



G.W.P. 137-90-00

**HIGHWAY 11/17 FOUR-LANING
FROM 1.3 KM WEST OF HIGHWAY 582 TO 800 M WEST OF COUGHLIN ROAD
UNINCORPORATED TOWNSHIPS OF STIRLING AND LYON, UNORGANIZED
DISTRICT OF THUNDER BAY**

**CLASS ENVIRONMENTAL ASSESSMENT FOR
PROVINCIAL TRANSPORTATION FACILITIES
GROUP 'B' PROJECT**

**MINISTRY OF TRANSPORTATION
NORTHWESTERN REGION**

**ENVIRONMENTAL STUDY REPORT
ADDENDUM**

March 2018

G.W.P. 137-90-00

HIGHWAY 11/17 FOUR-LANING

FROM 1.3 KM WEST OF HIGHWAY 582 TO 800 M WEST OF COUGHLIN ROAD

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DISTRICT OF THUNDER BAY**

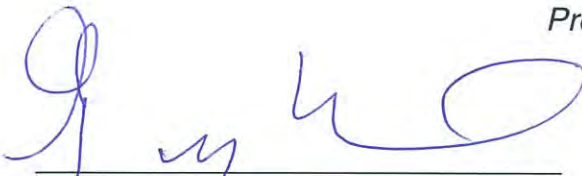
ENVIRONMENTAL STUDY REPORT ADDENDUM

March 2018

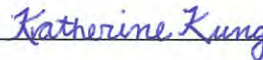
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Karen M. Zan, P.Eng.
Consultant Project Manager

THE PUBLIC RECORD

A copy of this document has been submitted to the following office of the Ministry of the Environment and Climate Change to be placed in the Public Record:

Ministry of the Environment and Climate Change

Thunder Bay Regional Office
435 James Street South, Suite 331
Thunder Bay, Ontario P7E 6S7

This Addendum to the Environmental Study Report is also available for public review on the project website (www.hwy11-17-hwy582tocoughlin.com) and during normal business hours at:

Red Rock Public Library

42 Salls Street
Red Rock, Ontario

Township of Dorion

170 Dorion Loop Road
Dorion, Ontario

Dorion Public Library

170 Dorion Loop Road
Dorion, Ontario

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NOTICE OF FILING – ENVIRONMENTAL STUDY REPORT ADDENDUM

Detail Design and Class Environmental Assessment Study Highway 11/17 Four-Laning from west of Highway 582 to Coughlin Road

THE STUDY

The Ontario **Ministry of Transportation (MTO)** retained **WSP** to undertake the Detail Design and Class Environmental Assessment (EA) Study for the four-lane expansion of Highway 11/17 from 1.3 km west of Highway 582 to 800 m west of Coughlin Road.

The project includes:

- Expansion of Highway 11/17 to four lanes by twinning on the existing alignment; and
- Improvements / modifications to select intersecting side-roads.

In 1997, an Environmental Study Report (ESR) was prepared to document the proposed plans to four-lane this portion of Highway 11/17. The project was approved and subsequently the four-lane highway corridor was designated (protected) in 2003.

ENVIRONMENTAL STUDY REPORT ADDENDUM

MTO is proposing two changes to the 1997 EA Approved four-lane plan and has prepared an Addendum to the 1997 Environmental Study Report (ESR). The proposed changes include: widening the proposed right-of-way from 45 m to 55 m on the north (twinned) side of the highway, and a minor alignment revision to one intersecting roadway (Valley Road East).

THE PROCESS

This study is following the approved planning process for Group 'B' projects under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000). In accordance with the Class EA, this Addendum to the original ESR has been prepared to document the proposed changes. The ESR Addendum is available for review at the following locations:

Red Rock Public Library
Front Desk
42 Salls Street
Red Rock, ON

Township of Dorion
170 Dorion Loop Road
Dorion, ON

Dorion Public Library
Front Desk
170 Dorion Loop Road
Dorion, ON

Ministry of the Environment and Climate Change
Thunder Bay Regional Office
435 James Street South, Suite 331
Thunder Bay, ON

The Addendum and additional study information is also available on the project website at www.hwy11-17-hwy582tocoughlin.com.

The Addendum will be available for a 30-day review period beginning **Tuesday, April 3, 2018**. If you have serious unresolved concerns after consulting with ministry staff and consultants, you may request a Part II Order ("bump-up") from the Minister of the Environment and Climate Change (77 Wellesley Street West, 11th Floor, Toronto, Ontario, M7A 2T5). Opportunities for requesting a Part II Order are only applicable to changes documented in the Addendum.

A copy of your request should also be forwarded to the Ministry of Transportation at the address below. If there are no outstanding concerns received by **Thursday, May 3, 2018**, the project will proceed to Detail Design.

COMMENTS

We are interested in any comments or concerns you may have regarding the Addendum and study. Please submit your comments and/or concerns to one of the individuals listed below by **Thursday, May 3, 2018**.

Karen M. Zan, P.Eng., Senior Project Manager

WSP
610 Chartwell Road, Suite 300
Oakville, ON L6J 4A5
tel: 1-877-562-7947 or 289-835-2643
fax: 905-823-8503
e-mail: karen.zan@wsp.com

Kevin Saunders, Senior Project Manager

Ministry of Transportation
615 James Street South
Thunder Bay, ON P7E 6P6
tel: 1-800-465-5034 or 807-473-2109
fax: 807-473-2168
e-mail: kevin.saunders@ontario.ca

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. All comments will be maintained on file for use during the study and, with the exception of personal information, may be included in study documentation and become part of the public record.

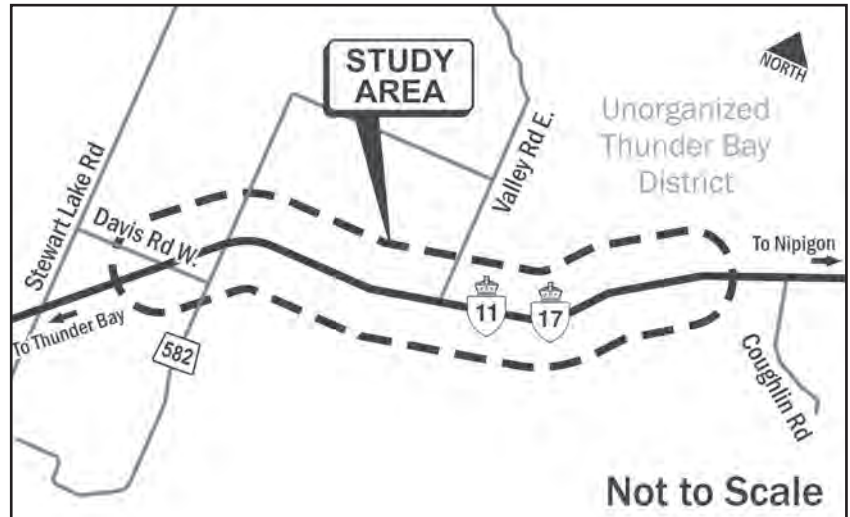


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GLOSSARY

DCR	–	Design and Construction Report
EA	–	Environmental Assessment
ESR	–	Environmental Study Report
MNRF	–	Ministry of Natural Resources and Forestry
MPP	–	Member of Provincial Parliament
MTO	–	Ministry of Transportation
PIC	–	Public Information Centre
SAR	–	Species-at-Risk

1.0 Project Summary

1.1 Project Description and Background

In 1996, the Ministry of Transportation (MTO) completed a Planning and Preliminary Design Study for the four-laning of Highway 11/17 from 8 km west of Ouimet easterly 36 km to the Red Rock Township West boundary. The 1996 Planning and Preliminary Design Study included the section from 1.3 km west of Highway 582 to 800 m west of Coughlin Road, in the unincorporated Townships of Stirling and Lyon, within the Unorganized Thunder Bay District; it is this section that is currently under Detail Design. An Environmental Study Report (ESR) was filed in January 1997 and received environmental clearance. The study was identified as a Group “B” project and complied with the requirements of the *Provincial Highway Class Environmental Assessment* (1992).

The 1997 ESR documented the following:

- Description of the project, project justification, and its purpose;
- Environmentally significant aspects of the planning, design, and construction of the four-laning within the study limits;
- Description of the alternatives evaluated at the time;
- External agency and public consultation; and
- Anticipated environmental effects, proposed mitigation measures, and monitoring.

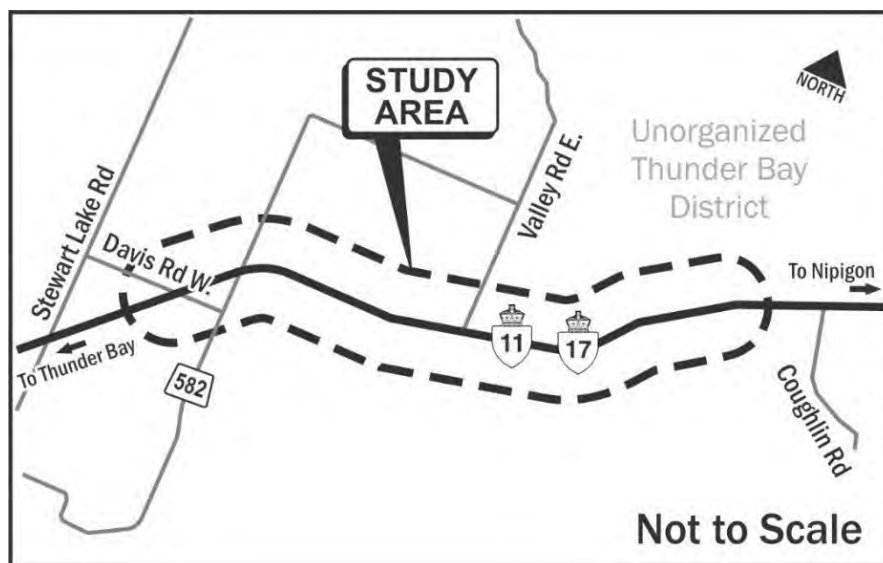
The key design features recommended in the 1997 ESR for the section of Highway 11/17 from 1.3 km west of Highway 582 to 800 m west of Coughlin Road, included:

- Expansion of Highway 11/17 to four lanes by twinning on the existing alignment; and
- Improvements/modifications to select intersecting side-roads.

