

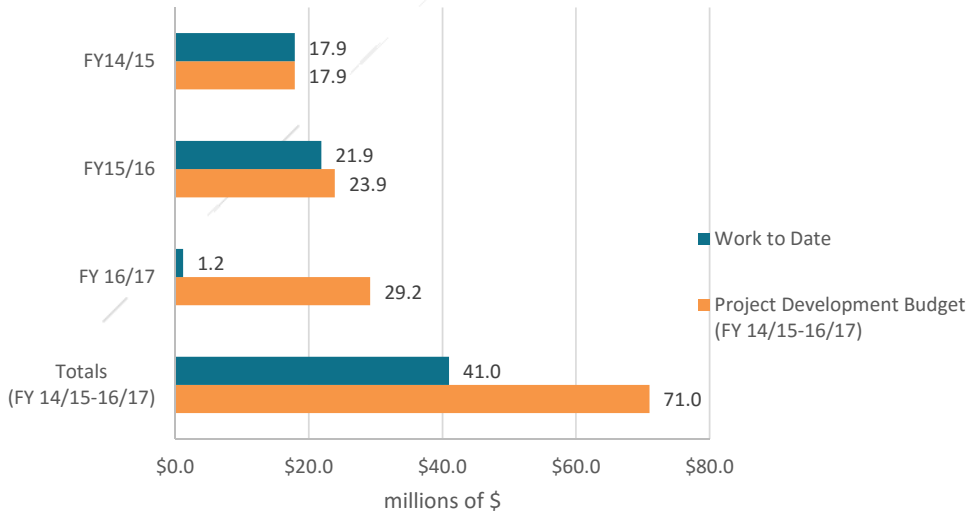



GEORGE MASSEY TUNNEL REPLACEMENT PROJECT

MONTHLY STATUS REPORT APRIL 2016

FINAL

PROJECT STATUS DASHBOARD

Scope	Status*															
<ul style="list-style-type: none"> A Project Definition Report draft reference concept has been completed, which includes the main bridge and interchanges at Steveston Highway, Highway 17A and Westminster Highway as well as Highway 99 corridor improvements from Bridgeport Road in Richmond to Highway 91 in Delta. The Project Definition Report was released on December 16, 2015. The Project scope, along with the draft reference concept, will be refined following Project Definition Report consultation, technical studies and the environmental review. 																
Schedule																
<ul style="list-style-type: none"> Consultation: Public and stakeholder consultation on the Project Definition Report has been completed; the Phase 3 - Project Definition Report Consultation Summary Report was released in March. Further comments from the public continue to be welcomed at the Project office in Richmond. Environment: Development of the EA Application will continue in preparation for a May/June 2016 submission. Technical Studies: Engineering, geotechnical and other technical studies are underway to further inform the draft reference concept and in support of the procurement process. Procurement: A business case has been completed. Procurement is expected to begin in 2016. All key Project activities are proceeding on schedule. 																
Cost																
<ul style="list-style-type: none"> The Project is on budget at April 30, 2016.  <table border="1" data-bbox="337 1163 1300 1675"> <caption>Cost Comparison (millions of \$)</caption> <thead> <tr> <th>Fiscal Year</th> <th>Work to Date</th> <th>Project Development Budget (FY 14/15-16/17)</th> </tr> </thead> <tbody> <tr> <td>FY14/15</td> <td>17.9</td> <td>17.9</td> </tr> <tr> <td>FY15/16</td> <td>21.9</td> <td>23.9</td> </tr> <tr> <td>FY 16/17</td> <td>1.2</td> <td>29.2</td> </tr> <tr> <td>Totals (FY 14/15-16/17)</td> <td>41.0</td> <td>71.0</td> </tr> </tbody> </table>	Fiscal Year	Work to Date	Project Development Budget (FY 14/15-16/17)	FY14/15	17.9	17.9	FY15/16	21.9	23.9	FY 16/17	1.2	29.2	Totals (FY 14/15-16/17)	41.0	71.0	
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* **Status Legend:** Green = No issues to report; Yellow = Minor issues to report; Red = Significant issues to report.

INTRODUCTION

Project Overview

The George Massey Tunnel is an important link in the regional and provincial transportation system, carrying an average of 80,000 vehicles each day. It connects to key gateways such as Vancouver International Airport (YVR), the Peace Arch and Pacific Canada-U.S. border crossings, BC Ferries' Tsawwassen terminal, Deltaport and the Boundary Bay Airport. It is a vital goods movement route that fuels our local, regional, provincial and national economies, and a key access point for businesses in Delta, Surrey, Richmond, and Tsawwassen First Nation.

