

COUNTY OF BRUCE

CLASS ENVIRONMENTAL ASSESSMENT DURHAM STREET BRIDGE REPLACEMENT

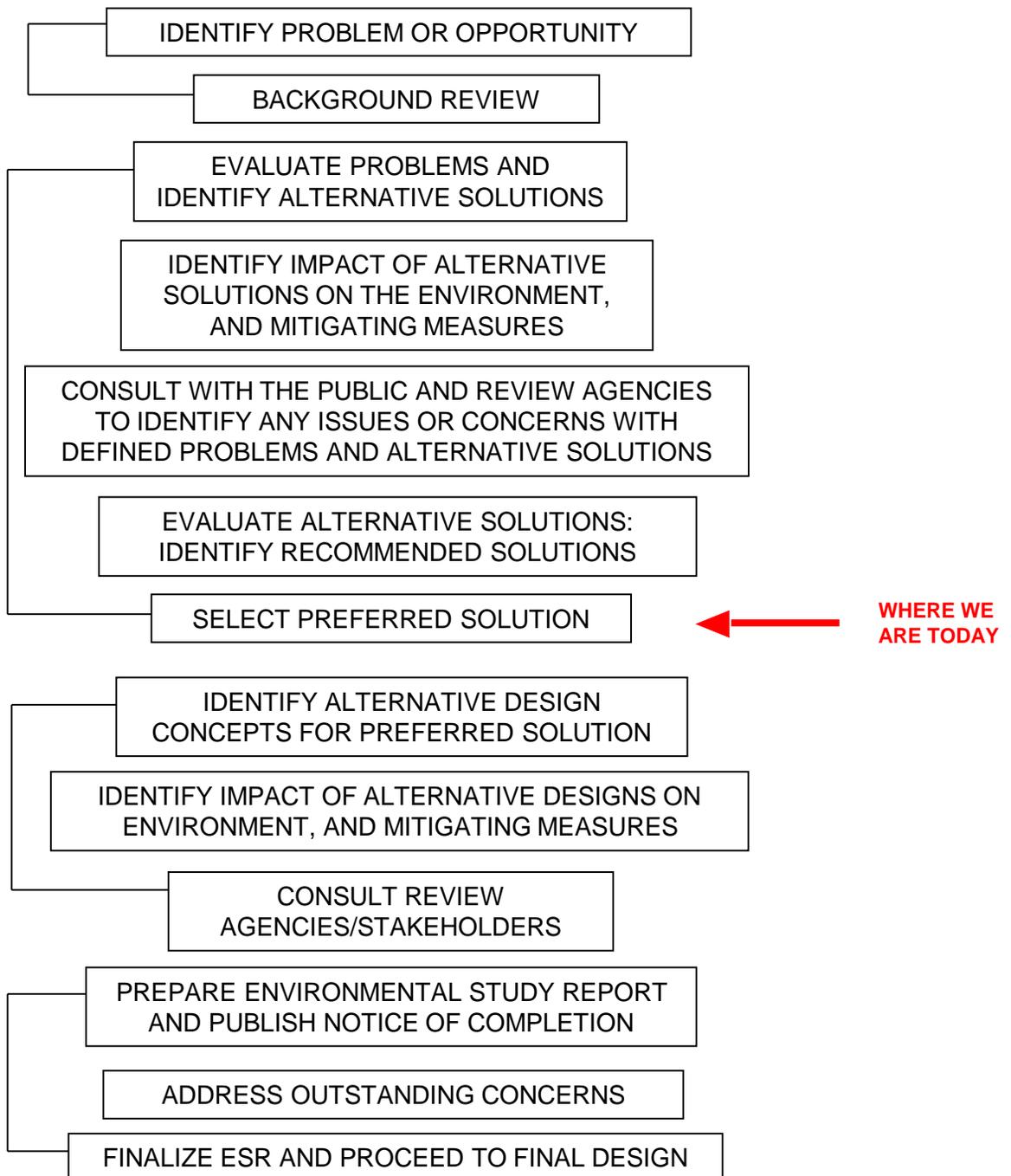


WELCOME

**PUBLIC INFORMATION MEETING
OCTOBER 4, 2022**



CLASS EA STUDY PROCESS (PHASES 1 -5)



MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

SUMMARY OF CLASS EA PROCESS:

