



Stantec Consulting Ltd.  
70 Southgate Drive, Suite 1, Guelph ON N1G 4P5

July 10, 2014  
File: 160960698

**Attention: Sue Edwards, Senior Project Evaluator**

Approval Services Unit – Team 5  
Environmental Approvals Branch  
Ministry of the Environment  
2 St. Clair Avenue West, Floor 12A  
Toronto ON M4V 1L5

Dear Ms. Edwards,

**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3  
Wind Project MOE Ref. No. 3624-98EQPN**

Grand Valley Wind Farms Inc. (GVWF) proposes to install and operate the 40MW Grand Valley Wind Farms - Phase 3 Wind Project (the Project) in the Town of Grand Valley and the Township of Amaranth, Ontario. Site plan maps for the Project are provided as **Attachment A**. The Renewable Energy Approval (REA) application for the Project was received by the Ministry of the Environment (MOE) on June 3, 2013, and is currently under technical review.

Thank you for the guidance provided in your June 4, 2014 email regarding potential technical changes proposed for the Project. As you've noted, the changes do not have the potential to result in increased significant environmental effects. Therefore, the MOE has determined that:

- Modification 1 and 2 would be considered Technical Changes;
- Modification 3 would be considered a Project Design Change (minor); and,
- Modification 4 would likely be considered a Project Design Change (minor).

Please find additional information included in this letter to assist with your determination of no increase in significant environmental effects due to these proposed changes.

**MODIFICATION 1 – REMOVAL OF TURBINE T107**

The Project was assessed under Ontario Regulation 359/09 (O. Reg. 359/09) as a 14-17 wind turbine project, with operational flexibility built in to allow for potential reduction in the number of turbines required. Since submission of the REA application, GVWF have opted to remove turbine T107 from the Project layout, based primarily on the requirement to meet the Project's Ontario Power Authority contracted maximum nameplate capacity and preliminary discussions with the Grand River Conservation Authority (GRCA).

The resulting Project layout (with turbine T107 removed) now includes a maximum of 16 wind turbine generators (Siemens SWT 3.0-113), maintaining the maximum nameplate capacity of 40MW. All turbines have been de-rated as detailed in the Revised Noise Assessment Report (NAR-R4) provided to the MOE in April, 2014. The location of the wind turbines, transformer station and



Reference: **Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

receptors as presented in the Revised NAR remained unchanged (**Table 1**). However, it should be noted that due to this modification, the predicted sound pressure levels at all receptor locations have been reduced (i.e., remain compliant with MOE requirements - equal to or less than 40 dBA).

**Table 1: Turbine and Transformer Locations**

Turbine	Model and Sound Power Level	UTM Coordinates (NAD 83 Zone 17)	
		Easting (m)	Northing (m)
T101	Siemens SWT-3.0-113 (MP2648kW)	546165	4873538
T102	Siemens SWT-3.0-113 (MP2648kW)	546188	4872997
T103	Siemens SWT-3.0-113 (MP2483kW)	548193	4872750
T104	Siemens SWT-3.0-113 (MP2483kW)	548297	4872271
T105	Siemens SWT-3.0-113 (MP2483kW)	552907	4870024
T106	Siemens SWT-3.0-113 (MP2483kW)	554074	4870311
T108	Siemens SWT-3.0-113 (MP2483kW)	555316	4869921
T109	Siemens SWT-3.0-113 (MP2483kW)	552688	4864238
T110	Siemens SWT-3.0-113 (MP2483kW)	552887	4863599
T112	Siemens SWT-3.0-113 (MP2483kW)	551622	4863426
T113	Siemens SWT-3.0-113 (MP2483kW)	551529	4861903
T114	Siemens SWT-3.0-113 (MP2483kW)	550852	4861687
T115	Siemens SWT-3.0-113 (MP2483kW)	550750	4860447
T117	Siemens SWT-3.0-113 (MP2483kW)	550194	4860468
T118	Siemens SWT-3.0-113 (MP2483kW)	550461	4859993
T120	Siemens SWT-3.0-113 (MP2483kW)	554159	4869801
Tr119	Transformer Station	553380	4868754

### Cultural Heritage Assessment

A request was sent to the MTCS on June 16, 2014 for confirmation that there would be no new effects on cultural heritage and archaeological features from the proposed change (**Attachment B**). The MTCS provided responses on July 2, 2014 (Archaeology) and July 8, 2014 (Cultural Heritage) confirming that the original MTCS letters remained valid, and there were no new impacts to heritage features based on the removal of T107 (**Appendix B**).



Reference: **Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

## **MODIFICATION 2 – SHIFT OF ACCECSS ROAD FOR TURBINE T112**

In the original REA application, and at the final open house for the Project, two options were presented for the access road and underground cable installation for turbine T112. GVWF would like to confirm in this Modification Document that the eastern option for this access road will be removed from the Project layout, to address concerns from the previous landowners immediately adjacent to this proposed access road. Those landowners have since sold the property, but GVWF would like to honour the discussions held with the former landowners going forward.

### **Archaeological Assessment**

The alternate location for this access road was considered as part of the original study area for the Stage 1 Archaeological Assessment. In anticipation of eventual removal of the eastern option, Stantec Consulting undertook a Stage 2 Archaeological Assessment of the western option in 2013. No artifacts were found, and the report was submitted to the Ministry of Tourism, Culture and Sport (MTCS) on June 6, 2013. A confirmation letter was received from MTCS on July 4, 2013. The Stage 2 report and MTCS letter are provided as **Attachment C** to this letter. A figure depicting the location of the alternative access road is provided in **Attachment D**.

### **Cultural Heritage Assessment**

A request was sent to the MTCS on June 16, 2014 for confirmation that there would be no new effects on cultural heritage features from the proposed change (**Attachment B**). The MTCS provided a response on July 8, 2014 confirming that the original MTCS letter remained valid, and there were no new impacts to cultural heritage features (**Appendix B**).

### **Natural Heritage Assessment**

As both options were included in the original HNA/EIS assessment, the conclusion of no impact to natural features remains the same, and no additional work is required at this site.

## **MODIFICATION 3 – MOVEMENT OF ACCESS ROAD/UNDERGROUND CABLE AND CONSTRUCITON AREA FOR TURBINE T110**

Due to the earlier removal of turbine T111 from the Project layout based on stakeholder feedback (as documented in the REA application), the original access road and underground cable location heading north from Concession Road 4/5 were deemed unnecessary. GVWF proposes relocating the access road to head east to turbine T110 from Sideroad 27/28, as shown in the Figure provided as **Attachment D**. This modification would considerably shorten the amount of road and underground cabling, thus reducing potential impacts to the agricultural field and within the municipal road right-of-way.

In addition, the location of turbine T110 was shifted 10m to the west prior to the final open house for the Project, based on stakeholder feedback. At this time, Veresen would like to request an adjustment of the construction area for the turbine to reflect this turbine shift (also shown in **Attachment D**).