Since the Tunnel opened in 1959, Metro Vancouver's population and economy have grown, and its population is forecast to continue to grow by more than one million people over the next 30 years. Without improvements to this crossing, economic growth and regional livability will be constrained by congestion and increasing travel times for commuters, goods movers, commercial traffic and other traffic.

With growing concerns about public safety and congestion in and near the Tunnel, in 2012, the government of B.C. commenced a study of options to address the Highway 99 corridor. After analysis and consultation, a new bridge to replace the Tunnel emerged as the most appropriate and supported solution. Construction is anticipated to begin in 2017.

Project Goals

Based on the Ministry's mandate and results of consultation to date, six primary goals have been identified for the Project:

1. **Reduce congestion.** Improve travel times and reliability for all users.
2. **Improve safety.** This includes improving traffic and seismic safety, as well as emergency response capabilities.
3. **Support trade and commerce.** Improve access to local businesses and gateway facilities, and improve travel time reliability for goods movers and service providers.
4. **Support increased transit on the Highway 99 corridor.** Provide dedicated transit/HOV lanes on the new bridge to improve travel time reliability and add capacity for long-term transit improvements.
5. **Support options for pedestrians and cyclists.** Provide a multi-use pathway on the new bridge to connect cycling and pedestrian corridors in Richmond and Delta.
6. **Enhance the environment.** Enhance the environment under the new bridge and in the Project right-of-way on Deas Island.

Key Milestones Achieved to Date

Key milestones achieved to date are listed by category below. The reports can be found within the Document Library of the George Massey Tunnel Replacement Project website.

Consultation	<ul style="list-style-type: none"> • Project Definition Report • Completion of Phase 1, Phase 2 and Phase 3 Consultation, including summary reports
Environmental Review	<ul style="list-style-type: none"> • Submission of Environmental Assessment (EA) Pre-Application to the BC Environmental Assessment Office • Baselines studies
Design/Engineering	<ul style="list-style-type: none"> • Draft reference concept for EA application • Project Definition Report Draft Reference Concept • Multiple traffic data and analysis reports • Multiple geotechnical studies
Procurement	<ul style="list-style-type: none"> • Business Case • Capital Cost Estimate Report • Operations, Maintenance and Rehabilitation Base Cost Estimate Report • Procurement Options Report • Risk Report

April 2016 Highlights

Engineering	<ul style="list-style-type: none"> • Completed draft reference concept for Environmental Assessment Application • Completed review of implications of new bridge code with respect to seismic design
Construction	<p>Pile Load Test Update:</p> <ul style="list-style-type: none"> • Continued installation of reaction piles • Began installation of test pile instrumentation • Continued recording structural monitoring data during pile installations

Report Structure

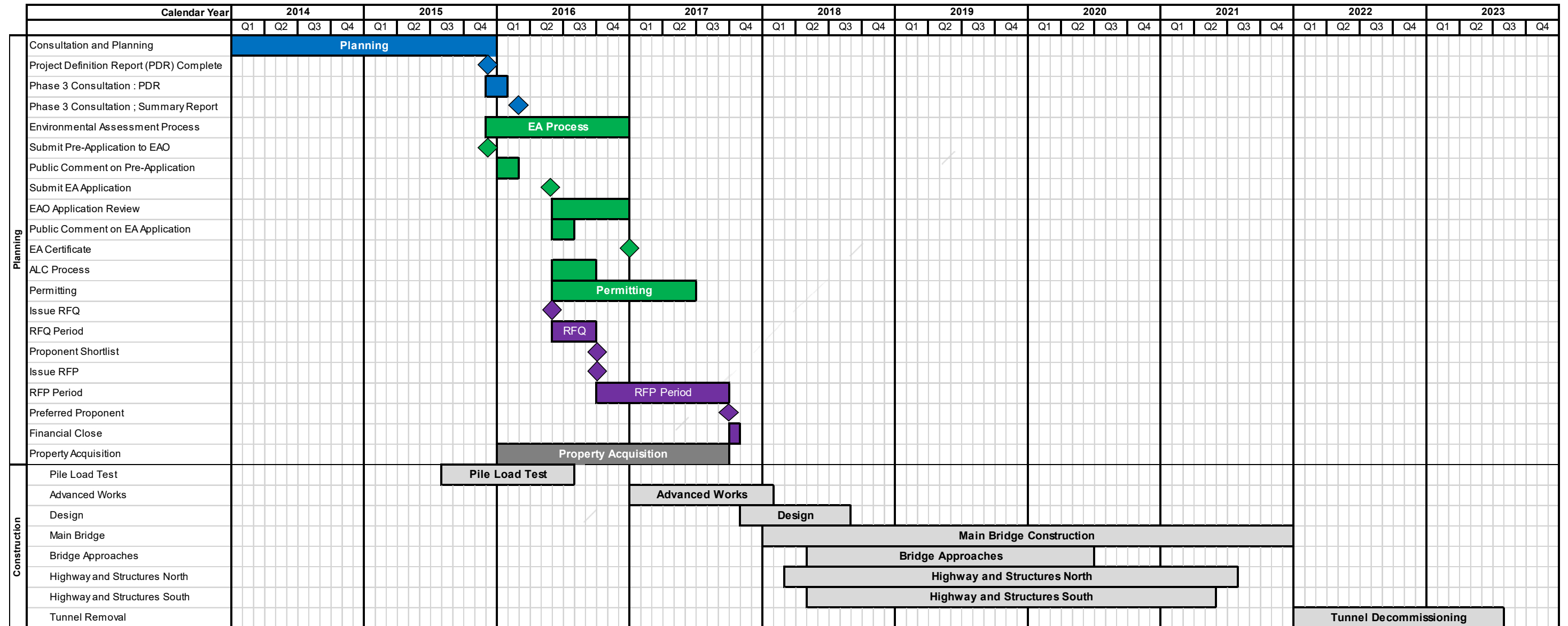
The table below provides a brief description of the contents of this report.

1. Schedule	<ul style="list-style-type: none"> • High-level Project schedule including major milestones and deliverables
2. Project Management	<ul style="list-style-type: none"> • Objectives, monthly accomplishments and upcoming activities related to Safety, Quality and Project Controls
3. Project Development	<ul style="list-style-type: none"> • Scope, monthly accomplishments and upcoming activities for the each of the major disciplines: Stakeholders, Environment, Agriculture, Aboriginal Groups, Procurement, Engineering, Construction and Property
4. Cost Report	<ul style="list-style-type: none"> • Annual budgets and actual cost by fiscal year
5. Risk Management	<ul style="list-style-type: none"> • Key risks and mitigation strategies

1 SCHEDULE

The following schedule depicts deliverables, milestones and associated dates and timelines for the planning phase of the Project as well as high-level construction timelines.

Legend:



2 PROJECT MANAGEMENT

2.1 Safety

Objectives:	<ul style="list-style-type: none"> • Provide clear information on health and safety responsibilities. • Ensure all required training is provided and evaluated. • Ensure a safe worksite at all times.
Accomplished in month:	<ul style="list-style-type: none"> • Conducted Occupational Health and Safety Committee meeting. • Conducted Project safety orientations at the Project Office. • Provided safety training to Project staff. • Conducted field safety audit on Pile Load Test Project. • Conducted office safety inspection.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Safety training will be provided on a continual basis to the Project team and for new team members. • Conduct Occupational Health and Safety Committee meetings. • Conduct additional field safety audits for Pile Load Test Project.

2.2 Quality

Objectives:	<ul style="list-style-type: none"> • Ensure design services and construction works delivered to the Province are implemented within a quality standard consistent with Ministry standards and ISO 9001.
Accomplished in month:	<p>For the Pile Load Test:</p> <ul style="list-style-type: none"> • Ongoing quality management input as required. • Ongoing review and monitoring of contractor quality management activities including quality control and quality assurance activities per contractor's Quality Management Plan, and work plans for Adjacent Structures Monitoring, Pile Installation and Construction Site Health, Safety and Environment Management. • Ongoing daily site surveillance monitoring. • Conducted two quality audits.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Continue quality management input and support to procurement activities as required. <p>For the Pile Load Test:</p> <ul style="list-style-type: none"> • Continue review and monitoring of contractor quality management activities including observation and review of contractor's internal and external audits. • Carry out activity-specific Quality Management System and surveillance audits per audit schedule. • Continue ongoing daily site surveillance monitoring.

2.3 Project Controls

Objectives:	<ul style="list-style-type: none">• Effectively manage the Project’s contracts, scope, schedule and cost.
Accomplished in month:	<ul style="list-style-type: none">• Held regular monthly Project controls meetings with all discipline leads.• Conducted annual performance review with contractors for the fiscal year ended March 31, 2016.• Ongoing development and updates to the Project schedule.
Key activities for next 3 months:	<ul style="list-style-type: none">• Conduct monthly project controls meetings with all discipline leads.• Monitor project schedule.

3 PROJECT DEVELOPMENT

3.1 Stakeholders

Scope:	<ul style="list-style-type: none"> • Management of phased and ongoing public and stakeholder consultation, community relations and Project communications.
Accomplished in month:	<p><i>Meetings were held with the following stakeholder groups:</i></p> <p>Agriculture</p> <ul style="list-style-type: none"> • Agricultural Land Commission • Richmond Farmers' Institute • Delta Farmers' Institute <p>Business Association</p> <ul style="list-style-type: none"> • BC Association Equipment Distributors • Canadian Society for Civil Engineers <p>Government</p> <ul style="list-style-type: none"> • BC Environmental Assessment Office • MLA • Ministry of Agriculture • City of Richmond • Corporation of Delta • Metro Vancouver • TransLink • South Coast Region <p>Other</p> <ul style="list-style-type: none"> • Vancouver Fraser Port Authority • BC Hydro • Fortis • Cycling Community – South Delta HUB, Cycling Working Group • Bell Canada • Rogers Communications • BC Ferries • Vancouver Airport Fuels Facilities Corporation • First Responders
Key activities for next 3 months:	<ul style="list-style-type: none"> • Follow up with key stakeholders regarding environmental assessment pre-application feedback and future opportunities to participate in the environmental assessment public comment period. • Continued stakeholder engagement. • Business and community group presentations on request.

3.2 Environment

Scope:	<ul style="list-style-type: none"> • Development of the Environmental Assessment (EA) Application as well as management of the Project monitoring and permitting process.
Accomplished in month:	<ul style="list-style-type: none"> • Revised the draft Application Information Requirements (dAIR) document. • Revised the draft EA Application to reflect the revised dAIR. • Completed baseline studies.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Finalize the EA application for an expected submission of May/June 2016. • Address EAO comments as part of Application completeness review. • Prepare for the Application Review Phase, including public comment period and other consultation activities.

3.3 Agriculture

Scope:	<ul style="list-style-type: none"> • Identify and work with farmers and other agricultural stakeholders potentially affected by the Project. • Prepare and submit the application to the Agricultural Land Commission (ALC).
Accomplished in month:	<ul style="list-style-type: none"> • Met with the Richmond Farmers' Institute (RFI), the Delta Farmers' Institute (DFI) and the Agricultural Land Commission (ALC). • Ongoing meetings with Agricultural Land Reserve (ALR) property owners and operators. • Ongoing development of the application to the Agricultural Land Commission (ALC) for approval of works within ALR boundaries.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Conduct follow-up meetings with farmers and stakeholders including the City of Richmond, the Corporation of Delta, the Ministry of Agriculture, the RFI and the DFI. • Finalize the application to the ALC. • Submit the application to the ALC. • Conduct assessment of existing highway ditch drainage/irrigation system and develop improved system related to the Project's design. • Continuing liaison with ALR property owners and operators.

3.4 Aboriginal Groups

Scope:	<ul style="list-style-type: none"> • Consultation and engagement with Aboriginal Groups.
Accomplished in month:	<ul style="list-style-type: none"> • Conducted meetings with 11 Aboriginal Groups. • Supported Aboriginal Groups in their review and comment on draft documents required for the environmental assessment (EA) process. • Incorporated Aboriginal input into the EA application and related reports. • Responded to questions and information needs of Aboriginal Groups through the Ministry's ongoing consultation program. • Responded to comments from Environmental Assessment Office (EAO) and Aboriginal Groups in relation to the dAIR and draft Aboriginal Consultation Report 1.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Provide Aboriginal Consultation Report 2 for Aboriginal Groups' review and comment. • Finalize the Aboriginal Consultation Report 2 based on input received from Aboriginal Groups and submit to EAO. • Continue consultation with Aboriginal Groups including meetings, community meetings and other activities in accordance with each group's Aboriginal Consultation Plan. • Incorporate input from Aboriginal Groups on draft Part C content of the EA Application. • Coordinate and finalize funding to support Aboriginal Groups' participation in the Application Review Phase. • Revise Aboriginal Consultation Plans as required. • Support Aboriginal Groups in their review and comment on the EA application. • Respond to outstanding questions and information needs of Aboriginal Groups through the EAO-led working group process and through the Ministry's consultation program.

3.5 Procurement

Scope:	<ul style="list-style-type: none"> • Development of a business case, Request for Qualifications (RFQ), Request for Proposals (RFP) and subsequent evaluation of submissions.
Accomplished in month:	<ul style="list-style-type: none"> • Conducted RFQ data room document collection and site development. • Further refinement of the draft RFQ in preparation for review by advisors. • Advanced the planning of the RFQ evaluation process including evaluation logistics and resources. • Continued to develop the draft Concession Agreement with further advancement of technical specifications including seismic design criteria and ground improvement design criteria.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Continue developing the data room including access protocols. • Finalize RFQ evaluation materials. • Finalize the RFQ and appendices. • Advance drafting the RFP Instructions to Proponents and draft Concession Agreement.

3.6 Engineering

Scope:	<ul style="list-style-type: none"> • Development of a reference concept, technical requirements/specifications and related technical studies for the Project. • Travel demand forecasting, traffic operations modelling, traffic data collection, and other related services in support of the Project.
Accomplished in month:	<ul style="list-style-type: none"> • Completed draft reference concept for EA application. • Prepared technical specifications for pavement and geotechnical design. • Conducted micro-simulation for traffic operations at Westminster Highway Interchange. • Completed review of new bridge code implications with respect to seismic design. • Reviewed cycling and pedestrian trail design with municipalities and cycling groups. • Began review of drainage requirements in Richmond. • Provided ongoing technical support on the Pile Load Test. • Ongoing refinement of draft reference concept and cost estimate.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Refine draft reference concept and cost estimate based on the results of the Project Definition Report consultation, technical studies and the environmental review. • Finalize reference concept for cycling and pedestrian trail design. • Continue construction staging analysis and constructability assessment. • Provide technical support for procurement including drafting of technical schedules. • Continue review of drainage requirements in Richmond. • Conduct ongoing traffic data collection and travel demand forecasting. • Develop landscaping requirements and concepts.

3.7 Construction

Scope:	<ul style="list-style-type: none"> • The overall planning, coordination and implementation of construction activities. • Current construction works include: Pile Load Test.
Accomplished in month:	<ul style="list-style-type: none"> • Continued installation of reaction piles. • Continued recording structural monitoring data during pile installations. • Began installation of test pile instrumentation. • Completed design of load frame and finalized corresponding shop drawings. • Obtained initial monitoring data during pile installations.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Complete installation of reaction and test piles. • Complete load frame modifications and erect on site. • Perform static load test and gather all related data. • Complete final technical report.

3.8 Property

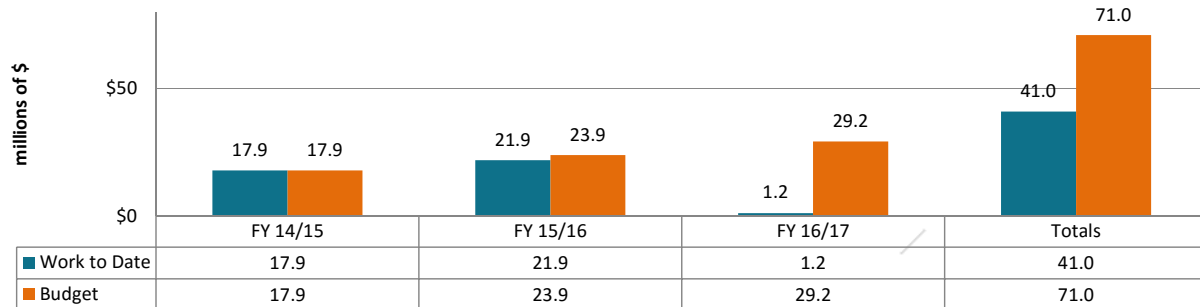
Scope:	<ul style="list-style-type: none"> • Review of properties along the Project corridor and development of a property acquisition plan. • The acquisition of land required to deliver the Project. • A total of 36 properties have been identified for acquisition, the majority of which are partial acquisitions.
Accomplished in month:	<ul style="list-style-type: none"> • Finalized three appraisal reports and delivered to owners for review.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Continue property negotiations with owners to secure final agreements or agreements in principle. • Assist in the preparation of the ALC application, including onsite meetings with farmers. • Finalize property acquisition plans. • Conduct legal surveys on selected properties.

4 COST REPORT

4.1 Project Cost Estimate

Capital costs are estimated to be \$3.5 billion. This estimate will be refined in response to scope changes resulting from public and stakeholder engagement and environmental review. The detailed cost estimate will be refined and finalized after completion of the Pile Load Test and the Environmental Assessment public comment period.

4.2 Planning Phase Financials



5 RISK MANAGEMENT

The Project team has developed a risk register for the Project, including risk mitigation strategies. The risk register is reviewed on a regular basis and will evolve as project development progresses.

Soft soil conditions have been identified as a risk. The ministry is undertaking additional geotechnical investigations (Pile Load Test project) to test soil conditions and confirm foundation requirements for the bridge.

6 APPENDIX A – PROJECT PHOTOS



Hoisting pile for stacking



Test pile instrumentation protection