- PLANNING AND DESIGN PROCESS FOR MUNICIPAL WATER, ROAD AND WASTEWATER PROJECTS
- CONDUCTED TO EVALUATE THE POTENTIAL IMPACTS OF THE PROJECT ON THE NATURAL, CULTURAL, SOCIAL, ECONOMIC, AND BUILT ENVIRONMENTS

STUDY PHASES:



SCOPE OF THIS STUDY:

- RECONSTRUCTION OR ALTERATION OF A STRUCTURE WHEN THE STRUCTURE IS OVER 40 YEARS OLD, WHICH AFTER APPROPRIATE EVALUATION IS FOUND TO HAVE CULTURAL HERITAGE VALUE (< 2.4 M)
 - SCHEDULE C PROJECTS APPROVED SUBJECT TO COMPLETION OF FULL CLASS EA PROCESS (PHASES 1 THRU 5)
- GENERAL STUDY COMPONENTS:
 - DEFINE PROBLEM / OPPORTUNITY;
 - IDENTIFICATION OF ALTERNATIVE SOLUTIONS;
 - CONSULTATION WITH THE PUBLIC / REVIEW AGENCIES;
 - SELECTION OF A PREFERRED ALTERNATIVE;
 - EVALUATION OF ALTERNATIVES / IMPACT MITIGATION;
 - PREPARATION OF ENVIRONMENTAL STUDY REPORT (ESR); AND
 - FINAL PUBLIC NOTIFICATION.



PROJECT TIMELINES

February 2021 – Initial Public/Agency Notifications

Winter 2021 – Cultural Heritage Report Completed

May 2021 – Signs erected at bridge advertising web site

Summer 2021 – Aquatic Habitat Assessment Completed

Winter 2021/22 – Preliminary Engineering Design

July 2022 – Geotechnical Assessment Completed

Summer 2022 – Hydrological Assessment Completed

September 2022 – Public Information Meeting

Spring 2023 – Second Public Meeting

Fall 2023 – Preliminary Bridge Design to be Completed

Fall 2023 – Finalize Class Process

Spring 2025 – Start of Construction

CULTURAL HERITAGE EVALUATION

CHARACTER-DEFINING HERITAGE ATTRIBUTES:

➤ CONCRETE RIGID FRAME T-BEAM DESIGN

“The bridge is a rare example of what was once a common concrete rigid frame T-beam bridge design with embossed stanchions/pillars and cantilevered end spans associated with late 1930’s provincial bridge construction”



Exterior view of stanchion/pillar with embossed detailing



Interior view of stanchion/pillar with embossed detailing



Image 5: Previous truss bridge in 1908 (Bruce County Museum & Cultural Centre)

DURHAM STREET BRIDGE

DEFICIENCIES:

- AGE; CONSTRUCTED IN 1937 – 85 YEARS
- RECOMMENDED FOR REPLACEMENT BY PROVINCE DUE TO CONCERNS WITH DROP-IN SPAN HALF JOINTS
- CONCRETE DETERIORATION

POST DETERIORATION



RAILING DAMAGE

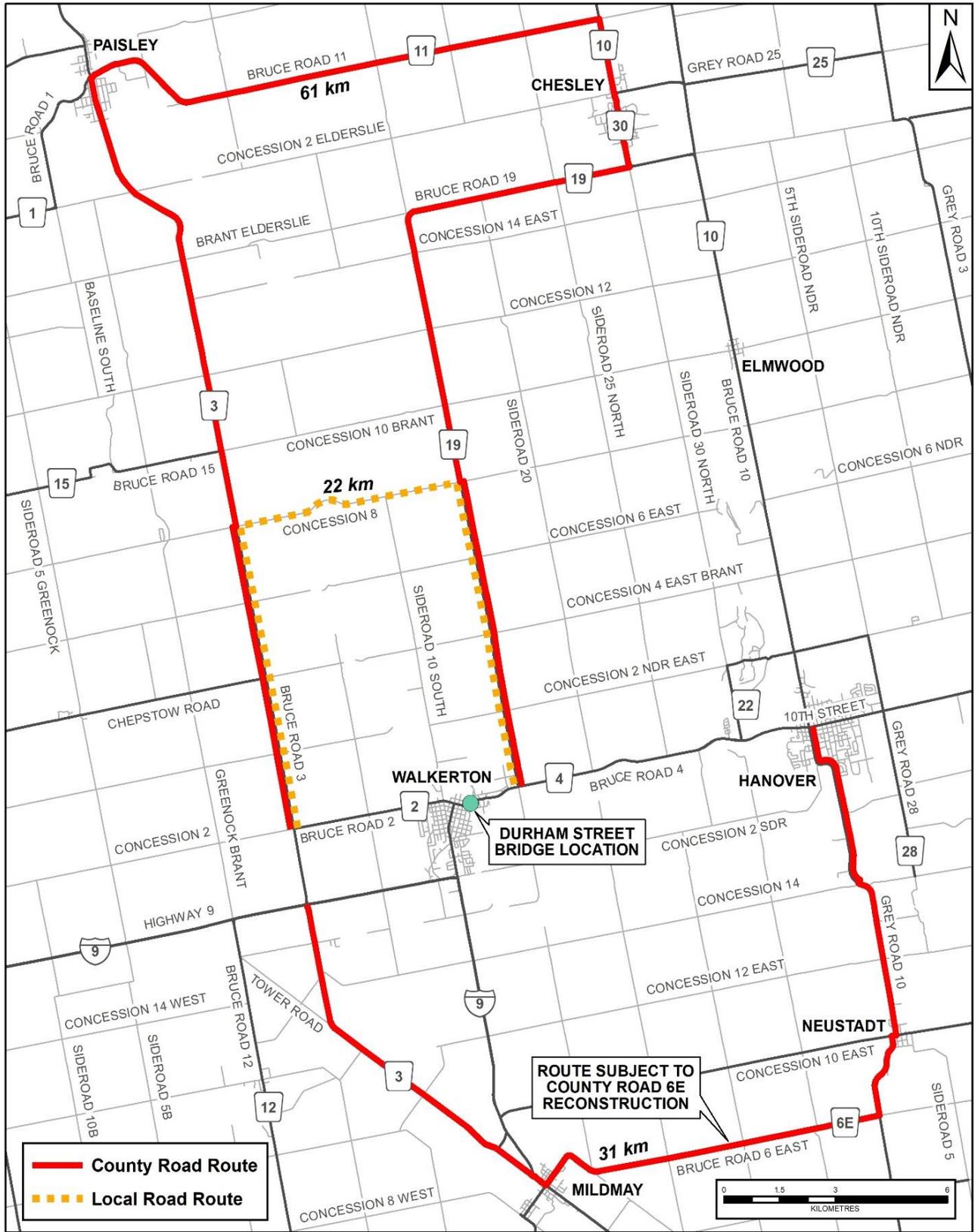


SOFFIT DETERIORATION



DROP-IN HALF JOINT

PROPOSED DETOUR OPTIONS

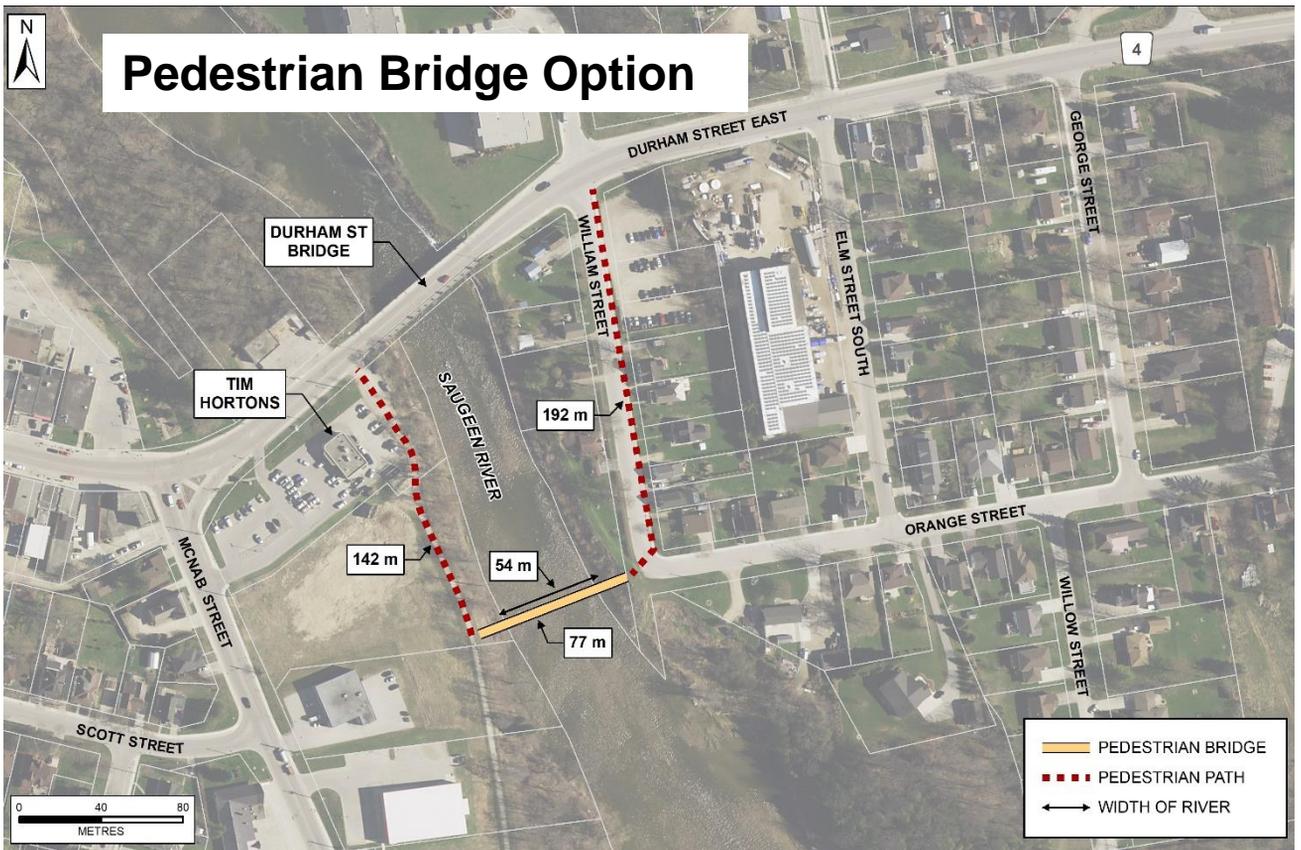
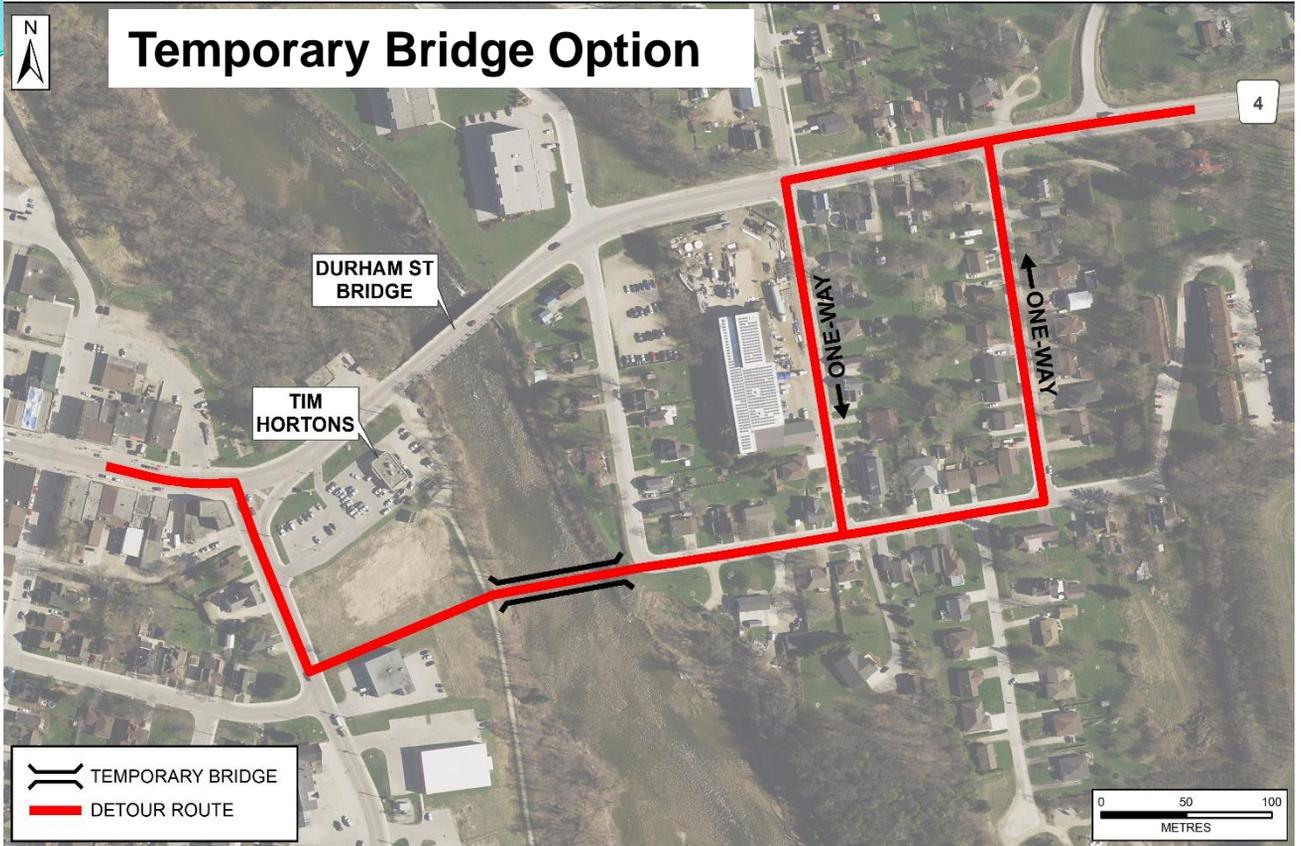


NORTH – 61 KM

PROPOSED TRUCK DETOURS

SOUTH – 31 KM

PROPOSED DETOUR OPTIONS

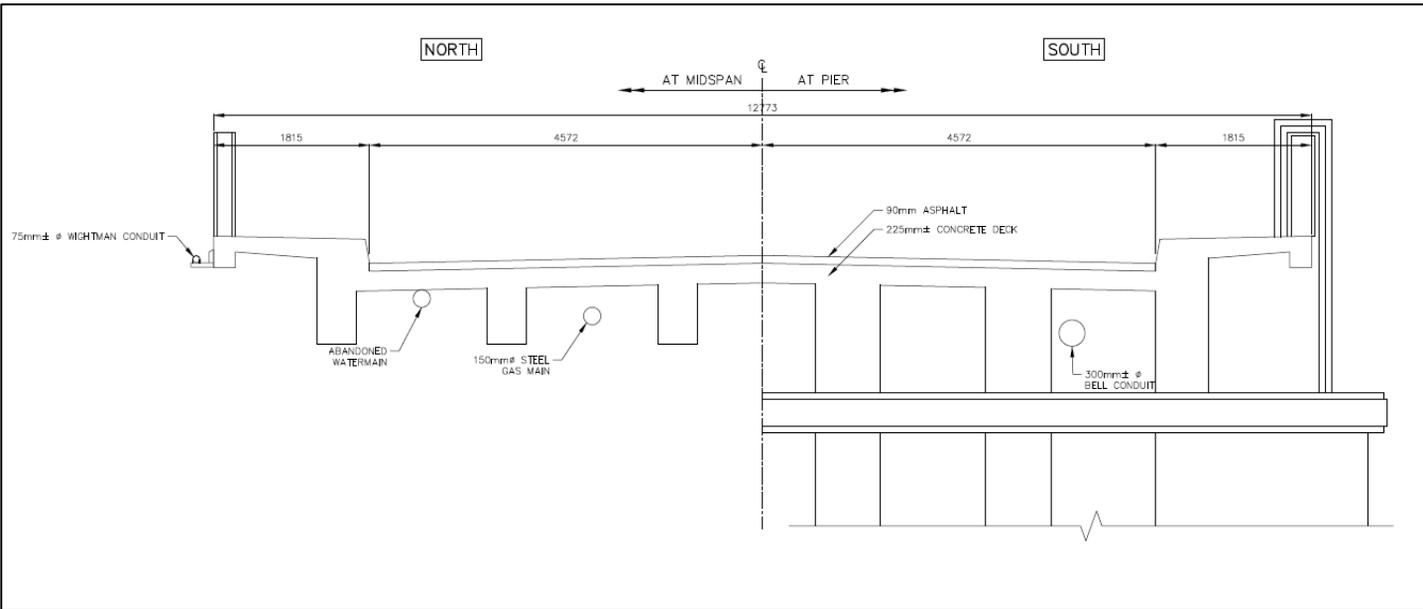


PREFERRED DETOUR OPTION

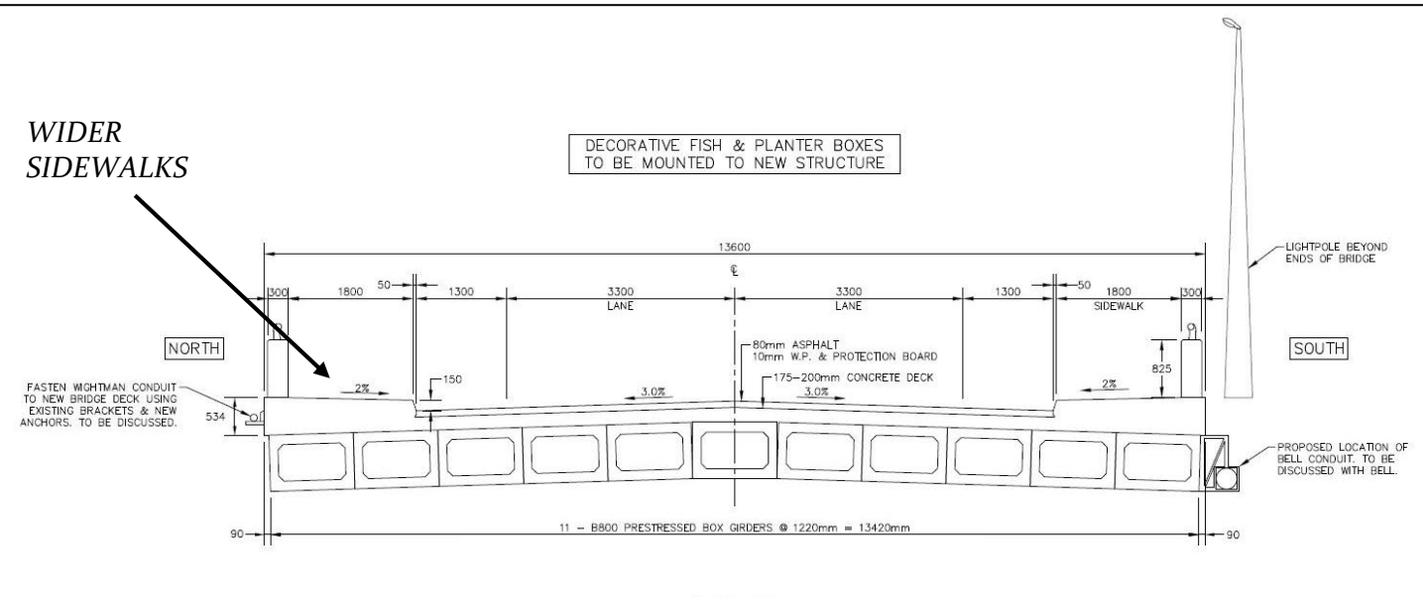


LOCAL DETOUR

Proposed Bridge Design



Existing Deck Section



Proposed Deck Section

Existing Bridge Photos



Existing Bridge looking north



Flood control dyke adjacent to east bank



Bridge underside showing utilities



Fish Sculptures



Gabion basket erosion protection

Potential Impacts

- Social Environment
 - Access During Construction
 - Noise/Vibrations
 - Impacts to Businesses
- Economic Environment
 - Capital Construction Costs
- Cultural Environment
 - Cultural Heritage
- Natural Environment
 - Terrestrial Habitat
 - Species at Risk/Fish Habitat
 - Flooding



ACCESS OVER RIVER DURING CONSTRUCTION

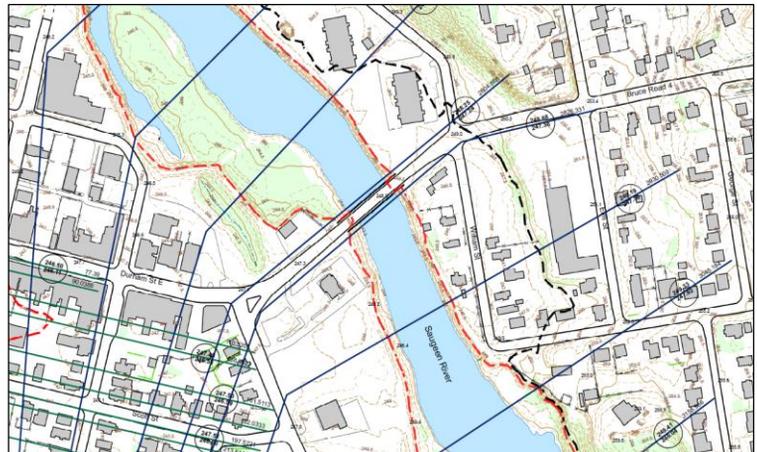


FRESHWATER MUSSEL HABITAT

FISH HABITAT



IMPACT ON FLOODPLAIN



Hydrology Study

