

# SOUTH ALCONA FLOOD RELIEF PROJECT

LSRCA Board of Directors

April 24, 2020

Bhavika Patel, Restoration Engineer



**Lake Simcoe Region**  
conservation authority



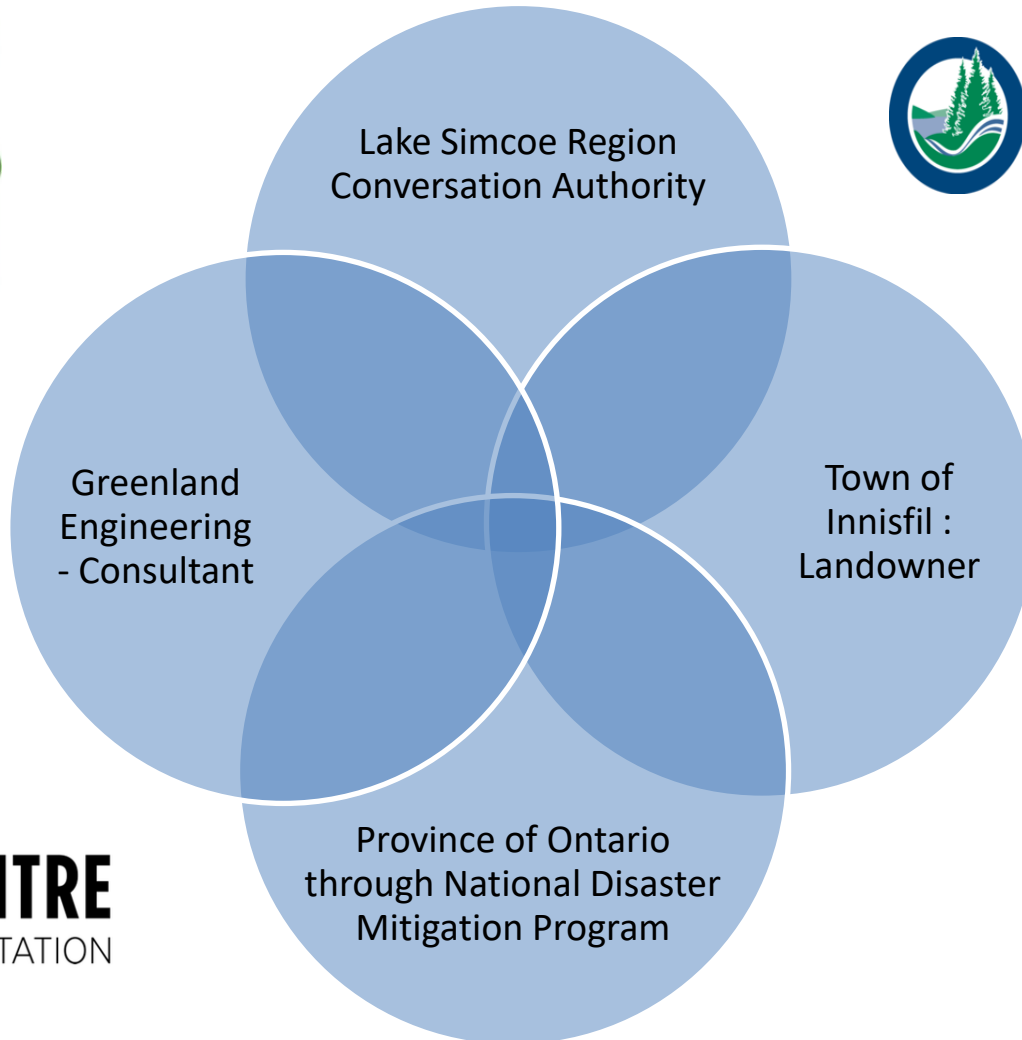
Member of Conservation Ontario



# PROJECT PARTNERS



Lake Simcoe Region  
conservation authority