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### **Archaeological Assessment**

The alternate location for this access road and adjusted construction area were considered as part of the original study area for the Stage 1 Archaeological Assessment. In anticipation of eventual removal of the north-south option and adjustment to the construction area, Stantec Consulting undertook a Stage 2 Archaeological Assessment of the east-west option and construction area in 2013. No artifacts were found, and the report was submitted to the MTCS on June 6, 2013. A confirmation letter was received from MTCS on July 4, 2013. The Stage 2 report and MTCS letter are provided as **Attachment C** to this letter.

### **Cultural Heritage Assessment**

A request was sent to the MTCS on June 16, 2014 for confirmation that there would be no new effects on cultural heritage features from the proposed change (**Attachment B**). The MTCS provided a response on July 8, 2014 confirming that the original MTCS letter remained valid, and there were no new impacts to cultural heritage features (**Attachment B**).

### **Natural Heritage Assessment**

This new access road location and adjustment to the construction area were not assessed as part of the original NHA/EIS for the Project. However, the new access to turbine T110 and adjustment to the construction area are contained entirely within a tilled agricultural field. Stantec prepared an NHA/EIS Addendum for this area, and submitted to the MNR on June 20, 2014. A letter confirming that the conclusions of the original NHA/EIS remain unchanged was provided by the MNR on June 26, 2014. Both the report and the MNR letter are provided in **Attachment E** to this letter.

### **MODIFICATION 4 – INCREASE IN CONSTRUCTION AREA, TRANSFORMER STATION**

In discussion with their proposed construction contractor, GVWF wishes to propose an increase in the construction area required for the transformer station from 2.3 ha to 3.3 ha (see **Attachment F**). This modification would facilitate construction of the transformer station, and would also result in moving construction activities (and associated noise and construction disturbance) further from the closest non-participating residence R202, 297m from Tr119, maximum modelled noise level – 36.5dBA). The construction area for the Transformer Station will also be pushed as far back on the property as possible, but there will still be construction activities throughout the TS site (i.e., for the connection to the HONI transmission lines, construction lay down, etc.).

### **Archaeological Assessment**

The increased area for the transformer station site was considered as part of the original study area for the Stage 1 Archaeological Assessment. In anticipation of eventual expansion of the transformer station construction area, Stantec Consulting undertook a Stage 2 Archaeological Assessment of the expanded site in 2013. No artifacts were found, and the report was submitted to the MTCS on June 6, 2013. A confirmation letter was received from MTCS on July 4, 2013. The Stage 2 report and MTCS letter are provided as **Attachment D** to this letter.





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### **Cultural Heritage Assessment**

A request was sent to the MTCS on June 16, 2014 for confirmation that there would be no new effects on cultural heritage features from the proposed change (**Attachment B**). The MTCS provided a response on July 8, 2014 confirming that the original MTCS letter remained valid, and there were no new impacts to cultural heritage features (**Attachment B**).

### **Natural Heritage Assessment**

This expanded area was not assessed as part of the original NHA/EIS for the Project. However, the expansion is in the 120m ZOI as reported in the NHA and Stantec has field data for the area, as it is in the same pasture as the previously identified area for the transformer station. Stantec prepared an NHA/EIS Addendum for this area, and submitted to the MNR on June 20, 2014. A letter confirming that the conclusions of the original NHA/EIS remain unchanged was provided by the MNR on June 26, 2014. Both the report and the MNR letter are provided in **Attachment E** to this letter.

### **CONSULTATION ON THE PROPOSED CHANGES**

As noted in your June 4, 2014 email, GVWF has prepared a Notice of Project Change in the form provided in the email. The Notice contains the following information:

- OPA Reference Number;
- Name and contact information of the applicant;
- A brief description of the project;
- A map identifying the project location;
- A description of the proposed change(s) and the rationale for the change(s); and
- A description of where information and documentation regarding the proposed change(s) can be located.

The Notice will be published in the Orangeville Banner on July 14, 2014 (**Attachment G**), and will be sent by mail to all on the Project contact list (including Aboriginal groups, all those who attended the open houses for the Project, and all those who provided comments during the REA process).

In addition, this Modification Report, and its Attachments, will be placed on the Project website, which will be indicated in the Notice. Hard copies will also be provided to the MOE regional office.

### **CONCLUSIONS**

GVWF wishes to present this draft Modification Document to request direction on next steps towards updating the REA application, as per Section 4.3.1 of the Technical Guide to Renewable Energy Approvals (the Guide) (MOE, 2013).



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We have confirmed there will be no new effects to archaeological and natural features following removal of turbine T107 and the removal of the eastern access road option for T112.

As per the Guide, and your email of June 4, 2014, we are proceeding with minor Technical and Project Changes. As per the Table below, a Revised Noise Assessment Report was required following application submission, and other reports submitted as part of the original REA application will require changes to reflect the reduction in number of turbines and modifications to access roads and the size of construction areas.

The table below outlines the sections of the REA reports that address the number of turbines and location of access roads and construction areas, for your information, along with details of the proposed report updates, including:

- Where reports or studies do not require a material change to the content, explain how the proposed change does not impact the document.
- Where there are notification and/or public consultation requirements, a description of activities should be documented as amendments to the Consultation Report.
- May include a table that shows the page number, section, original text and revised text, where appropriate.

**Table 2: Proposed Report Changes Based on Project Modification**

Report	Description of Change	Section References
Project Description Report	<ul style="list-style-type: none"><li>• All mapping - remove T107 from project layout</li><li>• Remove text references to T107</li><li>• Update turbine type and rating, as required</li><li>• Remove eastern access road to T112</li><li>• Remove north-south access to T110</li><li>• Add east-west access to T110</li><li>• Show expanded construction area for T110 on project mapping</li><li>• Show expanded construction area for transformer station on project mapping</li><li>• Update area for transformer station site in text as required.</li></ul>	<ul style="list-style-type: none"><li>• Appendix A maps (Figures 1, 2, 3 and 4)</li><li>• Table 3.3</li><li>• Section 3.3.2</li></ul>
Construction Plan Report	<ul style="list-style-type: none"><li>• All mapping - remove T107 from project layout</li><li>• Remove text references to T107</li><li>• Update turbine type and rating, as required</li><li>• Remove eastern access road to T112</li></ul>	<ul style="list-style-type: none"><li>• Appendix A maps (Figures 1, 2, 3 and 4)</li><li>• Table 2.2</li></ul>



**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

Report	Description of Change	Section References
	<ul style="list-style-type: none"> <li>• Remove north-south access to T110</li> <li>• Add east-west access to T110</li> <li>• Show expanded construction area for T110 on project mapping</li> <li>• Show expanded construction area for transformer station on project mapping</li> <li>• Update area for transformer station site in text as required.</li> </ul>	<ul style="list-style-type: none"> <li>• Sections 3.2, 3.5</li> <li>• Appendix C – Noise Assessment Report</li> </ul>
Design and Operations Report	<ul style="list-style-type: none"> <li>• All mapping - remove T107 from project layout</li> <li>• Remove text references to T107</li> <li>• Update turbine type and rating, as required</li> <li>• Remove eastern access road to T112</li> <li>• Remove north-south access to T110</li> <li>• Add east-west access to T110</li> <li>• Show expanded construction area for T110 on project mapping</li> <li>• Show expanded construction area for transformer station on project mapping</li> <li>• Update area for transformer station site in text as required.</li> </ul>	<ul style="list-style-type: none"> <li>• Appendix A maps (Figures 1, 2, 3 and 4)</li> <li>• Table 3.2</li> <li>• Sections 2.1.2 and 2.1.6</li> </ul>
Decommissioning Plan Report	<ul style="list-style-type: none"> <li>• All mapping - remove T107 from project layout</li> <li>• Remove eastern access road to T112</li> <li>• Remove north-south access to T110</li> <li>• Add east-west access to T110</li> <li>• Show expanded construction area for T110 on project mapping</li> <li>• Show expanded construction area for transformer station on project mapping</li> </ul>	Appendix A maps (Figures 1, 2, 3 and 4)
NHA/EIS	<ul style="list-style-type: none"> <li>• All mapping - remove T107 from project layout</li> <li>• Remove text references to T107</li> <li>• Remove eastern access road to T112</li> <li>• Remove north-south access to T110</li> <li>• Add east-west access to T110</li> <li>• Show expanded construction area for T110 on project mapping</li> <li>• Show expanded construction area for transformer</li> </ul>	Figures 1.0, 2.1, 2.2, 3.1, 3.2, 4.1, 5.1, 5.2 and 6.1



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Report	Description of Change	Section References
	station on project mapping	
Environmental Effects Monitoring Plan (EEMP)	<ul style="list-style-type: none"> <li>• None required</li> </ul>	N/A
Water Assessment and Water Body Report	<ul style="list-style-type: none"> <li>• All mapping - remove T107 from project layout</li> <li>• Remove eastern access road to T112</li> <li>• Remove north-south access to T110</li> <li>• Add east-west access to T110</li> <li>• Show expanded construction area for T110 on project mapping</li> <li>• Show expanded construction area for transformer station on project mapping</li> </ul>	Appendix A maps (Figures 1 and 2)
Stage 1-2 Archaeological Assessment Report	<ul style="list-style-type: none"> <li>• All mapping - remove T107 from project layout</li> <li>• Remove eastern access road to T112</li> <li>• Remove north-south access to T110</li> <li>• Add east-west access to T110</li> <li>• Show expanded construction area for T110 on project mapping</li> <li>• Show expanded construction area for transformer station on project mapping</li> </ul>	Figures 3, 4A, 4B, 4.3, 4.4, 4.7 and 4.8
Cultural Heritage Assessment Report	<ul style="list-style-type: none"> <li>• All mapping - remove T107 from project layout</li> <li>• Remove eastern access road to T112</li> <li>• Remove north-south access to T110</li> <li>• Add east-west access to T110</li> <li>• Show expanded construction area for T110 on project mapping</li> <li>• Show expanded construction area for transformer station on project mapping</li> </ul>	Figures 1, 6, and 7
Noise Assessment Report	Report reissued to MOE (NAR R4, April, 2014)	N/A
Wind Turbine Specification Report	<ul style="list-style-type: none"> <li>• Remove text references to T107</li> <li>• Update turbine type and rating, as required</li> </ul>	Table 2.2
Consultation Report	<ul style="list-style-type: none"> <li>• All mapping - remove T107 from project layout</li> <li>• Remove text references to T107</li> </ul>	<ul style="list-style-type: none"> <li>• Tables 3.3 and 3.4</li> <li>• Section 2.5.3</li> </ul>



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**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

Report	Description of Change	Section References
	<ul style="list-style-type: none"><li>• Update turbine type and rating, as required</li><li>• Remove eastern access road to T112</li><li>• Remove north-south access to T110</li><li>• Add east-west access to T110</li><li>• Show expanded construction area for T110 on project mapping</li><li>• Show expanded construction area for transformer station on project mapping</li><li>• Update area for transformer station site in text as required.</li></ul>	

To summarize, these minor changes reduce the overall impact of the Project on natural features and non-participating residences. No new impacts are anticipated. GVWF commits to the original mitigation and monitoring proposed in the NHA and REA reports.

The changes will be communicated to the community on the Project website, and no updates to the reports are anticipated.

We trust the information provided is sufficient to assist in your review. Please contact us directly should you have any questions.

Regards,

**STANTEC CONSULTING LTD.**

**Shawna Peddle, MSc.**  
Senior Project Manager  
Assessment Permitting and Compliance  
Phone: 519-836-6050  
Fax: 519-836-2493  
Shawna.Peddle@stantec.com



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**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

Attachments: A - Study Area Map  
B - MTCS Confirmations Regarding Potential Impacts to Cultural Heritage and Archaeological Features  
C - Stage 2 Archaeological Assessment Addendum Report and MTCS Confirmation Letter  
D - Location of Alternative Access – T110 and T112  
E - NHA/EIS Addendum Report and MNR Confirmation Letter  
F - Location of Expanded Transformer Station Site  
G – Notice of Project Change

c. Meaghan Brown and Jose Menendez, Grand Valley Wind Farms Inc.  
Jane Glassco, Guelph District Manager, Ministry of the Environment

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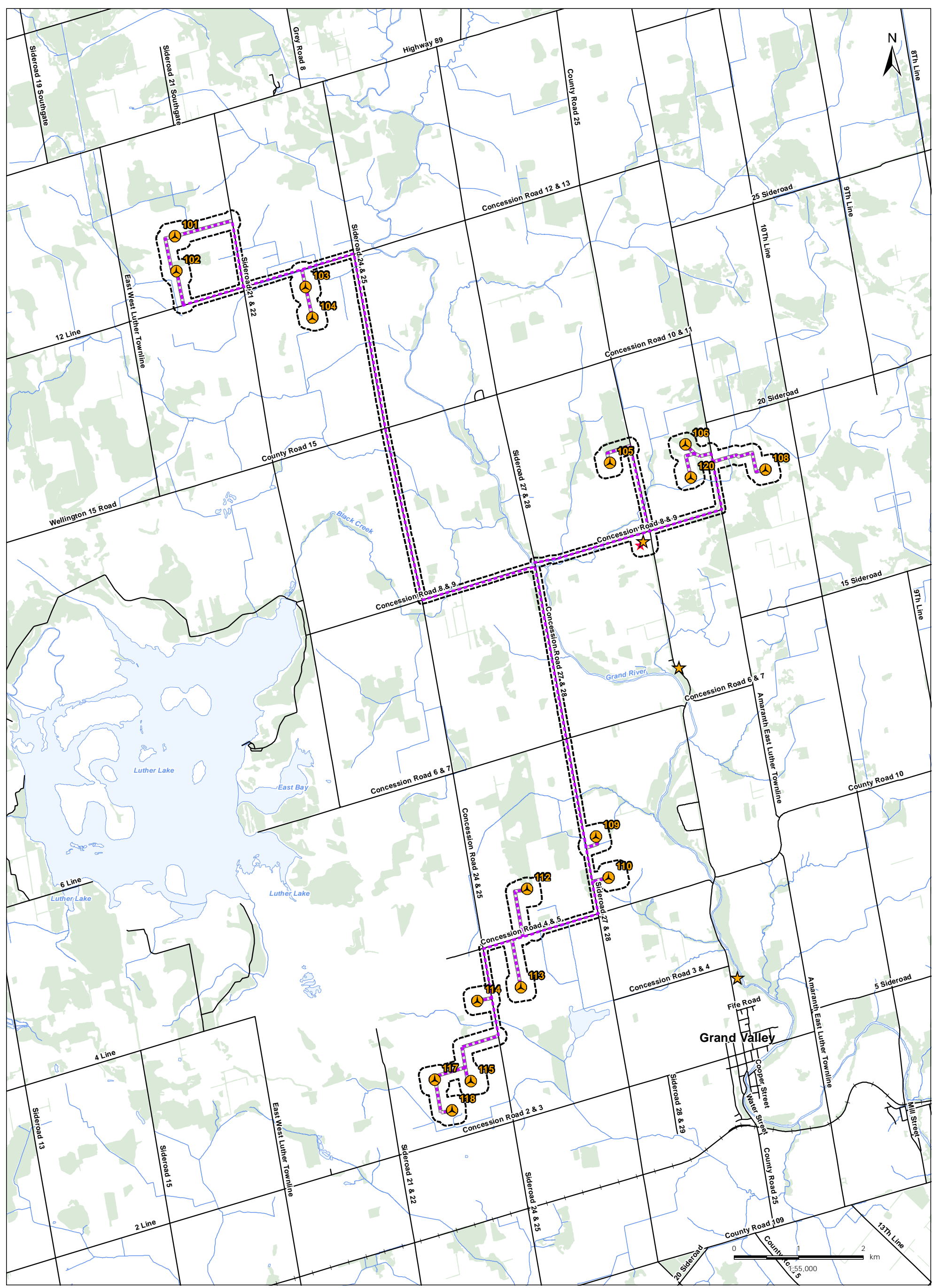
Sue Edwards, Senior Project Evaluator

**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

# **Attachment A**

## **Study Area Map**





**Notes**  
 1. Coordinate System: NAD 1983 UTM Zone 17N  
 2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.

Legend	
	Study Area
	Proposed Project Components
	Turbines
	Access Roads
	Collector Lines
	Construction Trailer/ Parking Area (Previously Disturbed)
	Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
	Existing Features
	Road
	Watercourse
	Waterbody
	Wooded Area

Client/Project  
 Grand Valley Phase 3  
 Veressen Inc.

Figure No.  
 1

Title  
 Study Area



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Sue Edwards, Senior Project Evaluator

**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

## **Attachment B**

# **MTCS Confirmation Regarding Potential Impacts to Cultural Heritage Features**

## Peddle, Shawna

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**From:** Roe, Sarah (MTCS) <Sarah.Roe@ontario.ca>  
**Sent:** Wednesday, July 02, 2014 4:25 PM  
**To:** Peddle, Shawna  
**Subject:** RE: Grand Valley Phase 3 Wind Farm - proposed change (Turbine T107)

Good Afternoon Shawna,

**RE: 160960698\_Fig1\_StudyArea\_and\_ProjectLocation\_20140520.pdf**

This ministry has had the opportunity to review the proposed refinements (Modification 1 – Removal of Turbine T107) to your project as outlined in the above-referenced document.

The assessment of the areas proposed to be impacted was documented in *Stage 2 Archaeological Assessment, Grand Valley Wind Farms – Phase 3 Wind Project, Various Lots and Concessions, Town of Grand Valley and Township of Amaranth, Dufferin County, Ontario, PIF P001-673-2012, Report Dated February 6, 2013, Filed on February 13, 2013, FIT Number FIT-FBK61WV, MTCS File Number HD00209*, which has been entered into the Ontario Public Register of Archaeology reports. The report recommended that there were no further archaeological concerns for the area of Turbine T107.

**The proposed changes do not affect the original recommendations for this property.**

These comments address concerns for archaeological resources only. Please contact your heritage consultant regarding concerns for impacts to other heritage resources.

This does not constitute approval of the renewable energy project. Approvals of the project may be required under other statutes and regulations. It is your responsibility to obtain any necessary approvals or licences.

I trust this is of assistance. Should you require any further information regarding this matter, please feel free to contact me.

Yours,  
Sarah

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**From:** Peddle, Shawna [mailto:Shawna.Peddle@stantec.com]  
**Sent:** June 30, 2014 2:11 PM  
**To:** Roe, Sarah (MTCS)  
**Subject:** FW: Grand Valley Phase 3 Wind Farm - proposed change

Hi Sarah!

When I retracted my request to you, stating that these proposed changes had already been reviewed by MTCS, I neglected to consider the removal of turbine T107.

Can you please confirm that removal of a turbine from the Project layout would have no new effects from a cultural heritage perspective?

Kind thanks,  
Shawna

Shawna Peddle, M Sc.

Senior Project Manager - Assessment, Permitting, and Compliance  
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**From:** Peddle, Shawna  
**Sent:** Monday, June 16, 2014 2:59 PM  
**To:** penny.young@ontario.ca; andrea.williams@ontario.ca; shari.prowse@ontario.ca  
**Cc:** Edwards, Susanne (ENE); Hali Zigomanis; Meaghan Brown; Jose Menendez  
**Subject:** Grand Valley Phase 3 Wind Farm - proposed change

Good afternoon Penny and Andrea!

Grand Valley Wind Farms Inc. (GVWF) is proposing to install and operate the 40MW Grand Valley Wind Farms - Phase 3 Wind Project (the Project) in the Town of Grand Valley and the Township of Amaranth, Ontario. The Renewable Energy Approval (REA) application for the Project was received by the Ministry of the Environment (MOE) on June 3, 2013, and is currently under technical review. Since submission of the application to the MOE, GVWF has identified a number of minor modifications based on stakeholder consultation that would benefit the Project and the local community, as follows:

#### **MODIFICATION 1 – REMOVAL OF TURBINE T107**

The Project was assessed under O. Reg. 359/09 as a 14-17 wind turbine project, with operational flexibility built in to allow for potential reduction in the number of turbines required. GVWF has now opted to remove turbine T107 from the Project layout, based primarily on the requirement to meet the Project's Ontario Power Authority contracted maximum nameplate capacity and preliminary discussions with the Grand River Conservation Authority (GRCA). The turbine was to the east of Turbine T106 on the attached Project Location figure.

#### **MODIFICATION 2 – SHIFT OF ACCECSS ROAD FOR TURBINE T112**

In the original REA application, and at the final open house for the Project, two options were presented for the access road and underground cable installation for Turbine T112 (see attached figure). GVWF has elected to remove the eastern option for this access road from the Project layout to address concerns from the previous landowners immediately adjacent to this proposed access road. Those landowners have since sold the property, but GVWF would like to honour the discussions held with the former landowners going forward.

#### **MODIFICATION 3 – MOVEMENT OF ACCESS ROAD/UNDERGROUND CABLE AND CONSTRUCITON AREA FOR TURBINE T110**

Due to the earlier removal of turbine T111 from the Project Layout based on stakeholder feedback (as documented in the REA application), the original access road and underground cable location heading north from Concession Road 4/5 were determined unnecessary(see attached figure). GVWF proposes relocating the access road to head east to turbine T110 from Sideroad 27/28, considerably reducing the length of access road and underground cabling, and reducing potential impacts to the agricultural field and within the municipal road right-of-way.

In addition, the location of turbine T110 was shifted 10m to the west prior to the final open house for the Project, based on stakeholder feedback. At this time, Veresen would like to request an adjustment of the construction area for the turbine to reflect this turbine shift.

## MODIFICATION 4 – INCREASE IN CONSTRUCTION AREA, TRANSFORMER STATION

In discussion with their proposed construction contractor, GVWF wishes to propose an increase in the construction area required for the transformer station from 2.3 ha to 3.3 ha. This modification would facilitate construction of the transformer station, and would also result in moving construction activities (and associated noise and construction disturbance) further from the closest non-participating residence(see attached figure).

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Stage 2 Archaeological Assessments have been undertaken (and confirmed) for these proposed modifications (see attached figures). No impacts to archaeological artifacts was identified. No new infrastructure is being proposed, as the movements are within close proximity to the original layout within the same ploughed agricultural fields, and a turbine is being removed from the original layout. As such, we do not anticipate any new adverse environmental effects.

We have provided a draft document to the MOE, but as per the Technical Guide to Renewable Energy Approvals (MOE, 2013), we are required to get confirmation from the MTCS that the original comments and confirmation letter provided for the project remain unchanged.

We would appreciate your advice on the validity of the MTCS confirmation letter. Should you have any questions, or need further information, please let me know.

Kind regards,  
Shawna

### Shawna Peddle, M Sc.

Senior Project Manager - Assessment, Permitting, and Compliance  
Stantec  
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## Peddle, Shawna

---

**From:** Minkin, Dan (MTCS) <Dan.Minkin@ontario.ca>  
**Sent:** Tuesday, July 08, 2014 5:36 PM  
**To:** Peddle, Shawna  
**Subject:** RE: Grand Valley Phase 3 Wind Farm - proposed change  
**Attachments:** Grand Valley Wind Farms - HA Review - MTCS comment letter-28March2013.pdf

Good afternoon,

Based on the Ministry of Tourism, Culture and Sport's review of the proposed changes to the Grand Valley Phase 3 Wind Farm detailed in your email of June 16, 2014, and confirmation from your heritage consultant that the modifications do not create the potential for impacts to built heritage resources or cultural heritage landscapes beyond those identified in the February, 2013 Heritage Assessment Report for the project, nor change the recommendations included in said report, a revised heritage assessment will not need to be submitted, and the recommendations quoted in MTCS's letter of March 28, 2013 (attached) remain valid.

Sincerely,

**Dan Minkin**

Heritage Planner  
Ministry of Tourism, Culture and Sport  
Culture Division | Programs and Services Branch | Culture Services Unit  
401 Bay Street, Suite 1700  
Toronto, Ontario M7A 0A7  
Tel. 416.314.7147 | Fax. 416.314.7175

---

**From:** Peddle, Shawna [<mailto:Shawna.Peddle@stantec.com>]  
**Sent:** June 16, 2014 3:03 PM  
**To:** Hatcher, Laura (MTCS)  
**Subject:** FW: Grand Valley Phase 3 Wind Farm - proposed change

Hi Laura!

Penny's out of office identifies you as the Team Lead – can you please let me know if you are the correct person to send this to, or do you have another?

Kind thanks,  
Shawna

**Shawna Peddle, M Sc.**

Senior Project Manager - Assessment, Permitting, and Compliance  
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**From:** Peddle, Shawna  
**Sent:** Monday, June 16, 2014 2:59 PM  
**To:** [penny.young@ontario.ca](mailto:penny.young@ontario.ca); [andrea.williams@ontario.ca](mailto:andrea.williams@ontario.ca); [shari.prowse@ontario.ca](mailto:shari.prowse@ontario.ca)  
**Cc:** Edwards, Susanne (ENE); Hali Zigomanis; Meaghan Brown; Jose Menendez  
**Subject:** Grand Valley Phase 3 Wind Farm - proposed change

Good afternoon Penny and Andrea!

Grand Valley Wind Farms Inc. (GVWF) is proposing to install and operate the 40MW Grand Valley Wind Farms - Phase 3 Wind Project (the Project) in the Town of Grand Valley and the Township of Amaranth, Ontario. The Renewable Energy Approval (REA) application for the Project was received by the Ministry of the Environment (MOE) on June 3, 2013, and is currently under technical review. Since submission of the application to the MOE, GVWF has identified a number of minor modifications based on stakeholder consultation that would benefit the Project and the local community, as follows:

#### **MODIFICATION 1 – REMOVAL OF TURBINE T107**

The Project was assessed under O. Reg. 359/09 as a 14-17 wind turbine project, with operational flexibility built in to allow for potential reduction in the number of turbines required. GVWF has now opted to remove turbine T107 from the Project layout, based primarily on the requirement to meet the Project's Ontario Power Authority contracted maximum nameplate capacity and preliminary discussions with the Grand River Conservation Authority (GRCA). The turbine was to the east of Turbine T106 on the attached Project Location figure.

#### **MODIFICATION 2 – SHIFT OF ACCESS ROAD FOR TURBINE T112**

In the original REA application, and at the final open house for the Project, two options were presented for the access road and underground cable installation for Turbine T112 (see attached figure). GVWF has elected to remove the eastern option for this access road from the Project layout to address concerns from the previous landowners immediately adjacent to this proposed access road. Those landowners have since sold the property, but GVWF would like to honour the discussions held with the former landowners going forward.

#### **MODIFICATION 3 – MOVEMENT OF ACCESS ROAD/UNDERGROUND CABLE AND CONSTRUCTION AREA FOR TURBINE T110**

Due to the earlier removal of turbine T111 from the Project Layout based on stakeholder feedback (as documented in the REA application), the original access road and underground cable location heading north from Concession Road 4/5 were determined unnecessary (see attached figure). GVWF proposes relocating the access road to head east to turbine T110 from Sideroad 27/28, considerably reducing the length of access road and underground cabling, and reducing potential impacts to the agricultural field and within the municipal road right-of-way.

In addition, the location of turbine T110 was shifted 10m to the west prior to the final open house for the Project, based on stakeholder feedback. At this time, Veresen would like to request an adjustment of the construction area for the turbine to reflect this turbine shift.

#### **MODIFICATION 4 – INCREASE IN CONSTRUCTION AREA, TRANSFORMER STATION**

In discussion with their proposed construction contractor, GVWF wishes to propose an increase in the construction area required for the transformer station from 2.3 ha to 3.3 ha. This modification would facilitate construction of the transformer station, and would also result in moving construction activities (and associated noise and construction disturbance) further from the closest non-participating residence (see attached figure).

---

Stage 2 Archaeological Assessments have been undertaken (and confirmed) for these proposed modifications (see attached figures). No impacts to archaeological artifacts was identified. No new infrastructure is being proposed, as the movements are within close proximity to the original layout within the same ploughed agricultural fields, and a turbine is being removed from the original layout. As such, we do not anticipate any new adverse environmental effects.



We have provided a draft document to the MOE, but as per the Technical Guide to Renewable Energy Approvals (MOE, 2013), we are required to get confirmation from the MTCS that the original comments and confirmation letter provided for the project remain unchanged.

We would appreciate your advice on the validity of the MTCS confirmation letter. Should you have any questions, or need further information, please let me know.

Kind regards,  
Shawna

**Shawna Peddle, M Sc.**

Senior Project Manager - Assessment, Permitting, and Compliance  
Stantec

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July 10, 2014

Sue Edwards, Senior Project Evaluator

**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

**Attachment C**  
**Stage 2 Archaeological Assessment Addendum**  
**Report and MTCS Confirmation Letter**

Ministry of Tourism, Culture and Sport

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Programs and Services Branch  
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July 4, 2013

Jim Wilson  
Stantec Consulting Ltd.  
400-1331 Clyde Avenue  
Ottawa ON  
K2C 3G4

**RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, “Stage 2 Archaeological Assessment, Grand Valley Wind Farms – Phase 3 Wind Project Turbine 112 Access Road, Lot 26, Concession 5; Turbine 110 Pad and Access Road, Lot 28, Concession 5; Transformer Station, Lot 30, Concession 8 Town of Grand Valley, Dufferin County, Ontario”, Dated June 6, 2013, Filed by MTCS Toronto Office June 12, 2013, MTCS Project Information Form Number P001-722-2013, FIT Number: FIT-FBK61WV, MTCS File Number HD00209**

Dear Mr. Wilson:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18.<sup>1</sup> This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 *Standards and Guidelines for Consultant Archaeologists* set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.

The report documents the assessment/mitigation of the study area as depicted in *Figure 4B: Stage 2 Survey Methods Overview* and *Figure 4A: Key Plan* of the above titled report and recommends the following:

*The Stage 2 assessment of the Turbine 112 Access Road; the Turbine 110 Pad and Access Road; and Transformer Station of the Grand Valley Wind Farms – Phase 3 Wind Project did not identify any archaeological sites. Therefore **the Turbine 112 Access Road; the Turbine 110***

<sup>1</sup>*In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.*

***Pad and Access Road; and the Transformer Station do not require any further archaeological assessment.***

*The Ministry of Tourism, Culture and Sport is asked to accept this report into the Ontario Public Register of Archaeological Reports.*

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Sarah Roe  
Archaeology Review Officer

cc. Hali Zigomanis  
Mansoor Mahmood, Ministry of the Environment

**Stage 2 Archaeological  
Assessment, Grand Valley Wind  
Farms – Phase 3 Wind Project**

Turbine 112 Access Road,  
Lot 26, Concession 5; Turbine 110  
Pad and Access Road, Lot 28,  
Concession 5; Transformer Station,  
Lot 30, Concession 8  
Town of Grand Valley, Dufferin  
County, Ontario



**Stantec**

Submitted to:  
Ms. Hali Zigomanis  
Grand Valley Wind Farms Inc.  
Suite 502, 216 Chrislea Road  
Woodbridge, ON L4L 8s5  
Tel: (416) 479-0865  
Fax: (905) 264-9487  
Email: hzigomanis@vereseninc.com  
Licensee: Jim Wilson  
License Number: P001  
PIF Number: P001-722-2013  
FIT NUMBER: FIT-FBK61WV  
Stantec Project Number: 160960698

**ORIGINAL REPORT**

June 6, 2013

## Executive Summary

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A Stage 2 archaeological assessment was conducted by Stantec Consulting Ltd. (Stantec) for the Turbine 112 Access Road, Lot 26, Concession 5; the Turbine 110 Pad and Access Road, Lot 28, Concession 5; and the Transformer Station, Lot 30, Concession 8, Town of Grand Valley, Dufferin County, Ontario. The Turbine 112 Access Road; the Turbine 110 Pad and Access Road; and the Transformer Station are part of the 40 megawatt Grand Valley Wind Farms – Phase 3 Wind Project in the Town of Grand Valley and Township of Amaranth completed on behalf of Grand Valley Wind Farms Inc., the entire Project covering an area of approximately 190 hectares. The Stage 2 assessment was undertaken in order to meet the requirements for an application for a Renewable Energy Approval, as outlined in Ontario Regulation 359/09 section 22(3) of the *Environmental Protection Act*.

The Stage 2 assessment conducted by Stantec did not identify any archaeological sites. Therefore **the Turbine 112 Access Road; the Turbine 110 Pad and Access Road; and the Transformer Station do not require any further archaeological assessment.**

The Ministry of Tourism, Culture and Sport is asked to accept this report into the Ontario Public Register of Archaeological Reports.

*The Executive Summary highlights key points from the report only; for complete information and findings, the reader should examine the complete report.*

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## **Project Personnel**

Licensed Archaeologist: Jim Wilson, MA (P001)

Licensed Field Directors: Jennifer Schumacher, BA (R465)

Field Technicians: Sean Thomson

Report Writer: Jennifer Schumacher, BA (R465)

Office Assistants: Jeffrey Muir, BA (R304)  
Amanda Laprise, BA (R470)  
Adam Hossack, BA (P084)

Senior Review: Colin Varley, MA, RPA (P002)

First Nations Monitors Dalton Miller – Haudenosaunee Development Institute  
Adrienne Brennan – Saugeen First Nation  
Jason Silver – Six Nations  
Sheila Silver – Six Nations

Proponent Contact: Hali Zigomanis, Grand Valley Wind Farms Inc.

Ministry of Tourism, Culture and Sport: Robert von Bitter  
Shari Prowse, MA

First Nations Contacts: Angela Gunn  
Wayne Hill  
Joanne Thomas

## 1.0 Project Context

---

### 1.1 DEVELOPMENT CONTEXT

A Stage 2 archaeological assessment of the Turbine 112 Access Road; Turbine 110 Pad and Access Road; and Transformer Station were conducted by Stantec Consulting Ltd. (Stantec) for the 40 megawatt (MW) Grand Valley Wind Farms - Phase 3 Wind Project (the Project) in the Town of Grand Valley and Township Amaranth on behalf of Grand Valley Wind Farms Inc. (GVWF). The entire wind farm covers an area of approximately 190 hectares (Figure 1). The Turbine 112 Access Road, Lot 26, Concession 5; the Turbine 110 Pad and Access Road, Lot 28, Concession 5; and the Transformer Station, Lot 30, Concession 8, Town of Grand Valley, Dufferin County, Ontario were subject to Stage 2 archaeological assessment in addition to the previously completed Stage 2 Archaeological Assessment of Grand Valley Wind Farms – Phase 3 Wind Project under the PIF numbered P001-673-2012. The Stage 2 assessment was undertaken in order to meet the requirements for an application for a Renewable Energy Approval, as outlined in Ontario Regulation 359/09 section 22(3) of the *Environmental Protection Act*. The Stage 1 archaeological assessment was conducted by Archaeological Services Inc. (ASI) in 2012 (ASI 2012) which is summarized in Sections 1.2 and 1.3 below.

The *Green Energy Act* (2009) enabled legislation governing project assessments and approvals to be altered to allow for a more streamlined Renewable Energy Approval (REA) process. Under Section 22(1) of the REA, an archaeological assessment must be conducted if the proponent concludes that engaging in the project may have an impact on archaeological resources. ASI previously determined that archaeological potential for the recovery of pre-contact Aboriginal and Euro-Canadian historic archaeological resources exists within the study area (ASI 2012). Currently, Ontario Regulation 359/09 of the *Environmental Protection Act* governs the REA process for renewable energy projects such as wind, anaerobic digestions, solar, and thermal treatment facilities.

This assessment was undertaken in order to meet the requirements for an application for a REA, as outlined in Ontario Regulation 359/09 section 22(3) of the *Environmental Protection Act*. The Grand Valley Wind Farms – Phase 3 Wind Project will be permitted for up to 17 wind turbines as well as associated infrastructure including collector cable routes, access roads, construction roads, point of interconnect and transformer station.

Permission to enter the optioned lots within the study area and remove archaeological resources was provided by Hali Zigomanis of GVWF. For the purposes of this Stage 2 assessment the Ministry of Tourism, Culture and Sport's (MTCS) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011) were followed. The objectives of the Stage 2 assessment were to document archaeological resources present within the study area, to determine whether any of the resources might be artifacts or

archaeological sites with cultural heritage value or interest requiring further assessment, and to provide specific Stage 3 direction for the protection, management and/or recovery of the identified archaeological resources (Government of Ontario 2011).

## **1.2 ARCHAEOLOGICAL CONTEXT**

### **1.2.1 The Natural Environment**

All three parcels are located within the Dundalk Till Plain physiographic region of southern Ontario. The Dundalk Till Plain comprises an area of approximately 2,370 square kilometres with low drumlin-like swells in the area oriented northwest to southeast (Chapman and Putnam 1984). This region forms the watershed serving as the headwaters of the Saugeen, Maitland, Grand, and Nottawasaga Rivers. The Project Location specifically falls within the Grand River watershed. The Dundalk Till Plain is characterized by swamps or bogs and by poorly drained depressions, including within the Project Location. Perth silt loam, with imperfect drainage characteristics and Brookston Silt loam, with poor drainage characteristics, are present within the Turbine 112 Access Road parcel. Huron silt loam, with good drainage characteristics, is present within the Turbine 110 Pad and Access Road parcel. Huron Loam, with good drainage characteristics is present within the Transformer Station parcel.

Potable water is the single most important resource for any extended human occupation or settlement and since water sources in southwestern Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. In fact, distance to water is one of the most commonly used variables for predictive modeling of archaeological site location in Ontario. The closest sources of potable water to the Turbine 112 Access Road are seasonal tributaries, one to the northeast within 250 metres and one to the south within 150 metres. The closest source of potable water to the Turbine 110 Pad and Access Road is a seasonal tributary 550 metres northwest. The closest source of potable water to the Transformer Station is a seasonal tributary 550 metres west. All of these water sources are seasonal and flow into the Grand River.

### **1.2.2 Previously Known Archaeological Sites and Surveys**

A Stage 1 archaeological assessment was previously conducted by ASI (2012) and resulted in the determination that the potential for pre-contact Aboriginal and Euro-Canadian sites was deemed to be moderate to high and Stage 2 assessment was recommended.

The Stage 2 archaeological assessment has already been completed for the majority of the Project Location by Stantec on behalf of GVWF (Stantec 2013). Three archaeological sites were identified during this investigation but are not within one kilometre of any of the parcels which are the subject of this current Stage 2 archaeological assessment. Of the three sites identified, two are historic Euro-Canadian and one is pre-contact Aboriginal. The only site that fulfilled criteria for Stage 3 assessment was the pre-contact Aboriginal site, Location 3 (AIHc-9). Location 3 (AIHc-9) consisted of an isolated secondary flake manufactured from local till chert

**STAGE 2 ARCHAEOLOGICAL ASSESSMENT, GRAND VALLEY WIND FARMS – PHASE 3 WIND PROJECT**

Project Context  
June 6, 2013

(Stantec 2013) which was recommended for Stage 3 archaeological assessment at the request of the Saugeen First Nation. The other two sites not recommended for further assessment, Location 1 and Location 2, are historic Euro-Canadian artifact assemblages dating to the late 19<sup>th</sup>/early 20<sup>th</sup> century and the early 20<sup>th</sup> century respectively (Stantec 2013).

Table 1 provides a general outline of the culture history for Dufferin County (based on Ellis and Ferris 1990).

**Table 1: Cultural Chronology for Dufferin County**

Period	Characteristics	Time Period	Comments
Early Paleo-Indian	Fluted Projectiles	9000 - 8400 B.C.	spruce parkland/caribou hunters
Late Paleo-Indian	Hi-Lo Projectiles	8400 - 8000B.C.	smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 - 6000 B.C.	slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 B.C.	environment similar to present
Late Archaic	Lamoka (narrow points)	2000 - 1800 B.C.	increasing site size
	Broad Points	1800 - 1500 B.C.	large chipped lithic tools
	Small Points	1500 - 1100B.C.	introduction of bow hunting
Terminal Archaic	Hind Points	1100 - 950 B.C.	emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 B.C.	introduction of pottery
Middle Woodland	Dentate/Pseudo-Scallop Pottery	400 B.C. - A.D.500	increased sedentism
	Princess Point	A.D. 550 - 900	introduction of corn
Late Woodland	Early Ontario Iroquoian	A.D. 900 - 1300	emergence of agricultural villages
	Middle Ontario Iroquoian	A.D. 1300 - 1400	long longhouses (100m +)
	Late Ontario Iroquoian	A.D. 1400 - 1650	tribal warfare and displacement
Contact Aboriginal	Various Algonkian Groups	A.D. 1700 - 1875	early written records and treaties
Late Historic	Euro-Canadian	A.D. 1796 - present	European settlement

During the Stage 1 archaeological assessments, ASI (2012) consulted the Ontario Archaeological Sites Database (ASDB; Government of Ontario n.d.) and noted that there were no registered archaeological sites within the overall Project Location or within one kilometre of the site. The only known sites close to the three parcels discussed in this report are the three locations documented by Stantec as part of this Project (Stantec 2013).

### **1.2.3 Determination of Archaeological Potential**

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Criteria commonly used by the MTCS (Government of Ontario 2011) to determine areas of archaeological potential include:

- Proximity to previously identified archaeological sites;
- Distance to various types of water sources;
- Soil texture and drainage;
- Glacial geomorphology, elevated topography and the general topographic variability of the area;
- Resource areas including food or medicinal plants, scarce raw materials and early Euro-Canadian industry;
- Areas of early Euro-Canadian settlement and early transportation routes;
- Properties listed on municipal register of properties designated under the Ontario Heritage Act (Government of Ontario 1990b);
- Properties that local histories or informants have identified with possible archaeological sites, historical events, activities or occupants; and
- Historic landmarks or sites.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential. Finally, extensive land disturbance can eradicate archaeological potential (Wilson and Horne 1995).

The following outlines these criteria specific to the setting of the Turbine 112 Access Road; the Turbine 110 Pad and Access Road; and the Transformer Station.

Distance to water is an essential factor in archaeological potential modeling. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect sites locations and types to varying degrees. The MTCS categorizes water sources in the following manner:

- Primary water sources: lakes, rivers, streams, creeks;
- Secondary water sources: intermittent streams and creeks, springs, marshes and swamps;
- Past water sources: glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes; and
- Accessible or inaccessible shorelines: high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

The closest sources of potable water to the Turbine 112 Access Road; the Turbine 110 Pad and Access Road; and the Transformer Station are seasonal tributaries. The water sources are seasonal tributaries that flow into the Grand River and can only be considered secondary sources. The Grand River is located less than 2.8 kilometres to the east of all locations.

Soil texture can be an important determinant of past settlement, usually in combination with other factors such as topography. Aboriginal groups preferred well drained lighter (sandy) soil to heavier soils. A variety of loam and silt loam till soils are found throughout the Project Location with drainage characteristics ranging from poorly to well drained.

As discussed below in Section 1.2.1, previous 19<sup>th</sup> century landowners and the historical road grid can be identified.

The Stage 1 archaeological assessment conducted by ASI (2012) determined that the archaeological potential for pre- and post-contact Aboriginal and Euro-Canadian sites was moderate to high. The examination of the specific position for Turbine 112 Access Road supports the evaluation of moderate to high archaeological potential. The examination of the specific position of the Turbine 110 Pad and Access Road supports the evaluation of moderate to high archaeological potential. The examination of the specific position of Transformer Station supports the evaluation of moderate to high archaeological potential.

Based on the presence of pockets of well-drained soils and water sources, ASI determined that the Turbine 112 Access Road had the potential for the recovery of pre-contact Aboriginal archaeological resources. In addition, the closest sources of potable water to the Turbine 112 Access Road are seasonal tributaries, one to the northeast within 250 metres and one to the south within 150 metres. Perth silt loam, with imperfect drainage characteristics, and Brookston Silt loam, with poor drainage characteristics, are present within the Turbine 112 Access Road parcel.

Based on the presence pockets of well-drained soils and water sources, ASI determined that the Turbine 110 Pad and Access Road had the potential for the recovery of pre-contact Aboriginal archaeological resources. In addition, the closest source of potable water to the Turbine 110 Pad and Access Road is a seasonal tributary 550 metres northwest and Huron silt loam, with good drainage characteristics, is present within the Turbine 110 Access Pad parcel.

Based on the presence pockets of well-drained soils and water sources, ASI determined that the Transformer Station had the potential for the recovery of pre-contact Aboriginal archaeological resources. In addition, the closest source of potable water to the Transformer Station is a seasonal tributary 550 metres west and Huron Loam, with good drainage characteristics is present within the Transformer Station parcel.

The MTCS also views the presence of previously registered archaeological resources as a prime indicator of archaeological potential. There are no registered sites within one kilometre of the Turbine 112 Access Road. Similarly, there are no registered sites within one kilometre of the Turbine 110 Pad and Access Road. Finally, there are no registered sites within one kilometre of the Transformer Station.

#### **1.2.4 Existing Conditions**

The Stage 2 field assessment for the Grand Valley Wind Farms – Phase 3 Wind Project: the Turbine 112 Access Road; the Turbine 110 Pad and Access Road; and the Transformer Station were conducted on May 6, 2013 and May 14, 2013 under the PIF P001-722-2013 issued to Jim Wilson, MA, by the MTCS. Turbine 112 Access Road is approximately 690 metres in length and approximately 25 metres wide and consists of ploughed, well-weathered, agricultural fields as well as a small portion of manicured lawn. The topography was generally flat (Figure 4.3). Turbine 110 Pad and Access Road is approximately 200 metres in length and 40 metres in width and consists of ploughed, well-weathered, agricultural fields. The topography was generally flat (Figure 4.3). The Transformer Station is approximately 180 metres in length and 60 metres in width and consists of ploughed, well-weathered, agricultural fields. The topography was rolling highlands (Figure 4.7).

### **1.3 HISTORICAL CONTEXT**

#### **1.3.1 Post-contact Aboriginal Resources and Archaeological Potential**

The post-contact Aboriginal occupation of Southern Ontario was heavily influenced by the dispersal of various Iroquoian-speaking communities by the New York State Iroquois and the subsequent arrival of Algonkian speaking groups from northern Ontario at the end of the 17<sup>th</sup> century and the beginning of the 18<sup>th</sup> century (Konrad 1981; Schmalz 1991). By 1690, Algonkian speakers from the north appear to have begun to repopulate Bruce County (Rogers 1978:761). This is the period in which the Mississaugas are known to have moved into southern Ontario and the lower Great Lakes watersheds (Konrad 1981). In southwestern Ontario, however,



members of the Three Fires Confederacy (Chippewa, Ottawa and Potawatomi) were immigrating from Ohio and Michigan in the late 1700s (Feest and Feest 1978:778-779).

The study area first enters the Euro-Canadian historic record when the Chippewa First Nations entered into Treaty Number 18 (Figure 2). Treaty Number 18

*was a provisional agreement made the 17<sup>th</sup> day of October, 1818 between the Honourable William Claus on behalf of His Majesty the King and the Principal Men of the Chippewa Nation of Indians, inhabiting the northern parts of the unpurchased lands, within the Home District, on consideration of a yearly payment of twelve hundred pounds by His Majesty to the Chippewa Indians, the said tract being described as follows: Bounded by the District of London on the west, by Lake Huron on the north, by the Penetanguishene purchase (made in 1815) on the east; by the south shore of Kempenfeldt Bay; the western shore of Lake Simcoe and Cooks Bay and the Holland River to the north west angle of the Township of King.*

(Morris 1943:23-24)

While there are no archaeological sites in the area, First Nation presence is possible given two Aboriginal men formed part of the surveying crew and were familiar with hunting in the area. The Stage 1 archaeological assessment report surmises that even though the swampy conditions prevented permanent settlement the area still had enough natural resources to serve as hunting grounds for nearby First Nations groups. Thus, there is archaeological potential for post-contact Aboriginal archaeological resources for similar reasons for the possibility of pre-contact Aboriginal archaeological resources, plus the suggestion that the general area could have served as an Aboriginal hunting ground (ASI 2012).

### **1.3.2 Historic Euro-Canadian Archaeological Resources and Archaeological Potential**

The study area falls within the Geographic Township of Luther (later East Luther). Luther Township was surveyed in the first half of the 19<sup>th</sup> century. The one major settlement surrounded by the Project Location is Grand Valley.

The settlement of Grand Valley was the 19<sup>th</sup> century commercial centre of the township, especially after the arrival of the railway in 1870. