



MORRISON HERSHFIELD

November 3, 2021

City of Mississauga
 Transportation & Works Department
 Infrastructure Planning & Engineering Services Division
 201 City Centre Drive
 Mississauga, ON L5B 4E4

**Attention: Ms. Rebecca Huang, P.Eng., M.Eng.
 Capital Project Manager**

**Re: Condition Survey and Detail Design for five (5) bridges
 PRC002097
 Additional Fee Authorization AFA-COR #2 – Detail Design for Burnhamthorpe
 Road West over the Credit River Bridge EB & WB (ID #: 024001 EB & WB) and
 Burnhamthorpe Road West over Mullet Creek Bridge EB & WB (ID #: 024002 EB &
 WB)**

Description of Scope Change

**Burnhamthorpe Road West over the Credit River Bridge EB (ID #: 024001 EB)
 Burnhamthorpe Road West over the Credit River Bridge WB (ID #: 024001 WB)**

**Burnhamthorpe Road West over Mullet Creek Bridge EB (ID #: 024002 EB)
 Burnhamthorpe Road West over Mullet Creek Bridge WB (ID #: 024002 WB)**

Based on the review of the information provided by the City during the Request for Proposal stage, our fee for the detail design for the rehabilitation of these bridges was based on the following anticipated scope of rehabilitation for each bridge, as indicated in our original proposal:

- Removal of the existing asphalt and deteriorated concrete from deck top, patch, waterproof and pave;
- Replace expansion joints or joint seals;
- Patch repairs to barrier walls, sidewalks and concrete curbs;
- Patch repairs to deck fascia, girder and girder soffits with delamination;
- Remove the existing drain pipes and reinstall with extended drain pipes;
- Remove existing bearings and deteriorated concrete in abutment bearing seats;
- Repair bearing seats and clean the embedded steel plate in girder soffit then replace bearings; and
- Repair cracks at pier caps.

Based on the findings from the investigations completed during Phase 1 – Detailed Condition Survey of the assignment, the following additional works have been identified:

**Burnhamthorpe Road West over the Credit River Bridge EB (ID #: 024001 EB)
 Burnhamthorpe Road West over the Credit River Bridge WB (ID #: 024001 WB)**

**Burnhamthorpe Road West over Mullet Creek Bridge EB (ID #: 024002 EB)
 Burnhamthorpe Road West over Mullet Creek Bridge WB (ID #: 024002 WB)**

1. Removal and Reconstruction of Ballast Walls
2. Concrete Overlay and New Railing on South Sidewalk

3. Replacement of Existing Gabion Basket Retaining Wall (Credit Rive Bridges only)
4. Replacement of Undocumented Deck Drains
5. Extension of Storm Drain Pipe and Construction of New Manhole Access Chambers

Reason for Change

Burnhamthorpe Road West over the Credit River Bridge EB (ID #: 024001 EB)

Burnhamthorpe Road West over the Credit River Bridge WB (ID #: 024001 WB)

Burnhamthorpe Road West over Mullet Creek Bridge EB (ID #: 024002 EB)

Burnhamthorpe Road West over Mullet Creek Bridge WB (ID #: 024002 WB)

1. Removal and Reconstruction of Ballast Walls - Investigations completed during Phase 1 – Detailed Condition Survey of the assignment revealed certain components of the bridges were in worse condition than could be anticipated during the preparation of the proposal. In particular it was found that the existing ballast walls and vertical end faces of the box girders at each structure are in poor condition and it is recommended that the existing ballast walls will be replaced. As such the following additional works are required:
 - Removal and reconstruction of ballast walls;
 - Removal and reconstruction of approach slabs;
 - Removal and reconstruction of existing manhole chambers; and
 - Repairs to girder end vertical faces.
2. Concrete overlay and new railing on south sidewalk – The condition survey completed during Phase 1 – Detailed Condition Survey of the assignment revealed the existing south sidewalk is in poor condition and concrete overlay is recommended. This will also raise the elevation of the sidewalk surface and render the existing barrier railings too short. Therefore the existing railings will need to be removed and replaced with higher railings.
3. Replacement of the existing gabion basket retaining wall - The existing gabion basket retaining wall along the pathway beneath the east spans of the Burnhamthorpe Credit River EB and WB bridges has broken wire baskets and does not appear to be high enough to contain the slope rock protection from spilling onto the pathway. As such the City has requested the replacement of the existing gabion wall be included in the rehabilitation of the bridge. There is no existing information or drawings for the existing gabion basket retaining wall and survey information provided by the City is limited to the slopes beyond the bridge and does not include the area beneath the bridge. Therefore additional topographic survey in this area is also required.
4. Replacement of Undocumented Deck Drains - There are undocumented deck drains outletting to the environment. Our original proposal anticipated replacing these deck drains in kind with new drain pipes. However the City has requested these deck drains be connected to the existing storm sewer inside the box girders.
5. Extension of Storm Drain Pipe - There are existing manhole chambers to access the storm drain pipe inside the box girders at the east approach to each bridge.

Additional Fee Request.

Based on the Scope Change Summary presented above, we respectfully request the following Additional Fee for the detail design of the bridge rehabilitations.

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| Burnhamthorpe Road West over the Credit River Bridge EB (ID #: 024001 EB) | \$38,650.00 |
| Burnhamthorpe Road West over the Credit River Bridge WB (ID #: 024001 WB) | \$38,650.00 |
| Burnhamthorpe Road West over the Mullet Creek Bridge EB (ID #: 024002 EB) | \$20,300.00 |
| Burnhamthorpe Road West over the Mullet Creek Bridge WB (ID #: 024002 WB) | \$20,300.00 |
| Total (Excluding HST) | \$117,900.00 |

Yours truly,
Morrison Hershfield Limited



Scott Leitch, P.Eng.
Project Manager
Vice President, Transportation Structures

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City of Mississauga Additional Fee Authorization

An Additional Fee of \$117,900.00, excluding HST as requested under Morrison Hershfield's AFA-COR #2 is approved and Morrison Hershfield is authorized to proceed with the additional work.

City of Mississauga Change Order Reference: _____ Date: _____

Signature

Rebecca Huang, P.Eng., M.Eng.
Capital Project Manager