an assessment of the anticipated hazards that have been identified at the Site, and measures that shall be undertaken to minimize the potential for impacts to health and safety and general safety precautions to

minimize/prevent other potential safety hazards. The importance of employee awareness and the exercise of good common sense, by adhering to the policies and procedures presented herein, cannot be over-emphasized.

2.4.1 PRIMARY ENVIRONMENTAL HAZARDS

During the site investigation, heat stress or cold stress being weather dependent, may be an environmental hazard. An awareness of any potential concerns should be the concern of all employees on site, and shall report any environmental concerns to the Project Manager immediately.

2.4.2 PERSONAL CONDUCT AND HYGIENE

Poor personal conduct and hygiene is a common cause for accidents. The following list represents the minimum requirements for personal conduct and hygiene at the Site:

- No worker shall enter the Site while under the influence of intoxicants, narcotics, controlled substances or medication that may in any way adversely affect alertness, concentration, reaction response time or safety;
- No worker shall enter the Site or continue working when illness, fatigue, hunger, mental state or other condition may in any way adversely affect alertness, concentration, reaction response time or safety;
- Workers shall engage in activities for which they are qualified and with the utmost regard for the safety and wellbeing of themselves, other workers and the community;
- Workers shall wash and dry their hands before taking a break to eat, drink, smoke or use toilet facilities or if the worker may have been in contact with site contaminants;
- Workers that are non-essential to the performance of site activities shall not enter and/or linger in or around areas where these tasks are being performed; and
- Every worker is responsible for ensuring the site is kept free of discarded or blowing trash. All wastes shall be placed into appropriate containers.
- Due to the current COVID-19 situation
    - Masks or face coverings must be worn at all times when distancing of a minimum of 2m is not possible
    - Frequent hand sanitization is encouraged
    - WSP employees will arrive to site individually in personal vehicles to prevent prolonged contact

2.4.3 POTENTIAL SITE HAZARDS

The following potential hazards are common to most sites. WSP's policies and procedures to minimize/prevent these potential hazards have been developed from standard safety policies and procedures, and by applying common sense.

PHYSICAL

Physical hazards include the following:

- Slip, trip and fall (e.g., wet surfaces, steep/uneven terrain, holes);
- Dropped items (e.g., inspection hammer);
- Sharp objects (e.g., nails, metal shards, broken glass);
- Working in or near water;

- Traffic (e.g., vehicular, rail or pedestrians)

Good housekeeping, appropriate personal protective equipment (PPE), and alert workers exercising good common sense will minimize or prevent potential injury from physical hazards. Loose equipment and spilled liquids will be cleaned up. The appropriate PPE shall be worn at all times and shall be replaced when it becomes worn-out or damaged. The number of ongoing activities, number of workers and pace of activities shall be kept manageable. Reckless or careless workers will be removed from the site.

ELECTRICAL AND OTHER UTILITIES

The presence of utilities in the working area will be assessed prior to commencing inspection operations and operation of equipment on or near the working area. Minimum required clearances shall be determined based on the nature and regulatory requirements for the utilities identified.

FIRE AND EXPLOSION

Fire and explosion hazards may be associated with flammable vapors from products stored in tanks (above or below ground) as well as from spilled or leaked product or the sudden release of materials under pressure (e.g., propane cylinders). For combustion of flammable substances to occur, fuel, oxygen and an ignition source are necessary. Recognition, evaluation and control of the elements are necessary for the safety of field personnel.

STRESS AND FATIGUE

Stress may result from exposure to excessive heat and cold, as well as due to illness, fatigue, thirst and hunger. Reasonable work hours will be maintained and regular breaks will be scheduled to rest, eat and drink. Adjusted work schedules, shelter or shade and cold water will be provided to minimize the effects of working in hot or cold environments. Workers shall monitor their physical conditions and the physical conditions of co-workers. Persons having an impaired ability to work shall take a break of appropriate duration.

NOISE

Ongoing work around large equipment increases a person's exposure to excessive noise. High levels of noise can cause hearing loss, stress-like reactions in the body, and safety concerns due to a loss in the means of communication. Hearing protection shall be worn in areas where noise exceeds 85 decibels. Because WSP does not routinely monitor noise levels for the type of tasks WSP performs, hearing protection shall be worn under the following conditions as a precaution around operating large equipment, and if one has to raise his/her voice to be heard by someone 0.6 m (2 ft) away.