The proposed new four-lane divided highway was designated as a four-lane facility and registered as a controlled access highway in 2003.

In April 2017, MTO retained WSP to undertake the Detail Design, and Class Environmental Assessment (EA) Study for the four-laning of Highway 11/17 from 1.3 km west of Highway 582 to 800 m west of Coughlin Road. The project location is shown below in **Exhibit 1-1**.

Exhibit 1-1: Project Location



The initial design phase includes an update to the current environmental conditions, and a review of the proposed changes to the original design decisions that have occurred since the submission of the original 1997 ESR. An Addendum to the ESR is necessary to document any significant revisions to the original design as part of the requirements of the MTO Class EA process (see **Section 1.2** for further discussion).

The proposed changes to the 1997 EA Approved Plan (documented in the 1997 ESR) for the study area include: a slight realignment of Highway 11/17 in the vicinity of Valley Creek to increase the proposed radius of curvature, widening the proposed right-of-way from 45 m (minimum) to 55 m (minimum) on the north (twinned) side of the highway, and a minor realignment of Valley Road East - approximately 12.5 m to the east. Further details regarding these proposed changes to the 1997 EA Approved Plan are provided in **Section 3.0**.

The Project Team is also reviewing the feasibility of a realignment of a section of Valley Creek. The Ministry will continue this review and will make a determination following the completion of the additional field investigations in Spring 2018. A separate Addendum to the 1997 ESR may be required to address the potential realignment of Valley Creek.

The provincial government has committed funding for the expansion of the Highway 11/17 within the study area and construction is anticipated to proceed as early as 2019, subject to the clearance of this Addendum to the ESR, obtaining necessary environmental approvals, completion of the Detail Design, and the Design and Construction Report, and funding. The Northern Highways Program 2017-2021 notes the target completion date of 2021.

1.2 Purpose of the Addendum to the Environmental Study Report

As construction did not commence within five years of the 1997 ESR, this Addendum to the 1997 ESR has been prepared, in part, to provide an update to the current environmental conditions within the study area to determine whether there have been any changes to conditions in the study corridor that may affect, or be affected by, the proposed four-laning of Highway 11/17. This Addendum also provides a review of any proposed changes to the commitments made in the 1997 ESR (and/or the basic intent of the undertaking) that may be significant.

Given that some changes to the original 1997 EA Approved Plan (as documented in the 1997 ESR) are proposed, an Addendum to the ESR must be prepared and made available for a 30-day review period. The proposed changes include: a slight realignment of Highway 11/17 in the vicinity of Valley Creek, widening the proposed right-of-way from 45 m to 55 m on the north (twinned) side of the highway, and minor alignment revisions to one intersecting roadway (Valley Road East). A Notice of the ESR Addendum Filing has been sent to external agencies, Indigenous communities, affected and interested parties via direct notification letters, property owners within the vicinity of the study area through Canada Post's unaddressed ad-mail service (i.e. bulk), published in local newspapers and posted on the project website (www.hwy11-17-hwy582tocoughlin.com).

During the 30-day public review period, parties are encouraged to bring their concerns regarding the proposed changes to the 1997 EA Approved Plan to the attention of MTO by **May 3, 2018**. If you have serious unresolved concerns after consulting with MTO and its Consultant, you have the right to submit a Part II Request ("bump-up") to the Minister of the Environment and Climate Change (11th Floor Ferguson Block, 77 Wellesley Street West, Toronto, Ontario, M7A 2T5) to elevate this project to an Individual Environmental Assessment. Only the changes identified in the Addendum to the ESR are eligible for "bump-up".

A copy of the bump-up request should also be sent to the MTO and Consultant Project Manager at the following addresses:

Kevin Saunders

Senior Project Manager
Ministry of Transportation
615 James Street South
Thunder Bay, ON P7E 6P6
tel: 1-800-465-5034 or 807-473-2109
fax: 807-473-2168
e-mail: kevin.saunders@ontario.ca

Karen M. Zan, P.Eng.

Senior Project Manager
WSP
610 Chartwell Road, Suite 300
Oakville, ON L6J 4A5
tel: 1-877-562-7947 or 289-835-2643
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e-mail: karen.zan@wsp.com

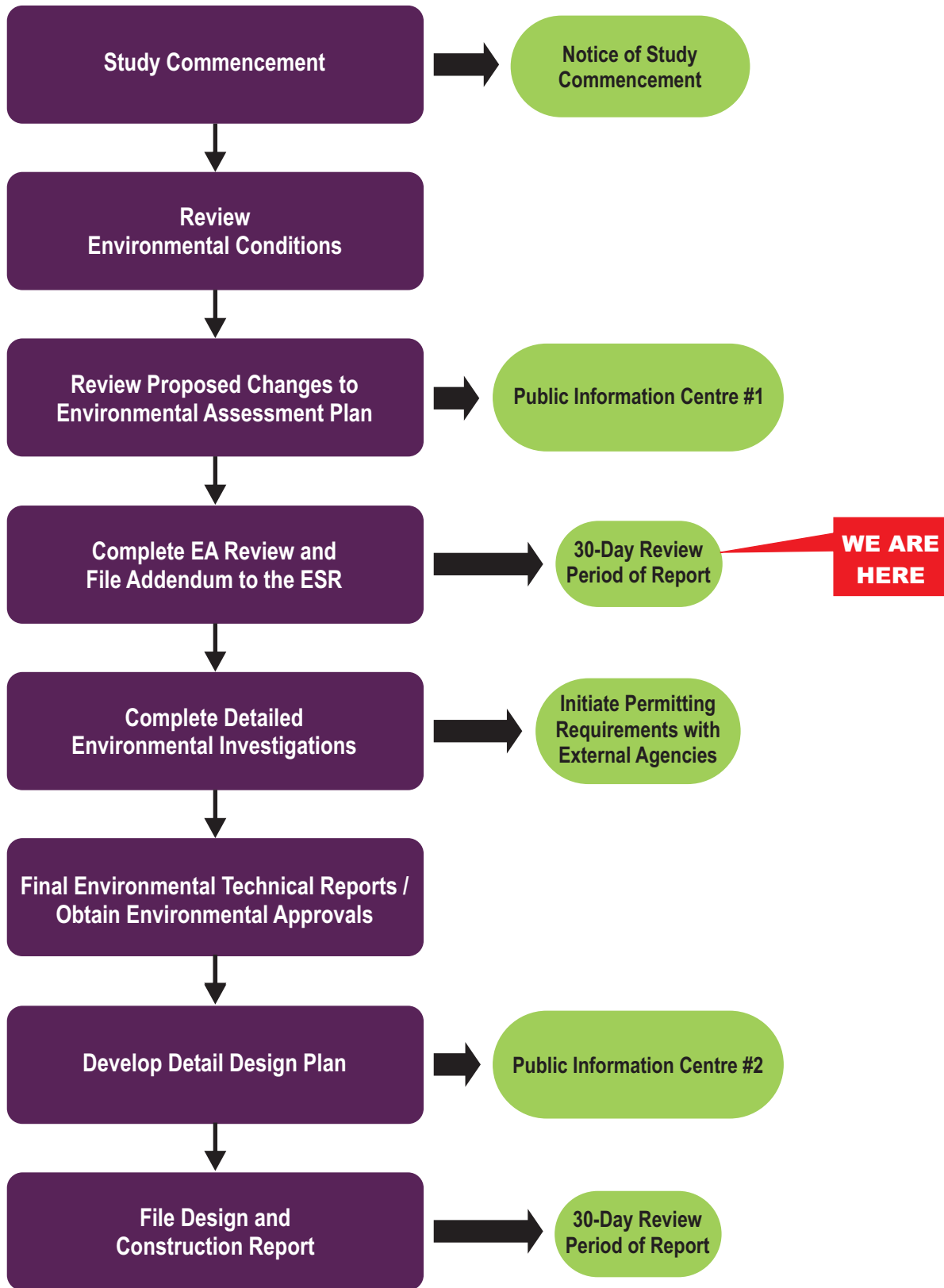
1.3 Study Process

The key steps in this Detail Design Study are highlighted in **Exhibit 1-2**. Upon completion of this Detail Design Study, a Design and Construction Report (DCR) will be prepared to document the updated Detail Design plan and the proposed environmental mitigation measures. There is a possibility that the final design plans may identify minor design modifications or refinements that could result in environmental benefits or impacts that may not have been anticipated or identified in this Addendum to the ESR. All minor design modifications or refinements to the final design plans and resultant environmental benefits or impacts will also be documented in the DCR. The DCR will be made available for a 30-day public and external agency review period, as shown in **Exhibit 1-2**. A notice of DCR filing will be sent to contacts on the study mailing-list, posted on the project and local municipal websites, and published in local newspapers when the DCR is available for viewing.

Should significant design modification or refinements be required as a result of the detailed environmental investigations, a second Addendum to the ESR may be prepared and made available for a 30-day public review prior to the preparation of the DCR.