**INTACT CENTRE**  
ON CLIMATE ADAPTATION

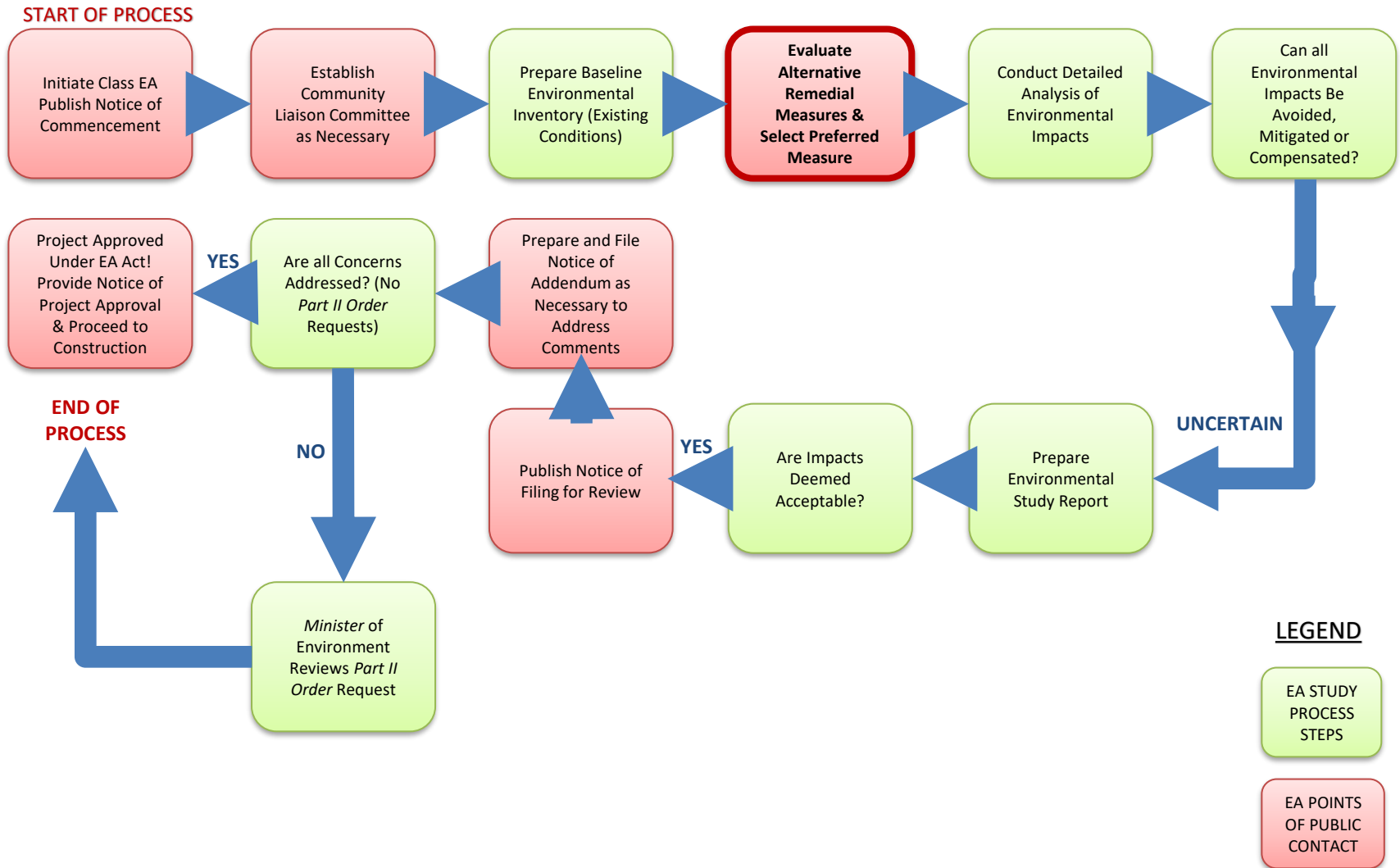


# PROJECT STATEMENT

Develop an engineering design solution to reduce flooding within the study area by maximizing green infrastructure to enhance water quality and infiltration before discharge to Lake Simcoe



# CONSERVATION AUTHORITY ENVIRONMENTAL ASSESSMENT (EA) FLOW CHART



# ENVIRONMENTAL ASSESSMENT MILESTONES

Notice of Study  
Commencement

- September 20, 2019

Public Information Centre 1

- December 10, 2019, 4:00 PM – 7:00 PM

Public Information Centre 2

- March 10, 2020, 4:30 PM – 7:30 PM

Notice of Study Completion

- March 30, 2020

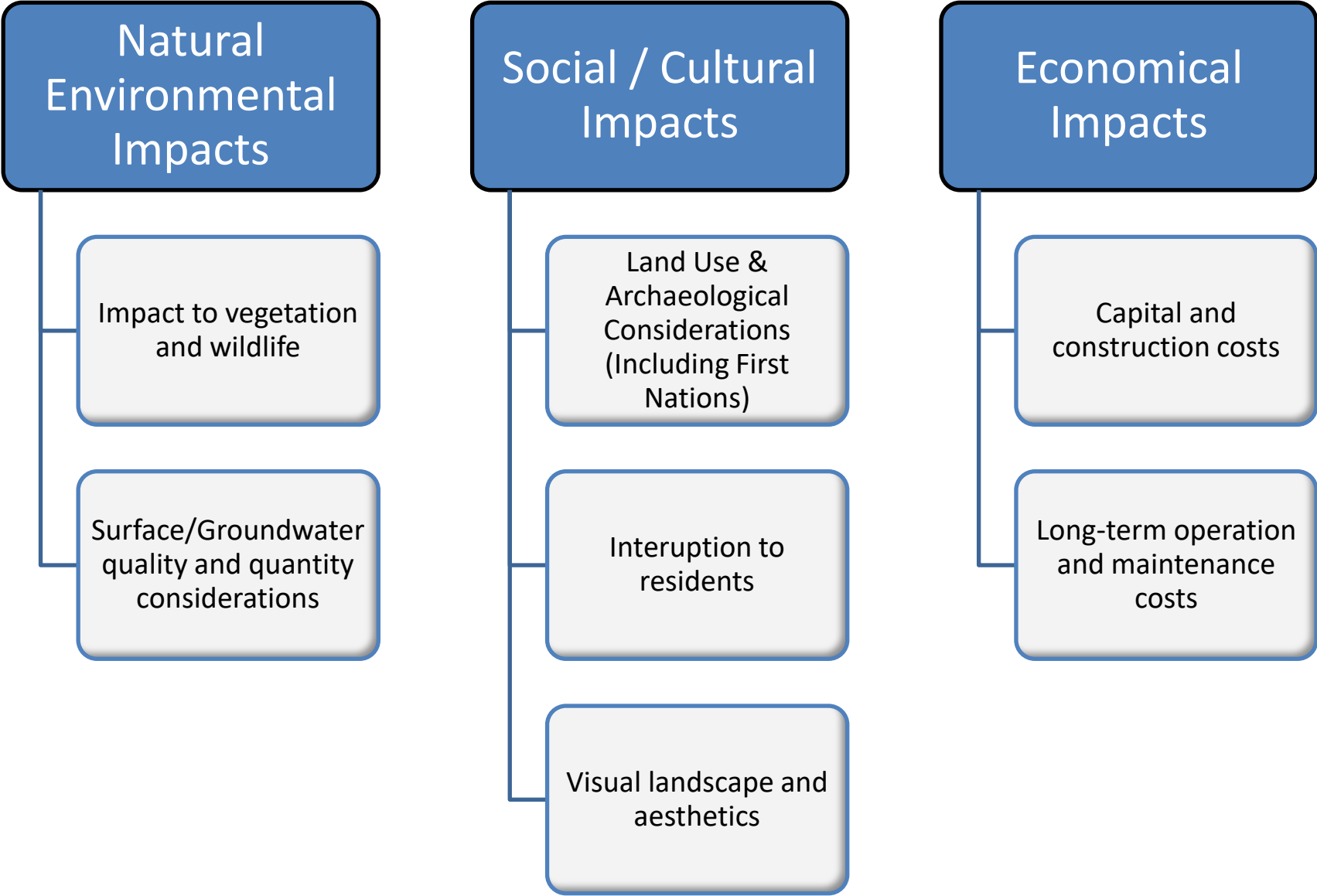
Environmental Study Report  
(ESR) for Review and input

- April 1 to April 30, 2020





# FLOOD REDUCTION OPTIONS EVALUATION PROCESS



# STUDY AREA PHOTOS



Figure A 1 Belle Aire creek near 1056 Spruce Road – limited conveyance capacity



Figure A 3 Culverts along Belle Aire creek - Inadequate size



Figure A 2 Belle Aire creek near 1056 Spruce Road - channel near full during lean period flow



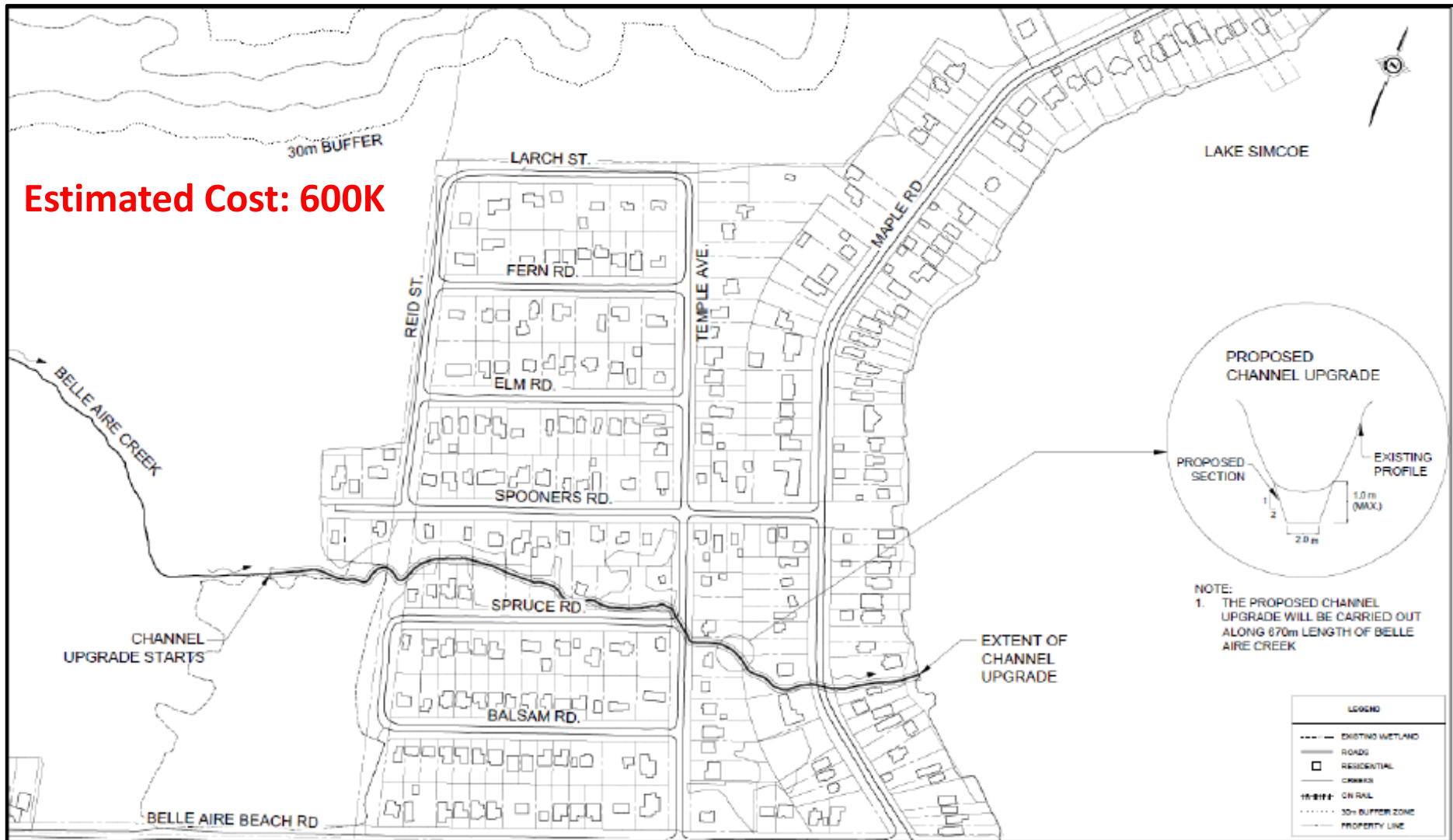
# PREFERRED DESIGN OPTIONS

- CONVEYANCE OPTION- Upgrade Belle Aire Creek Channel and Culverts Capacity to Convey Existing 2-year Storm
- STORAGE and BYPASS OPTION- By-Pass Flows Above 2-year Storm to Existing Wetland via New Green Infrastructure Bypass / Storage Channel in 30m Buffer



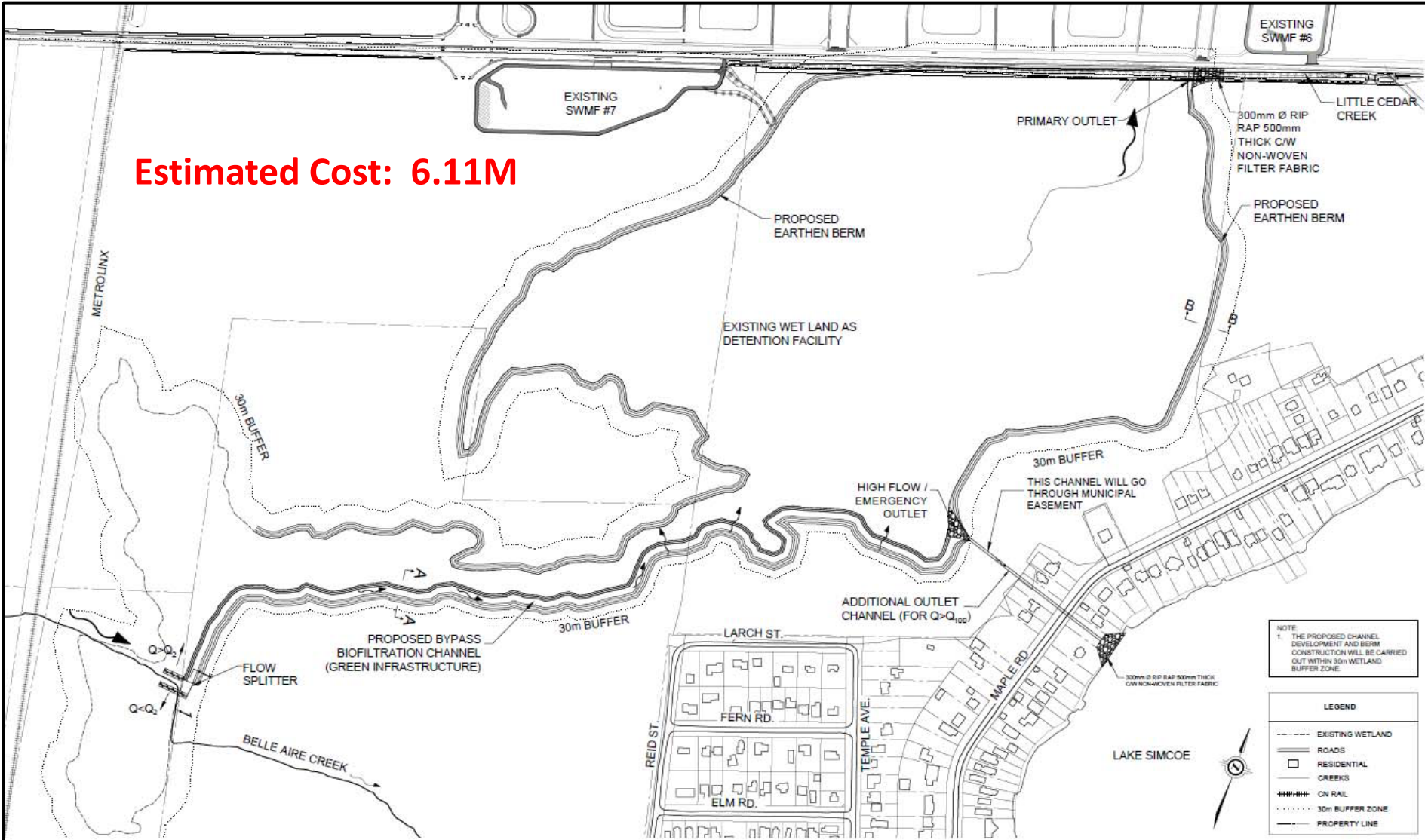
# CONVEYANCE OPTION- Upgrade Belle Aire Creek Channel and Culverts Capacity to Convey Existing 2-year Storm

**Estimated Cost: 600K**



# STORAGE & BYPASS OPTION- By-Pass Flows Above 2-year Storm to Existing Wetland via New Green Infrastructure Bypass / Storage Channel in 30m Buffer

**Estimated Cost: 6.11M**



# Questions?