PERSONAL SECURITY

WSP employees shall not engage in site activities where a real threat to personal security (e.g., excessive verbal abuse or threat of physical violence) is present. Employees will cease all site activities and retreat to a secure location until the threat is no longer present or appropriate security measures are in place.

OTHER SITE ACTIVITIES

WSP employees shall be aware or other activities being conducted at the Site that may impact upon their health and safety. If necessary, WSP employees shall cease site activities and retreat to a safe location until the work can be completed in a safe manner. Under these circumstances, the WSP Project Manager or designated alternate shall be informed. The Project Manager shall inform PWGSC if warranted.

ADVERSE WEATHER CONDITIONS

WSP employees shall cease site activities during adverse weather conditions or engage in other site activities that can be conducted safely in spite of the weather. Examples of adverse weather conditions include heavy precipitation, strong winds, thunderstorms, fog, and extreme hot and cold temperatures.

2.5 HAZARD ASSESSMENT – SITE SPECIFIC

Prior to the commencement of any inspections, all personnel involved in the inspection (both WSP and sub-consultants) will be required to review the site-specific Health and Safety Plan(s) for the planned activities. The Plan is included in Appendix A. Applicable WSP Group Health and Safety policies, practices and forms are provided in Appendix B.

Traffic control will be required to allow for a safe working area. WSP will be responsible for preparing a traffic control plan (in accordance with OTM Book 7) and obtain approval by PSPC and the City of Kingston prior to commencement of work. QSS (CCTV inspection subcontractor) will be responsible for executing traffic control in accordance with the approved plan. Work shall not commence on site until all traffic control measures are in place and WSP has inspected conformance with traffic control plan.

There is potential for falling into open storm structures and into near by water bodies. All personnel on site shall maintain a safe distance from both these hazards at all times, unless close proximity is required and all necessary protective measures are in place.

2.6 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) is designed to protect employees from the actual and potential hazards that may be encountered during site investigations. PPE selection shall be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the actual and potential hazards identified at the site. All protective equipment shall have CSA approval, and/or an equivalent or higher level of protection. The level of protection provided shall be increased when site conditions deem it necessary to reduce employee exposures to below permissible exposure limits and published exposure levels for hazardous substances.

2.6.1 PPE REQUIREMENTS FOR ALL SITE PERSONNEL

The following details apply for the PPE required at the Site:

- Head Protection: CSA approved (Class B) hard hats shall be worn on-site, except inside vehicles;
- Foot Protection: CSA approved safety-toe boots shall be worn at all times during on-site. In areas that are wet or slippery, additional requirements may be appropriate;
- Eye and Face Protection: Eye protection, consisting of CSA approved safety glasses with side shields or CSA approved prescription safety glasses with side shields shall be worn on-site where dust and debris from may be a concern;
- Hearing Protection: CSA approved hearing protection devices with a Noise Reduction Rating (NRR) of 25 or higher shall be worn in areas with excessive noise. Hearing protective devices may be either of the plug or muff design;
- Body protection: Suitable clothing for the existing conditions and work being performed shall be worn. Pants shall be at least ankle length and shirts shall be worn at all times. Long-sleeve shirts and preferably long-sleeve coveralls are the preferred clothing to increase body protection; however, short-sleeve shirts may be permitted, depending on weather conditions; and

- Reflective Vest: A reflective vest shall be worn at all times.
- Face covering: A mask of face covering, completely covering the mouth and nose is required to be worn at all times when distancing of a minimum of 2m is not possible.

2.7 EMERGENCY PREPAREDNESS AND RESPONSE

The emergency services available at the Site are summarized on the Project Specific Safe Work Plan found in Appendix A. This plan will be signed prior to field work commencing and a copy will be available both in the office and on site.

The emergency response plan has been designed to provide WSP employees with the information required to respond promptly and appropriately to emergency situations, such as a medical injury, fall, fire or explosion, spill or leak, or the disruption of a service utility. In any emergency, the WSP Project Manager shall be informed immediately. The Project Manager or designated alternate has primary responsibility for responding to and correcting the emergency. This includes taking appropriate measures to ensure the safety of site personnel and the public, ensure that corrective measures have been implemented, appropriate notification of PWGSC personnel and other authorities as required, and completion of any required follow-up reports.

2.7.1 FIRST AID

A general first aid kit shall be available to all WSP employees and subcontractors on site, and shall contain the basic supplies to attend to minor work place injuries. The injured worker should be transported to the nearest hospital or clinic for follow-up treatment after receiving first aid, as necessary. WSP requires injuries to be reported.

If a medical injury is serious, the patient shall be stabilized, an ambulance called, and first aid administered while awaiting an ambulance or paramedics. Should the medical emergency be related to a hazardous material, the personnel who are transported to a clinic or hospital shall take with them information (WHMIS MSDS) on the chemical(s) they have been or may have been exposed to at the site.

2.7.2 FIRE PROTECTION

In case of a fire or explosion, the local fire department shall be notified immediately. The site safety coordinator or a designated alternate shall advise the fire commander of the location, nature, and identification of potentially hazardous materials on-site.

2.7.3 SPILL OR LEAK OF HAZARDOUS CHEMICALS

In case of a spill or a leak, site personnel shall:

- Inform the WSP Project Manager or designated alternate immediately;
- Locate the source of the spillage and stop the flow if it can be done safely; and
- Begin containment and recovery of the spilled materials; and contact a hazardous materials response team if required.

2.8 CONTACTS

CONTACT	PHONE NUMBER
Steve Davidson, P.Eng., OLS (Ret.), MBA **WSP Project Manager**	Tel: 613-856-0307 Cell: 613-539-7940
Daniel Searle, P. Eng. **WSP Assistant Project Manager**	Tel: 613-935-0538 Cell: 613-618-4825
Michael Hunter, C.E.T **WSP Field Inspector**	Tel: 613-856-0322

APPENDIX

A

PROJECT SPECIFIC SAFE WORK PLAN

Project Risk Assessment & Safety Plan

Project Information			
Office	Kingston - Gardiners	**Business Line**	Transport & Infrastructure
Project Number	211-02327-00	**Market Segment**	Municipal
Project Address	LaSalle Causeway	**Client**	PSPC
Project Manager	Steve Davidson	**Site description**	Roadway East of Bridge
PRASP Date	1-Mar-21	**Start Date**	3-Mar-21
Completed by	Daniel Searle	**End Date**	5-Mar-21

Project team signoff		
Name	**Title**	**Acknowledgment**
Steve Davidson	Project Manager	
Daniel Searle	Assistant Project Manager	
Michael Hunter	Site Inspector	

Emergency Medical Care	
First Aid Kit available in the following location	To be provided by subcontractor (Quinte Sewer)
On-site First Aider(s)	To be provided by subcontractor (Quinte Sewer)
Muster point	Subcontractor to confirm

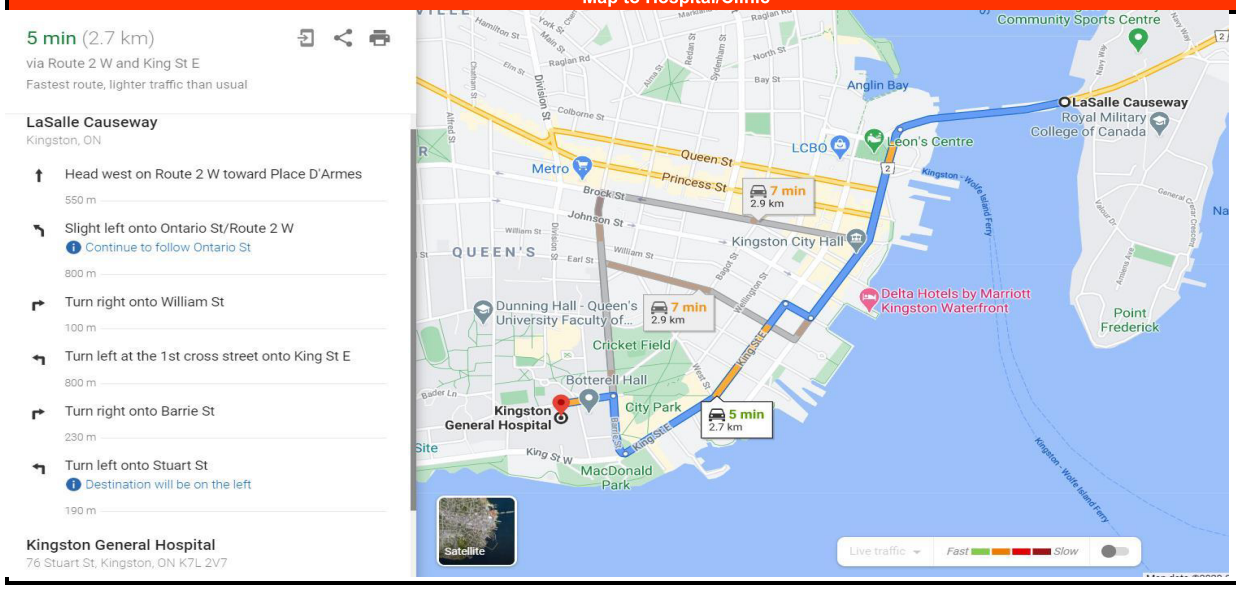
Safety Plan requirement	
Is WSP the Prime Contractor or Constructor ?	Yes

Any contact to provincial OH&S departments to be made by Corporate HSE department only, including reportable incidents

Contact	Phone	Contact	Phone
Emergency service (Police, firefighter and ambulance)	911	**WSP Radiation Emerg.**	
Poison Control		**Electrical Utility**	
Environmental		**Gas Utility**	
Spill Center		**Prov. OHS Regulator**	
Water Utility		**Satellite phone**	
Others		**Others**	

Hospital/Clinic Information			
Address	Kingston General Hospital 76 Stuart Street, Kingston, ON K7L 2V7	**Phone**	(613) 549-6666

Map to Hospital/Clinic



Risk Assessment & Controls

#	Tasks	Conditions, Hazards, or Risks	Weighting Factors Without Controls			Basic Controls	Additional or Specific Controls	Implement Date	Person Responsible	Weighting Factor With Controls			Safe Work Practices and Procedures
			Severity	Likelihood	Risk					Severity	Likelihood	Risk	
1	Inspection / Survey	Driving	Catastrophic	Possible		Valid driver's licence. Perform pre-use inspections. Plan your trip. Operate distraction free. Drive defensively and perform ongoing hazard assessments.	Only drive to and from established meeting point	TBD	MH	Moderate	Possible		Vehicle Safety
2	Inspection / Survey	Work on or near water	Major	Possible		Ensure appropriate PPE is worn. Life Jackets need to be used (or PFDs). This task requires a task specific rescue plan (how will workers be rescued if they fall in?). Number of employee' available for rescue operations as per legislation and trained in site specific procedures.	Personnel to remain inside the causeway guard rail (bordering exterior of sidewalk)	TBD	MH	Moderate	Unusual		Working Near On or Above Bodies of Water
3	Inspection / Survey	Work on or near public roadways	Catastrophic	Possible		Traffic control plan High visibility PPE. Frequent review of traffic conditions. Updating the plan as required.	Work only within dedicated "working zone" as communicated in approved traffic plan.	TBD	MH	Minor	Unusual		Traffic control on active roadways
4	Inspection / Survey	Cold stress	Moderate	Probable		Review weather forcast for the day. Use cell phone to receive weather alerts. Dress for the temperature, wear layers and cover head and extremities. Stay hydrated. Warm up brakes as required.	Follow basic control as noted.	TBD	MH	Minor	Unusual		Cold Stress
5	Inspection / Survey	Slips, trips and falls	Major	Possible		Wear and use appropriate foot wear. Ensure appropriate grip for weather conditions. Plan your route. Clear hazards from your path. Follow designated walkways. Perform ongoing hazard assessments.	Follow basic control as noted.	TBD	MH	Minor	Unusual		Slips, Trips and falls
6	Inspection / Survey	Virus	Major	Expected		Practice physical distancing. Practice good hand and respiratory hygiene. Wear a mask. Follow all local public health guidelines.	Wear mask and maintain physical distancing.	TBD	MH	Minor	Unusual		Industrial hygiene approach, COVID-19 Site and Field Work. COVID-19 office protocols
7	Inspection / Survey	Work near heavy equipment	Major	Expected		Coordinate your work activities with site supervisor and equipment operator. Stay out of the equipment's danger zone. Make eye contact with operator and wait for acknowledgement before moving around the equipment.	Follow basic control as noted.	TBD	MH	Minor	Unusual		Working around Heavy Equipment
8	Inspection / Survey	ergonomics (awkward postures, repetitive or forceful motions)	Moderate	Probable		Perform pre-work warm up. Take frequent breaks and rotate with a co-worker during repetitive tasks. Follow safe work procedures. Rotate strenuous work with low intensity activities.	Follow basic control as noted.	TBD	MH	Minor	Possible		Organization of the Work Environment
9													
10													
11													
12													
13													
14													

Project Risk Assessment & Safety Plan

Personal Protective Equipment Required			
Note: It is the responsibility of the Supervisor to ensure that all of the employees working on the project site use the appropriate CSA Approved Personal Protective Equipment as required by the Project Scope of Work and in respect to the hazards and risk identified.			
Required	**Item**	**Req**	**Item**
Required	Head protection	Required	Foot protection
Required	High-visibility apparel	As Required	Eye protection
As Required	Hand protection	As Required	Hearing protection
As Required	Long sleeve shirt	Required	Long pants

Additional or Specialized PPE			
Required	**Item**	**Req**	**Item**
N/A	Skin protection (chemical resistant etc.)	N/A	Respiratory protection
N/A	Fall prevention or fall arrest equipment	N/A	Fire resistant/retardant clothing
N/A	Lifejacket		

Other Safety Equipment			
Required	**Item**	**Req**	**Item**
Required	Cell phone / Satellite phone	N/A	Fire extinguisher
N/A	Two way radio, with applicable permits	N/A	SPOT device
Required	First aid kit	As Required	Vehicle beacon (with permits where applicable)
Required	Traffic cones	Required	Traffic / specialty signs
N/A	Gas monitor (O2, H2S, LEL, and CO)	N/A	Lock or tag out (locks, hasps, tags)

Safety Training Required						
Insert project team names below						
Training Type	*Michael Hunter*	*Name*	*Name*	*Name*	*Name*	*Name*
Traffic hazards	Required					
Cold Stress	Required					
Violence & Harassment	N/A					
Work near heavy equipment	Required					
Ergonomics	Required					
Electrical safety awareness	N/A					
Arc flash (external)	N/A					
Employee's must initial to confirm they have the training requirements as listed above and proof of training on their person while on site						

APPENDIX

B

APPLICABLE WSP H&S POLICY, PRACTICES, PROCEDURES AND FORMS

APPENDIX B

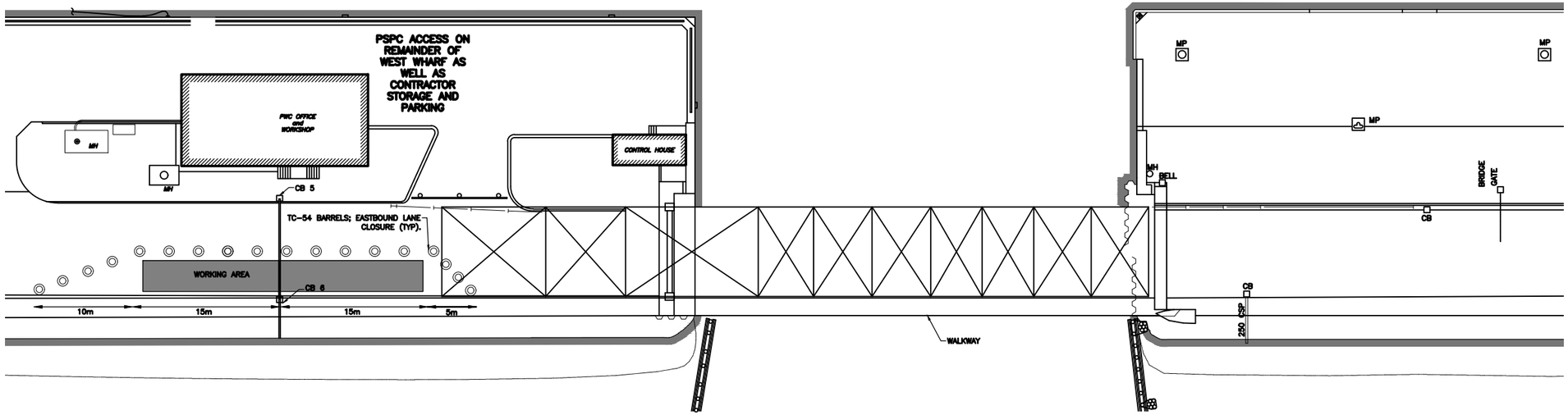
The WSP Canada Inc. Environmental Health & Safety Policy is several hundred pages long and will not be reproduced here in its entirety.

Included here is the WSP Health Safety and Environment Policy Letter.

The following policies are of particular application for the identified scope of work in this project:

Activity / Hazard	Procedure
Heavy Equipment	G-HSE-PRO-64-03
Vehicle Safety	G-HSE-MAN-63-10
Journey Management Program	G-HSE-MAN-63-10,1
Emergency Response Plan	G-HSE-PRO-64-22
Working near, on or above a body of water	G-HSE-PRO-64-31
Manual Material Handling	G-HSE-PRO-64-38
Site Inspection	HSE-PRO-64-1224
Slips, trips and falls	HSE-PRO-64-1061
Cold Stress	PRO-64-1047.1
Fitness For Duty	PRO-63-0031
Personal protective Equipment	PRO-64-0121

Any portions of the policy or the complete policy will be provided upon request.



PLAN: EASTBOUND SINGLE LANE CLOSURE (MINUS SIGNAGE)

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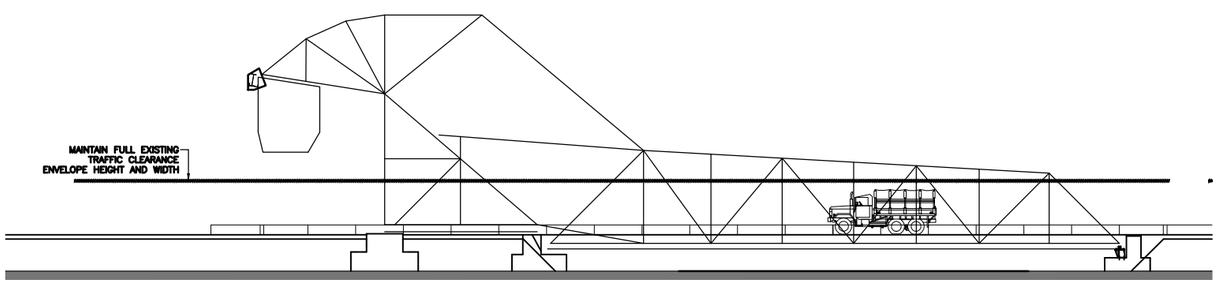

SOUTH ELEVATION

1:200

NOTES:

1. THE PURPOSE OF THIS DRAWING IS TO ILLUSTRATE THE GENERAL METHOD OF TRAFFIC CONTROL DURING CONSTRUCTION. IT IS NOT A COMPREHENSIVE TRAFFIC CONTROL PLAN OR DETAILED STAGING DRAWINGS, NOR A COMPREHENSIVE LIST OF ALL THE WORKS.
2. CONTRACTOR SHALL SUPPLY AND INSTALL ALL SIGNAGE, TRAFFIC CONTROL PEOPLE, AND TRAFFIC CONTROL DEVICES PER OTM BOOK 7 TL-20A. REFER TO "SIGNAGE SCHEDULE" FOR INVENTORY OF SIGNAGE REQUIRED, ALONG WITH REQUIRED SPACING.
3. ALL DETOUR SIGNAGE AND TC-54 BARRELS TO BE STORED AND/OR PLACED OUT OF TRAFFIC SIGHT LINES DURING NON DETOUR HOURS. ALL DELINEATORS AND SIGNAGE/FLAGGING SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE ONTARIO TRAFFIC MANUAL, BOOK 7. DETOUR SIGNING, ADVISORY SPEED, AND LANE CLOSURE SIGNS (INCLUDING ADVANCE WARNING OR CLOSURE SIGNS) SHALL BE PROVIDED, INSTALLED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
4. ACCOMMODATE AND GUIDE PEDESTRIANS THROUGH SITE DURING DETOURS.

SIGNAGE SCHEDULE

	OTM BOOK 7 SIGNAGE	DISTANCE FROM FIRST CONE IN TAPER (m)
APPROACH TO CLOSED LANE	TC-4	0
	TC-22	10
	TC-21	30
	Rb31	50
	TC-2B OR TC-2A	70
DEPARTURE FROM CLOSED LANE	TC-22	10
	TC-21	30
	Rb31	50
	TC-2B OR TC-2A	70

Public Services and Procurement Canada
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wsp

revision		date
01	ISSUED FOR CITY APPROVAL	2021/02/25
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Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the engineer of all discrepancies.

Ne pas mettre à l'echelle les plans.
Vérifier les dimensions et conditions sur le site et en aviser l'ingenieur immédiatement de tous divergence.

A C — A B C
A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

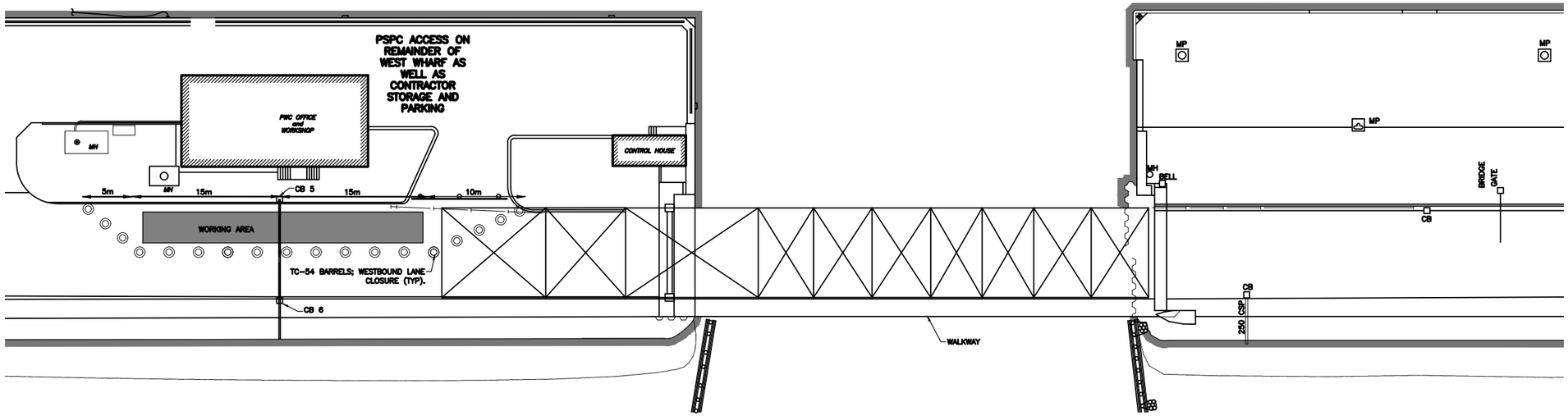
project title / titre du projet
Ontario
LASALLE CAUSEWAY – STORM SEWER CCTV INVESTIGATION

drawing title / titre du dessin
TRAFFIC AND PEDESTRIAN CONTROL PLAN – EASTBOUND LANE CLOSURE

drawn by / dessine par: C. ZANDER
designed by / conc par: D. SEARLE
approved by / approuve par: S. DAVIDSON
tender / soumission
project manager / administrateur de projets
project date / date du projet: 2021/02/25
project no. / no. du projet: XXXX
drawing no. / dessine no.: TCP-2

CAD FILE LOCATION AND NAME: M:\2021\211-XXXXX-XX - LaSalle Causeway Storm Investigation\Dwgs\01. CAD\01. Production\211-xxxxx-xx - Traffic Control Plan-Eastbound.dwg
MODIFIED: 2/25/2021 11:18:20 AM BY: CAC2074035
DATE PLOTTED: 2/25/2021 2:52:02 PM BY: CAC2074035

GSC-B1 DATE PLOTTED: 1/26/2021 PLOT SCALE: 1:200 CAD FILE:



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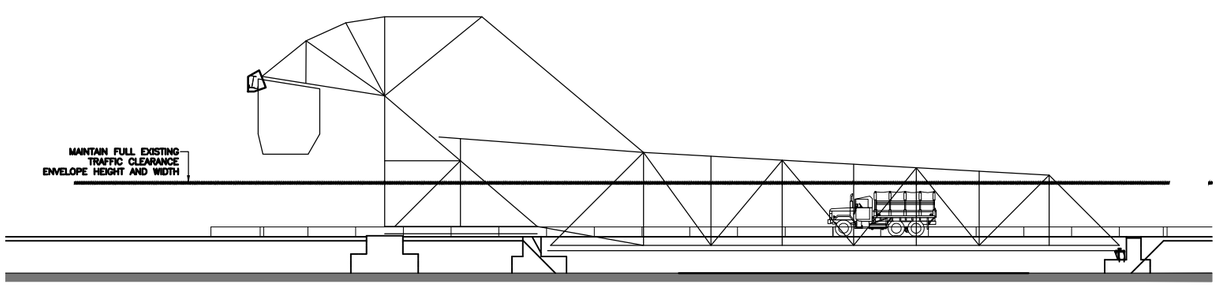
1:200



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Ontario
LASALLE CAUSEWAY – STORM SEWER CCTV INVESTIGATION

drawing title / titre du dessin
TRAFFIC AND PEDESTRIAN CONTROL PLAN – WESTBOUND LANE CLOSURE

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tender / soumission
project manager / administrateur de projets
project date / date du projet: 2021/02/25
project no. / no. du projet: XXXX
drawing no. / dessine no.: TCP-1

CAD FILE LOCATION AND NAME: M:\2021\211-XXXXX-XX - LaSalle Causeway Storm Investigation\Dwgs\01. CNA\01. Production\211-xxxxx-xx - Traffic Control Plan-Westbound.dwg
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Quinte Sewer Service
Sewer Inspection

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Main Inspections Large Photos

Mainline ID:	City:	Street:	Project name:
STORM CB-5	**KINGSTON**	**LASALLE CAUSEWAY**	**LASALLE CAUSEWAY KINGSTON MARCH=3**
Start date/time:	Total length:	Weather:	Surveyed by:
3/3/2021 9:35 AM	**1.0 m**	**1**	**Dan OBrien**
Upstream MH No:	Depth US:	Downstream MH No:	Depth DS:
CBMH=5		**CBMH=6**	
Shape:	Material:	Height:	Width:
C	**SP**	**300 mm**	**300 mm**
Additional info:			

Observations

Distance	Dir.	Length	From/To	Code	Modifier	Rating	Remarks
0.0 m	**U**		**/**	**AMH**			**CBMH=6**
0.0 m	**U**		**/**	**MWL**			
0.6 m	**U**		**/**	**MSA**			**CAMERA WILL NOT FIT**

Main Inspections Large Photos

Mainline ID:	City:	Street:	Project name:
NORTH SIDE =	**KINGSTON**	**LASALLE CAUSEWAY**	**LASALLE CAUSEWAY KINGSTON MARCH=3**
Start date/time:	Total length:	Weather:	Surveyed by:
3/3/2021 10:01 AM	**1.0 m**	**1**	**Dan OBrien**
Upstream MH No:	Depth US:	Downstream MH No:	Depth DS:
CBMH=5		**CBMH=6**	
Shape:	Material:	Height:	Width:
C	**SP**	**250 mm**	**250 mm**

Additional info:

Observations

Distance	Dir.	Length	From/To	Code	Modifier	Rating	Remarks
0.0 m	**D**		**/**	**AMH**			**CBMH=5**
0.0 m	**D**		**/**	**MWL**			
1.1 m	**D**		**/**	**MGO**			**PIPE THAT GOES UNDER RD.**

1.1 m	**D**		**/**	**MSA**			**CAMERA WILL NOT FIT**