**KEY
ACTIVITY**

**CONSULTATION
MILESTONE**



2.0 Existing Environmental Conditions and Changes

As noted in **Section 1.2**, the proponent must carry out a review of any portion of a project for which construction has not commenced and a Design and Construction Report (DCR) has not been submitted within five years of the Notice of Submission for the Environmental Study Report (ESR). This review must consider changes that have taken place since the submission of the original ESR, including new conditions that exist within the study area.

This section reviews and compares the current environmental conditions with the environmental conditions documented in the 1997 ESR to determine if there have been any significant changes that may affect the proposed four-laning of Highway 11/17 within the study limits. The 2017 existing environmental conditions are presented in **Exhibit 2-1** while the comparison table of the 1997 environmental conditions and the 2017 existing environmental conditions is presented in **Exhibit 2-2**.

As part of the Detail Design Study to date, initial field reconnaissance and a preliminary review of existing terrestrial and aquatic field investigations has been completed, including Valley Creek. Further natural environmental field investigations along the alignment are scheduled to occur Spring / Summer 2018 to augment data collection regarding current environmental conditions in accordance with MTO's current guidelines, standards and policy directives. The collection of updated information was and will be necessary to build upon the existing data, supplement the current existing conditions and constraints, and identify required agency permits. The 1997 existing conditions were obtained from the 1997 ESR. The preliminary data collection and 2017/2018 field investigations will be used to complete an impact assessment on the proposed alignment revisions outlined on the preferred plan and to identify mitigation measures (see **Section 5.0**). The findings of these detailed investigations, impact assessment of the preferred plan, and recommended mitigation measures will be presented at the second Public Information Centre (anticipated for Fall 2018), and documented in the DCR later in the study.

A noise impact assessment will be undertaken in Spring 2018 to assess the potential noise impacts to adjacent Noise Sensitive Areas based on current MTO noise guidelines. The findings of the noise assessment will be presented at the second Public Information Centre (anticipated in Fall 2018).

A Stage 1 archaeological assessment will be completed in Spring 2018 for the entire corridor (right-of-way to right-of-way) within the study limits. Further Stage 2 archaeological assessments may be required if previously unassessed areas are found to be impacted by the proposed changes. All archaeological assessments will be carried out in conformance with the Ministry of Tourism, Culture and Sport's (MTCS) *Standards and Guidelines* (2011) and submitted to MTCS for archaeological concurrency prior to construction.

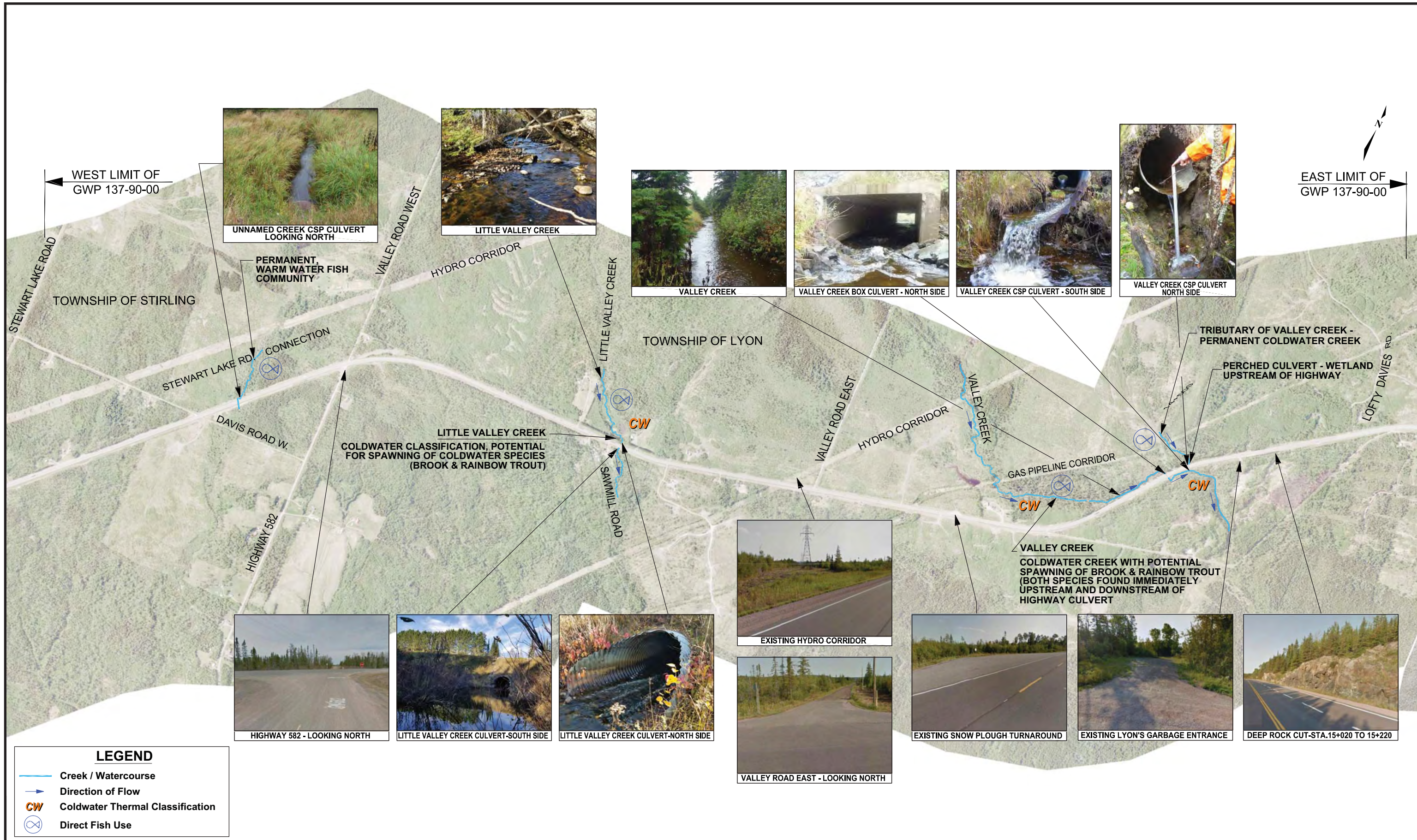


Exhibit 2-2: Comparison between 1997 and 2017 Review of Environmental Conditions

Factor / Indicator	Existing Environmental Conditions (1997)	Review of Existing Environmental Conditions (2017) ¹
Natural Environment		
Geology and Soils	<ul style="list-style-type: none"> The bedrock within the study area is entirely composed of rock formed in the Precambrian era. 	<ul style="list-style-type: none"> No changes since 1997. Additional geotechnical investigations to support Detail Design will be carried out in Spring/Summer 2018.
Vegetation	<ul style="list-style-type: none"> Dominant tree species along the highway corridor include: Poplar, White Birch, Balsam Fir, Black Spruce, White Cedar, and White Spruce. Most forests have good understory of ferns, grasses and herbaceous plants. No significant species identified by the Ministry of Natural Resources and Forestry (MNR) (<i>formerly Ministry of Natural Resources</i>). 	<ul style="list-style-type: none"> Vegetation surrounding Valley Creek consists primarily of Mixed and Conifer forest communities. There is evidence of past timber harvesting and an abundant amount of down-woody debris. Data collection and assessment of the vegetation and vegetation communities within the remainder of the study limits will be completed in the Spring/Summer of 2018. Vegetation species and communities are anticipated to be consistent with the 1997 with potential changes to composition and age. No vegetation species or communities of Conservation Concern were noted by MNR to be within the project area.
Wildlife and Wildlife Habitat	<ul style="list-style-type: none"> Area supports a wide range of species, including: moose, black bear, deer, rabbit, gamebirds, and waterfowl. A moose winter concentration area is located between Big Creek and Black Sturgeon River approximately 1 km south of existing Highway 11/17. No species of Conservation Concern were identified. 	<ul style="list-style-type: none"> Data collection and assessment of the wildlife and wildlife habitat within the remainder of the study area will be completed in the Spring/Summer of 2018. The project area continues to support a wide range of common wildlife species and habitats. No wildlife species or communities of Conservation Concern or habitats were noted by MNR to be within the project area.

¹ Existing conditions based on preliminary review of existing natural environmental conditions. Detailed natural environmental investigations will be completed in Spring/Summer 2018, potential for impacts will be reviewed, mitigation measures developed as required and documented in the Design and Construction Report.

Factor / Indicator	Existing Environmental Conditions (1997)	Review of Existing Environmental Conditions (2017) ¹
<p>Fish and Fish Habitat</p>	<p><u>Overall Study Area</u></p> <ul style="list-style-type: none"> Waterbodies within the study area are identified as cold water streams. Streams flowing into Lake Superior are considered significant by MNRF. Lake Superior tributaries contain a wide range of aquatic wildlife, such as resident brook trout, rainbow trout, salmon, pickerel, northern pike, smallmouth bass, perch suckers and cyprinids. No species of Conservation Concern were identified. <p><u>Little Valley Creek</u></p> <ul style="list-style-type: none"> Beaver dam exists upstream. Upstream: Good cover of willow, alder, and poplar, and an understory of madder, marsh marigold, meadow rue, cow parsnip, joe pye weed, violets, and swamp candles. Downstream: open area of alder, white birch, poplar, fireweed, redtop with instream cover of potamogeton and burreed and eelweed. <p><u>Valley Creek</u></p> <ul style="list-style-type: none"> Stream banks have good cover of Kentucky blue grass, asters, clover, horsetails, thistles, alder, red-osier dogwood, arens, madder, willow, meadow rue, redtop, and joe pye weed. 	<p><u>Overall Study Area</u></p> <ul style="list-style-type: none"> There are a number of unnamed watercourses along this stretch that also have the potential to support fish within the highway ROW reaches. WSP was able to confirm fish use at one of the locations (near Davis Road), and will complete additional fish surveys in Spring / Summer 2018 to document existing conditions at all these additional watercourse crossing locations. <p><u>Little Valley Creek</u></p> <ul style="list-style-type: none"> MNRF agency consultation confirmed that this watercourse should be considered as supporting coldwater with Rainbow and Brook Trout spawning habitat within close proximity to the highway crossing (MNRF, 07/14/17). Use of ROW reaches for spawning will be confirmed during 2018 field season. <p><u>Valley Creek</u></p> <ul style="list-style-type: none"> Initial screening / background information from MNRF identified that Valley Creek is a coldwater system with potential to support spawning, nursery, and feeding habitat for Brook Trout, Rainbow Trout and White Sucker. MNRF identified the following fish species: Rainbow and Brook Trout, and Mottled and Slimy Sculpin. Initial field reconnaissance identified potential use of the ROW reaches for spawning, rearing and nursery functions during 2017 field season.

Factor / Indicator	Existing Environmental Conditions (1997)	Review of Existing Environmental Conditions (2017) ¹
Social and Cultural Environment		
Social	<ul style="list-style-type: none"> Residents within study area are on well water. 	<ul style="list-style-type: none"> No significant changes since 1997.
Land-use	<ul style="list-style-type: none"> The area is generally characterized by rural land uses. There are no businesses. A garbage disposal for the Township of Lyon exists within the study area. 	<ul style="list-style-type: none"> No significant changes since 1997. The garbage disposal site beside Valley Creek (i.e. Lyon Dump) is now closed.
Noise Sensitive Areas	<ul style="list-style-type: none"> There are 19 residences within the study area. 	<ul style="list-style-type: none"> Existing residences have not significantly changed since 1997.
Agriculture	<ul style="list-style-type: none"> Soils within the Thunder Bay corridor are classified as Class 3, 5 and 7. Agricultural uses are located adjacent to the existing Highway 11/17. A commercial tree farm is located on the north side of Highway 11/17 west of Highway 582 in the Township of Stirling, outside the study area 	<ul style="list-style-type: none"> Agricultural operations exist within the study area and have not significantly changed since 1997.
Archaeology	<ul style="list-style-type: none"> The 1997 ESR recommended future archaeological assessments be conducted along the corridor. 	<ul style="list-style-type: none"> A Stage 1 archaeological assessment will be carried out in Spring 2018 to determine if areas containing archaeological potential exist within the study area. All areas recommended for additional Stage 2 archaeological assessment will be carried out later in the study and concurred with the Ministry of Tourism, Culture and Sport.
Heritage	<ul style="list-style-type: none"> A cemetery is located on the south side of Highway 11/17 opposite the commercial tree farm, in the Township of Stirling, outside the study area. 	<ul style="list-style-type: none"> The cemetery south of Highway 11/17 has not changed since 1997.

3.0 Review / Update to 1997 EA Approved Plan

This Detail Design and Class Environmental Assessment (EA) Study includes a review of the commitments made in the 1997 Environmental Study Report (ESR) based on new engineering standards, and new environmental constraints. The review of the EA Approved alignment for Highway 11/17 was based on new highway engineering standards, and new environmental constraints. The review of the 1997 EA Approved Plan includes the following:

- Review of Highway Alignment;
- Review of Highway Cross-Section; and
- Review of Intersecting Roadway Alignments.

Based on the review of the 1997 EA Approved Plan and integration of comments received through the consultation / engagement process, the Ministry is proposing two design changes to the EA Approved plan. The proposed design changes to the EA Approved plan are summarized as follows:

- A slight realignment of Highway 11/17 in the vicinity of Valley Creek to increase the proposed radius of curvature;
- Widening the proposed right-of-way from 45 m to 55 m on the north (twinned) side of the highway; and
- Minor alignment revisions to one intersecting roadway (Valley Road East).

Further refinements to the property requirements may be required, as the grading design progresses as part of Detail Design, soils information is gathered, and legal surveys of the various parcels are undertaken in Spring/Summer 2018. Further natural environmental field investigations are also scheduled in Spring/Summer 2018. Any modifications to property requirements as a result of the Detail Design process will be discussed directly the impacted property owner(s) as part of the negotiation process.

The preliminary data collection and 2017 field reconnaissance have been used to assess preliminary impacts of the proposed revisions outlined on the preferred plan, and to identify mitigation measures. The approved mitigation measures and commitments outlined in the 1997 ESR and the Addendum to the 1997 ESR will be carried forward to the Detail Design and construction phases for this project.

Exhibits 3-1a to 3-1e illustrate the updated preferred plan for the four-laning of Highway 11/17 within the study limits, while **Exhibit 3-2** illustrates the updated preferred plan for Valley Road East. **Exhibit 3-3** illustrate the typical cross section for the updated plan. The following sub-sections summarize the proposed design changes from the 1997 EA Approved Plan in greater detail.

3.1 Review of Highway Alignment

The four-laning alignment identified in the 1997 EA Approved Plan was reviewed to ensure the proposed highway alignment meets current highway engineering standards. A revision to Highway Engineering standards (effective January 2018) has resulted in a slight increase the proposed radius of curvature in the vicinity of Valley Creek. The revised engineering standards provide a greater level of safety and comfort for high speed facilities. This modification is not anticipated to have additional impact on the proposed increase in ROW width to 55 m on the north (twinned) side, nor on the natural environment, social and cultural environment or utilities and municipal services.

The Project Team will complete an impact assessment following the completion of the detailed natural environmental field investigations in Spring/Summer 2018 and review the Detail Design plan to minimize / avoid existing environmental constraints. Should significant design modification or refinements to the proposed plan be required, a second Addendum to the ESR may be prepared and made available for a 30-day public review. Any minor design modifications or refinements to the final design plans and resultant environmental benefits or impacts will be documented in the Design and Construction Report (DCR).

3.2 Review of Intersecting Roadway Alignments

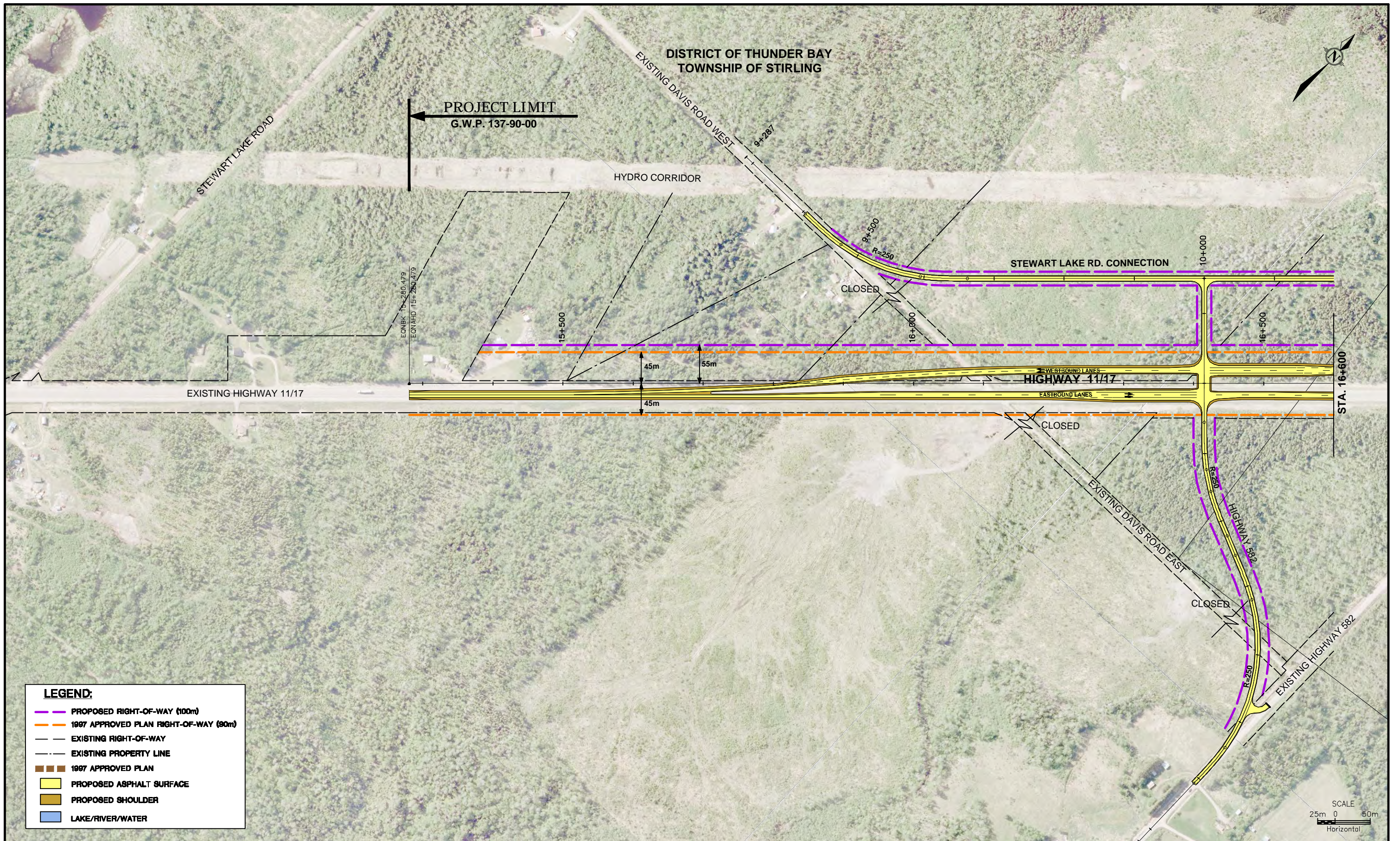
Intersecting roadway alignments identified in the 1997 EA Approved Plan were reviewed in consideration of the current highway design standards and impact to privately owned properties. As a result, the Valley Road East alignment has been shifted approximately 12.5 m to the east to meet Highway 11/17 at a 90° angle to provide improved line of sight and safety for vehicles approaching the highway from Valley Road East.

3.3 Review of Highway Cross-Section

MTO is proposing to increase the right-of-way from 45 m (minimum) to 55 m (minimum) on the north (twinned) side of Highway 11/17 due to revisions to highway engineering design and safety standards that have occurred since the 1997 ESR. This will accommodate a 30 m wide median and flatter (4:1) side slopes, which is consistent with the design intent for the four-laned sections of Highway 11/17 between Thunder Bay and Nipigon.

3.4 Realignment of Valley Creek

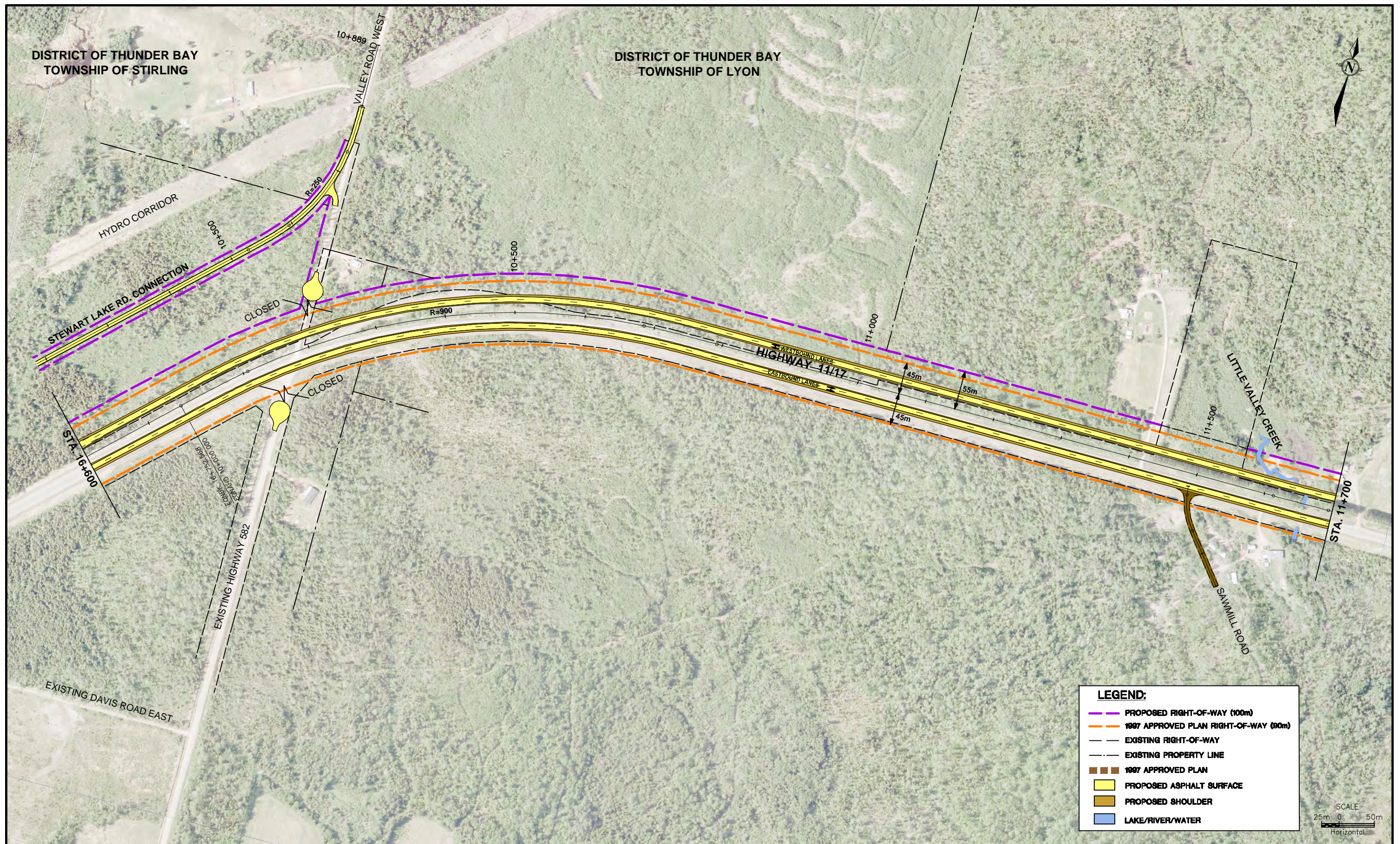
The Project Team is reviewing the feasibility of a realignment of a section of Valley Creek. This review is on-going and will be determined as the Detail Design progresses. This review has engaged and will continue to engage the Ministry of Natural Resources and Forestry. A separate addendum to the 1997 ESR may be required to address the potential realignment of Valley Creek if the realignment results in significant changes to the EA Approved Plan (e.g. greater property impacts than what were identified in the 1997 ESR).



W.P. 137-90-00
HIGHWAY 11/17 FOUR-LANING
 From West of Highway 582 to Coughlin Road
 Environmental Study Report Addendum

PREFERRED PLAN - (Part 1 of 5)

EXHIBIT
3-1a

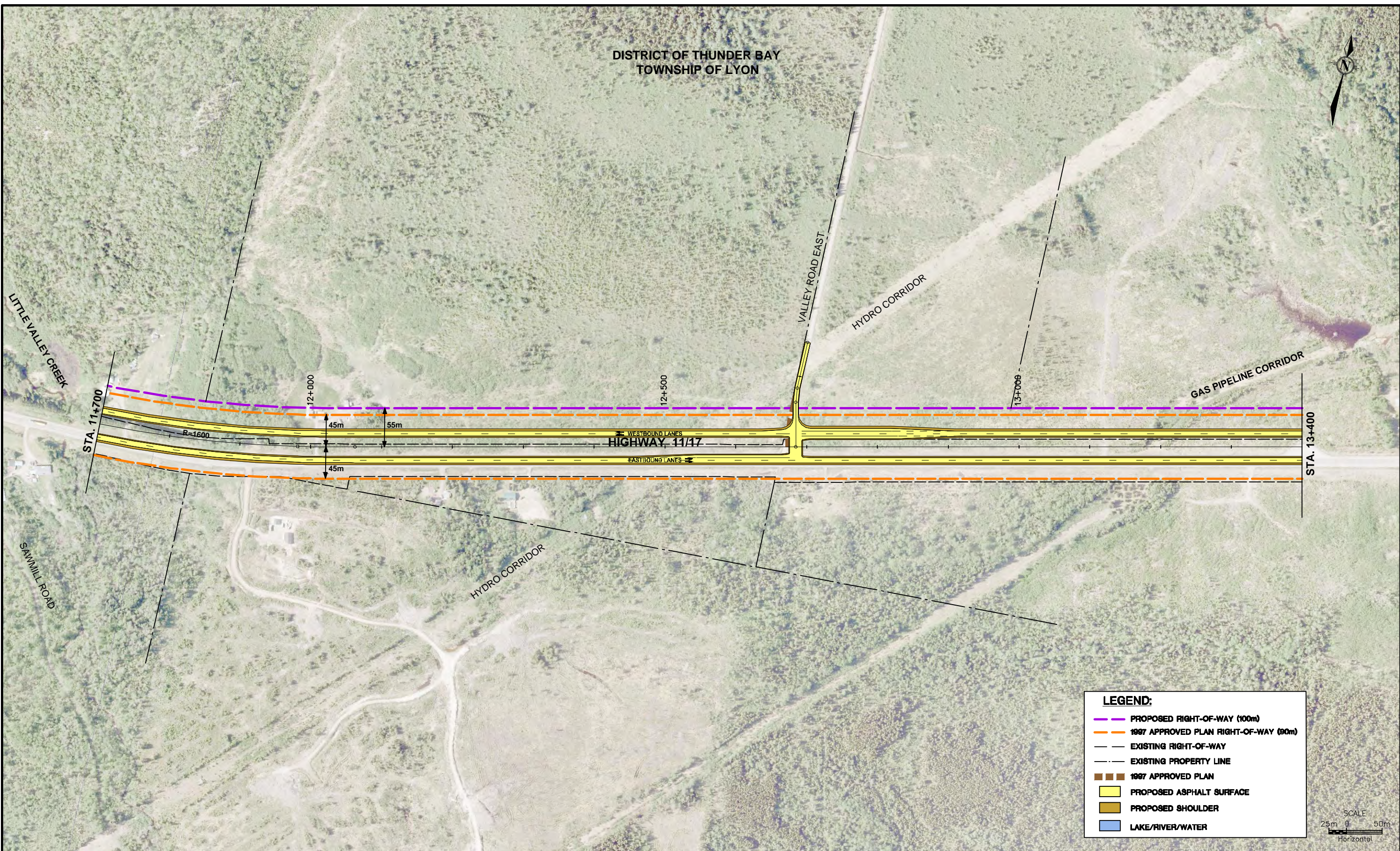


W.P. 137-90-00
HIGHWAY 11/17 FOUR-LANING
 From West of Highway 582 to Coughlin Road
 Environmental Study Report Addendum

PREFERRED PLAN - (Part 2 of 5)

EXHIBIT
3-1b

DISTRICT OF THUNDER BAY
TOWNSHIP OF LYON



LEGEND:

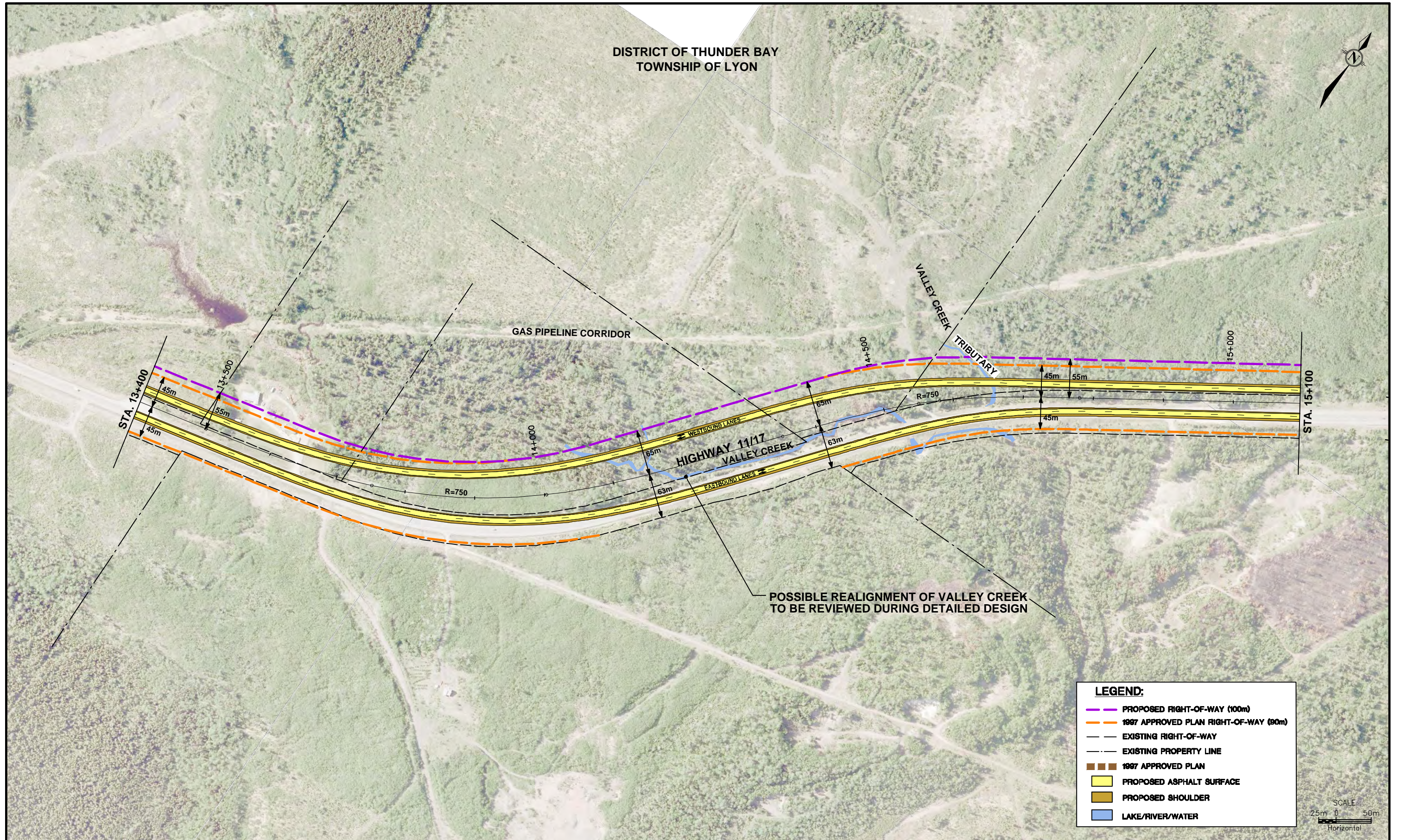
- PROPOSED RIGHT-OF-WAY (100m)
- 1997 APPROVED PLAN RIGHT-OF-WAY (80m)
- EXISTING RIGHT-OF-WAY
- EXISTING PROPERTY LINE
- 1997 APPROVED PLAN
- PROPOSED ASPHALT SURFACE
- PROPOSED SHOULDER
- LAKE/RIVER/WATER

SCALE
25m 0 50m
Horizontal

W.P. 137-90-00
HIGHWAY 11/17 FOUR-LANING
 From West of Highway 582 to Coughlin Road
 Environmental Study Report Addendum

PREFERRED PLAN - (Part 3 of 5)

EXHIBIT
3-1c



DISTRICT OF THUNDER BAY
TOWNSHIP OF LYON



GAS PIPELINE CORRIDOR

PROJECT LIMIT
G.W.P. 137-90-00

LOFTY DAVIES ROAD

STA. 15+100

45m
55m
45m

HIGHWAY 11/17

15+500

16+000

16+500

R=90

R=400

COUGHLIN ROAD

LEGEND:

- PROPOSED RIGHT-OF-WAY (100m)
- 1997 APPROVED PLAN RIGHT-OF-WAY (90m)
- EXISTING RIGHT-OF-WAY
- EXISTING PROPERTY LINE
- 1997 APPROVED PLAN
- PROPOSED ASPHALT SURFACE
- PROPOSED SHOULDER
- LAKE/RIVER/WATER

SCALE
25m 0 50m
Horizontal

W.P. 137-90-00
HIGHWAY 11/17 FOUR-LANING
From West of Highway 582 to Coughlin Road
Environmental Study Report Addendum

PREFERRED PLAN - (Part 5 of 5)

EXHIBIT
3-1e

DISTRICT OF THUNDER BAY
TOWNSHIP OF LYON

VALLEY ROAD EAST









HYDRO CORRIDOR

12+500

13+000

WESTBOUND LANES
HIGHWAY 11/17
EASTBOUND LANES

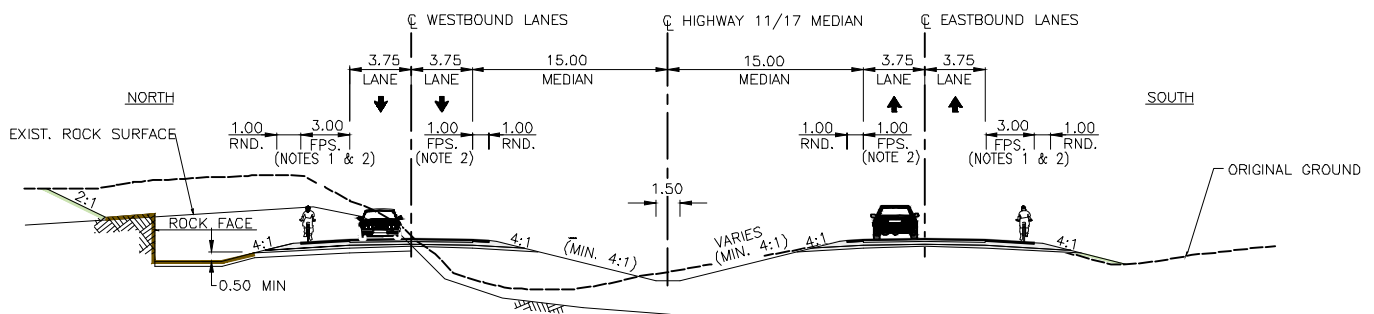
LEGEND:

-  PROPOSED RIGHT-OF-WAY (100m)
-  1997 APPROVED PLAN RIGHT-OF-WAY (90m)
-  EXISTING RIGHT-OF-WAY
-  EXISTING PROPERTY LINE
-  1997 APPROVED PLAN
-  PROPOSED ASPHALT SURFACE
-  PROPOSED SHOULDER
-  LAKE/RIVER/WATER

W.P. 137-90-00
HIGHWAY 11/17 FOUR-LANING
From West of Highway 582 to Coughlin Road
Environmental Study Report Addendum

VALLEY ROAD EAST
RELOCATION

EXHIBIT
3-2



TYPICAL SECTION - HIGHWAY 11/17
N.T.S.

NOTES:

1. A 3.0m FULLY PAVED RIGHT SHOULDER WILL BE PROVIDED ALONG EASTBOUND AND WESTBOUND HIGHWAY 11/17 WITHIN THE STUDY AREA TO ACCOMMODATE CYCLISTS.
2. RUMBLE STRIPS WILL BE INSTALLED ON THE OUTER AND MEDIAN SHOULDERS.

4.0 Consultation / Engagement

Consultation / engagement is an integral component of the Environmental Assessment (EA) process and provides an opportunity for communication between the community and the Project Team to identify potentially significant environmental issues early in the decision making process and throughout the study.

The Project Team has engaged and will continue to engage with members of the public, property owners, federal and provincial government review agencies, Indigenous Communities, the Ministry of Municipal Affairs and Housing (responsible for future land-use planning for unincorporated Townships of Stirling and Lyon, within the unorganized district of Thunder Bay), as well as other potentially interested stakeholders.

4.1 Initial Notification

External agencies, including federal and provincial government review agencies, Ministry of Municipal Affairs and Housing, Indigenous Communities, adjacent property owners, and other potentially interested stakeholders were notified regarding the commencement of this study by letter or email on June 16, 2017. The Ministry of Transportation (MTO) notified the local Members of Parliament (MP and Members of Provincial Parliament (MPP) of the study commencement on June 2, 2017, and the appropriate Indigenous Communities on June 16, 2017. In addition, a copy of the study commencement notice was sent via Canada Post unaddressed mailing (i.e. bulk) to approximately 1235 property owners within the vicinity of the study area.

All external agencies were provided with a form on which they could provide comments and/or background information relevant to the study, as well as the project website address (www.hwy11-17-hwy582tocoughlin.com). The study commencement notices were published in the *Thunder Bay Chronicle-Journal* and *Nipigon-Red Rock Gazette* on June 20, 2017. Copies of the newspaper notices are located in **Appendix A** while all relevant correspondence can be found in **Appendix B**.

4.2 Impacted Property Owners

Letters to impacted property owners were sent in Spring / Summer 2017. The Ministry will continue to correspond and meet with impacted property owners on an individual basis as required to discuss the proposed changes and the potential impacts to their property. The Ministry will negotiate with individual owners for property purchases in accordance with standard MTO property acquisition process.

4.3 External Agency Participation, Input, and Comments

Municipal, agency, commercial and interest group input was an integral part of the study, and assisted the Project Team to understand and incorporate federal, provincial, and local perspectives.

The following agencies, municipalities, businesses and other stakeholders were consulted with during the study:

Federal Government Agencies

- Department of Fisheries and Oceans Canada
- Transport Canada

Provincial Government Agencies

- Infrastructure Ontario
- Ministry of Indigenous Relations and Reconciliation (*formerly Ministry of Aboriginal Affairs*)
- Ministry of Community Safety and Correctional Services
- Ministry of Agriculture and Food & Ministry of Rural Affairs
- Ministry of the Environment and Climate Change
- Ministry of Municipal Affairs and Housing
- Ministry of Natural Resources and Forestry
- Ministry of Northern Development and Mines
- Ministry of Tourism, Culture and Sport

Municipal / Emergency Services / District School Boards

- Ministry of Municipal Affairs and Housing, Manager of Community Planning and Development (North – Thunder Bay)
- Ontario Provincial Police
- Nipigon Fire Department
- Superior North Emergency Medical Service
- Superior North Catholic District School Board
- Superior Greenstone District School Board
- Conseil scolaire de district catholique des Aurores boreales
- Conseil Scolaire de District Du Grand Nord
- East of Thunder Bay Transportation Consortium

Utilities / Agencies

- Bell Canada
- Canadian National Railway
- Canadian Pacific Railway
- Hydro One Networks Inc.
- Union Gas Limited
- TransCanada Pipe Lines
- Shaw Communciations
- TbayTel

Potentially Interested Stakeholder / Interest Groups

- Ontario Trucking Association
- Ontario Federation of Snowmobile Clubs
- Thunder Bay Field Naturalists
- Thunder Bay District Fish and Game Association
- North Shore Steelhead Association

A tracking table of all communication with external agency participants was maintained during the study. A summary of these communications is included in **Exhibit 4-1**.

Copies of all external agency correspondence are provided in **Appendix B**.

Exhibit 4-1: Summary of External Agency Correspondence

Agency / Participant	Comments Received	Action Taken / Response
Federal Agencies		
Transport Canada	Comment received via email on June 20, 2017: <ul style="list-style-type: none"> Noted Transport Canada does not require receipt of all Class EA related notifications. Requested proponents complete a self-assessment to determine if input from Transport Canada is required. 	Comment was noted by the Project Team. The project will not require approval and/or authorization under act Acts administered by Transport Canada.
Provincial Agencies		
Ministry of Natural Resources and Forestry	Comment received via email on July 21, 2017 provided detailed project specific information on the following: <ul style="list-style-type: none"> Crown Land Forestry Fisheries (Valley Creek) Wildlife <hr/> Follow-up email received on July 27, 2017 requested a copy of the shapefiles showing the proposed increased right-of-way for the two Highway 11/17 Four-Laning projects between Highway 582 and Red Rock Road #9 (i.e. Red Rock Road 9 – Coughlin, and Coughlin – Hwy 582). <hr/> Verbal comments received at Public Information Centre #1 (November 15, 2017): <ul style="list-style-type: none"> Expressed concern with the realignment of Valley Creek and an interest in the outcome on the potential realignment of Valley Creek. Requested that vegetation removal within the highway median will be minimized if 	Response sent by email on October 3, 2017 noted the following: <ul style="list-style-type: none"> Information provided on Crown Land, Forestry, Fisheries, and Wildlife have been noted. The Project Team is aware Valley Creek is sensitive fish habitat, and understands MNRF has concerns with the perched culvert, which is a barrier to fish movement. Initial aquatic field reconnaissance occurred in Fall 2017 and further terrestrial and aquatic field investigations are scheduled for Summer 2018. The Project Team will complete the impact assessment and follow standard MNRF/DFO permitting protocols pending results of the assessment. Impacts to the TransCanada Pipeline easement will be reviewed as part of the study and MNRF will be notified of any new values of endangered species in accordance with the <i>Endangered Species Act</i>. The Project Team committed to sending MNRF the Shapefile and Detail Design plan for review, once available, in the comment response sent as part of the Highway 11/17

Agency / Participant	Comments Received	Action Taken / Response
	Valley Creek is maintained within the MTO right of way. <ul style="list-style-type: none"> Reconfirmed no addition species at risk within the study area, including whip-poor-will habitat. 	Four-laning from 800 m west of Coughlin Road to Red Rock Road #9, Detail Design and Class Environmental Assessment Study (GWP 132-90-00).
Ministry of Tourism, Culture, and Sport Jeff Elkow, Heritage Planner	Comment received via email on June 23, 2017: <ul style="list-style-type: none"> Provided information to determine a project potential impact on cultural heritage resources. Acknowledged a Stage 1 archaeology assessment will be completed as part of this study and requested the assessment be undertaken as early as possible. Recommended a Cultural Heritage Evaluation Report be prepared to determine if cultural heritage resources exist within the study area. 	Response sent by email on October 3, 2017 noted the following: <ul style="list-style-type: none"> A Stage 1 archaeological assessment is tentatively scheduled for Fall 2017 to determine if further Stage 2 surveys are required. (<i>Stage 1 archaeological assessment currently scheduled for Spring/Summer 2018</i>) All archaeological assessments completed for the study will submitted to the MTCS for registration. The Ministry determined a Cultural Heritage Evaluation Report (CHER) or a Heritage Impact Assessment (HIA) is not required for this study.
Ministry of Northern Development and Mines Stephanie Rocca, Initiatives Coordinator	Comments received via email on July 11, 2017 noted: <ul style="list-style-type: none"> One unpatented land mine claim exists within the study limits. No concerns from the Abandoned Mines Rehabilitation Program. No concerns with respect to the geology or mineral resource potential in the area. <hr/> Response received via email on October 17, 2017 provided contact information for the unpatented land mine claimant.	Response sent by email on October 3, 2017 requested contact information for the unpatented land mine claimant to advise them of the study.

4.4 Utilities Consultation

Letters notifying of potentially impacted utilities were sent to utility companies on July 5, 2017 to introduce the project scope and request information on existing and proposed utility plant within the study area.

The following utility companies were contacted for this study:

- Bell Canada
- Hydro One Networks
- Shaw Communications
- TbayTel
- Union Gas Limited
- TransCanada Pipe Lines

The Project Team will continue to consult with any affected utility companies to identify conflicts and develop relocation plans to suit the Detail Design.

4.5 Public Information Centre #1

Public Information Centres (PICs) are informal meetings where area residents, interested stakeholders, agencies and Indigenous communities are provided an opportunity to review planning and project information, identify concerns and provide input to the Project Team. PICs served an important function in providing an opportunity for direct, two-way communication with stakeholders on specific local conditions, issues, and concerns regarding the study. Two rounds of PICs will be held during the study.

The first of two PICs for this study was held on November 15, 2017, at the Hurkett Community Centre from 4:00 p.m. to 8:00 p.m. PIC #1 was arranged as a drop-in session (open-house style) where representatives of the Project Team were available to answer questions and discuss the study. Information presented at PIC #1 included: existing environmental conditions, the proposed changes to the preliminary design that was identified in the 1997 ESR, summary of potential environmental affects and proposed mitigation measures, and next steps. A copy of the displays presented at PIC #1 is included in **Appendix C**.

PIC #1 was advertised in the *Thunder Bay Chronicle-Journal* and *Nipigon Red Rock Gazette* on November 7, 2017. A copy of the publication is included in **Appendix A**.

Notification letters were distributed by direct mail or emailed to contacts on the study mailing list on November 3, 2017, including government agencies (federal and provincial), Indigenous communities, the Ministry of Municipal Affairs and Housing, emergency service providers, schoolboards, and other potentially interested stakeholder groups, Individuals and groups that expressed an interest in the project were either confirmed on or added to the study mailing list following project commencement and were notified of PIC #1. In addition, a copy of the PIC #1 notice was sent via Canada Post unaddressed mailing (i.e. bulk) on October 31, 2017 to approximately 1235 property owners within the vicinity of the study area.

A pre-PIC session was held for external agencies and Indigenous communities between 3:00 p.m. and 4:00 p.m. A representative from the Ministry of Natural Resources and Forestry (Nipigon District) attended the PIC.

PIC #1 was attended by approximately 30 people and a total of 29 participants signed the registration sheet. There were five comment sheets submitted at the PIC. No additional comments were received following the PIC. All agency and public comments gathered throughout the study are summarized later in **Exhibit 4-2**.

Copies of PIC #1 notification materials, including newspaper notices are provided in **Appendix A**. The PIC #1 display materials presented at the first PIC are provided in **Appendix C**.

4.6 Indigenous Community Engagement

Indigenous Communities and government agencies were contacted by the Project Team at key milestones throughout the study process. The Ministry of Indigenous Relations and Reconciliation (*formerly Ministry of Aboriginal Affairs*) were sent letters to identify any Indigenous Communities that may have an interest in the study.

The following Indigenous Communities were notified of the study commencement on June 9, 2017 and sent a notice of PIC #1 on November 3, 2017:

- Fort William First Nation
- Nishnawbe Aski Nation
- Anishinabek Nation / Union of Ontario Indians
- Red Rock Indian Band
- Pays Plat First Nation
- Animbiigoo Zaagi'igan Anishinaabek
- Métis Nation of Ontario (Head Office)
- Thunder Bay Métis Council
- Biinjitiwaabik Zaaging Anishinaabek First Nation
- Bingwi Neyaashi Anishinaabek
- Pic Moberg First Nation
- Ojibways of Pic River First Nation
- Michipicoten
- Long Lake #58 First Nation
- Kiashke Zaaging Anishinaabek

Letters were sent by MTO to all of the above-mentioned Indigenous Communities and organizations to inform them of the filing of the Addendum to the 1997 ESR. No comments have been received to date.

MTO will continue to consult with Indigenous communities as the study progresses.

4.7 Integration of External Consultation / Engagement

The intent of the consultation / engagement program for the study is to ensure that the public and review agencies have an opportunity to identify any potential concerns and influence the outcome of selection the preferred plan as appropriate while also addressing the consultation principles identified in MTO Class EA Document. One of the consultation principles relates to showing how the input received in earlier stages has affected the project.

Throughout the study to date, the Project Team has attempted to address all comments, concerns and requests for additional information from external agencies, property owners, local interest groups, stakeholders, and members of the public.

Exhibit 4-2 highlights some of the key concerns and comments provided by the public and review agencies and how they were addressed.

Exhibit 4-2: Summary of Key External Agency and Public Comments and Responses

Summary of Key Comments	MTO Response
General support for the four-laning of Highway 11/17 and positive comments regarding completed section of 4-laning providing improved travel times and safety through the area	Comments were noted by the Ministry.
Safety concern with sight lines (west) turning left at Stewart Lake Road due to the hill.	Stewart Lake Road is outside of the study area, however, the comment was noted by the Ministry and will be considered as part of the adjacent Highway 11/17 four-laning study once it is initiated.
Inquiry about access to Davis Road East to access underground water source (i.e. stream) which is commonly used.	Davis Road East between Highway 11/17 and Highway 582 will be closed to traffic after construction of the realignment of Highway 582.

Summary of Key Comments	MTO Response
Request that access be maintained on both ends of Valley Road East.	Access to Highway 11/17 will be maintained at Valley Road East while access to Highway 11/17 will be provided from Valley Road West via the proposed Stewart Lake Road connection and the realigned Hwy 582.
Concern with environmental impacts associated with the realignment of Valley Creek.	The Project Team is reviewing the benefits and impacts associated with realigning Valley Creek. The review is on-going.
Property specific questions / concerns.	MTO will continue working with affected property owners and compensate those owners whose private property is physically impacted by the proposed improvements on a one-on-one basis.
Impacted property owner inquired on the timing of property buy-out/expropriation, and when they will need to vacate property following buy-out/expropriation.	A representative from MTO's Property Section was present at the Public Information Centre and responded to property related comments / questions from property owners. The Ministry will contact impacted property owners in the coming months to discuss the impacts to their property, as well as any questions or concerns they may have about the study.
Will bike lanes be provided along Highway 11/17?	The design will include a 3 m fully paved outside shoulder in both directions which will accommodate cyclists.
What is the timing of construction for the four-laning of Highway 11/17?	A provincial funding commitment for the construction of the four-laning of this portion of Highway 11/17 is included in the 2017 Ontario Budget. Construction of the new 4-lane highway is anticipated to start as early as 2019 and anticipated to be completed in 2021.
Inquiries about timing of construction for the four-laning of Highway 11/17 adjacent to the study area.	<p>The Ministry provided responses regarding the proposed timing of construction :</p> <p>Birch Beach to Pass Lake (6.5 km)</p> <ul style="list-style-type: none"> • Construction Start – 2015 • Construction Complete – 2017 <p>Pass Lake to Pearl (14.6 km)</p> <ul style="list-style-type: none"> • Construction Start – 2018 • Construction Complete – 2020 <p>Ouimet to Dorion (8.5 km)</p> <ul style="list-style-type: none"> • Construction Start – 2019

Summary of Key Comments	MTO Response
	<ul style="list-style-type: none"> • Construction Complete – 2021 <p>Highway 582 to Coughlin Rd (7.5km)</p> <ul style="list-style-type: none"> • Construction start – 2019 • Construction complete – 2021 <p>Coughlin Road to Red Rock Road #9 (5.0 km)</p> <ul style="list-style-type: none"> • Construction Start - 2019 • Construction Complete - 2021 <p>Red Rock to Still Water Creek (10 km)</p> <ul style="list-style-type: none"> • Construction Start – 2015 • Construction Complete – 2021 <p>Nipigon River Bridge and approaches (3.5 km)</p> <ul style="list-style-type: none"> • Construction Start – 2013 • Construction Complete – 2018

Future consultations, including a second PIC, will continue throughout the Detail Design phase. Should significant design modification or refinements be required as a result of the detailed environmental investigations, a second Addendum to the ESR may be prepared and made available for a 30-day public review. Any changes resulting from minor design modifications and refinements and associated mitigation measures will be addressed and discussed with affected external agencies and property owners at PIC #2 and prior to construction.

5.0 Environmental Effects and Proposed Mitigation

5.1 Summary of Environmental Concerns and Proposed Mitigation

This section focuses on the direct and indirect potential environmental effects to the existing environmental, socio-economic and cultural features and sensitivities in the study area associated with the revisions to the 1997 EA Approved Plan for Highway 11/17 that were documented in the 1997 Environmental Study Report (ESR).

Further natural environmental field investigations along the alignment are scheduled to occur in Spring / Summer 2018 to augment data collection regarding current environmental conditions in accordance with MTO's current guidelines, standards and policy directives. The preliminary data collection and 2017/2018 field investigations will be used to complete an impact assessment on the proposed alignment revisions outlined on the preferred plan and to identify mitigation measures. The approved mitigation measures and commitments outlined in the 1997 ESR and the Addendum to the 1997 ESR will be carried forward to the Detail Design and construction phases for this project.

Exhibit 5-1 summarizes the identified concerns and potential impacts mitigation measures based on the identified environmental sensitivities and proposed realignment of Highway 11/17 in the vicinity of Valley Creek, increase in right-of-way from 45 m to 55 m (minimum) on the north (twinning) side of the highway, and realignment of Valley Road East. The criteria used in the assessment of effects reflected those used by MTO in the 1997 ESR.

The criteria used in the assessment of effects as part of this study was generally consistent with the 1997 ESR, however, the following considerations to transportation / engineering were added:

- Soil Erosion, Water Quality, Drainage
- Highway Geometrics;
- Complexity and Difficulty of Construction

The proposed changes to the 1997 EA Approved plan allows for an overall improvement to traffic and road safety. Although additional property requirements are necessary for the proposed changes to the 1997 EA Approved plan, the design changes do not result in significant changes to the impacts on existing environmental conditions as outlined in the 1997 ESR.

The approved mitigation measures and commitments outlined in the 1997 ESR and the Addendum to the 1997 ESR will be carried forward to the Detail Design and construction phases for this project.

Exhibit 5-1: Summary of Environmental Concerns and Potential Impacts

Factor	Potential Impacts Resulting From:		
	Realignment of Highway 11/17 in the Vicinity of Valley Creek	Increasing Right-of-Way Width from 45 m to 55 m (minimum) on the North (twinned) side	Realignment of Valley Road East
Natural Environment			
Vegetation	<ul style="list-style-type: none"> Increasing the right-of-way only incrementally increases the footprint from the 1997 ESR, thus, there are incremental impacts to the natural environment. Significant impacts to the natural environment are not anticipated. Specific natural environmental impacts and mitigation measures will be determined once natural environmental field investigations are completed in Spring/Summer 2018 and the detail design plan is developed. All recommended mitigation measures will be documented in the Design and Construction Report (DCR) and incorporated into the Contract Package. 		
Wildlife			
Aquatic Resources			
Social and Cultural Environment			
Archaeology	<ul style="list-style-type: none"> An archaeological assessment is being carried out to determine potential archaeological impacts in all previously unevaluated undisturbed areas. The area will be cleared of archaeological potential and the archaeological assessment reports completed for this study will be submitted to MTCS for archaeological concurrency prior to construction. 		
Land Use	<ul style="list-style-type: none"> Proposed changes result in new property impacts. MTO will negotiate with individual owners for property purchase in accordance with standard MTO procedures. A noise impact assessment will be undertaken to assess the potential noise impacts to adjacent Noise Sensitive Areas based on current MTO noise guidelines. Any recommended noise mitigation measures will be implemented, as required. The findings of the noise impact assessment will be presented at PIC #2. 		
Public Access	<ul style="list-style-type: none"> No change 	<ul style="list-style-type: none"> No change 	<ul style="list-style-type: none"> No significant impacts are anticipated to motorists. Enhances safety for vehicles approaching the highway from Valley Road East.

Factor	Potential Impacts Resulting From:		
	Realignment of Highway 11/17 in the Vicinity of Valley Creek	Increasing Right-of-Way Width from 45 m to 55 m (minimum) on the North (twinned) side	Realignment of Valley Road East
Engineering			
Utilities and Municipal Services	<ul style="list-style-type: none"> Revising the highway alignment in the vicinity of Valley Creek Road does not change the conflicts identified in the 1997 ESR. 	<ul style="list-style-type: none"> Increasing the right-of-way width does not change the conflicts identified in the 1997 ESR. 	<ul style="list-style-type: none"> The Project Team will consult with any affected utility companies to develop relocation plans to suit the detail design plan, as required.

APPENDIX A

ONTARIO GOVERNMENT NOTICES AND NOTIFICATIONS

See Separate File

APPENDIX B

RELAVENT AGENCY CORRESPONDENCE

See Separate File

APPENDIX C

PUBLIC INFORMATION CENTRE #1 DISPLAY PANELS

See Separate File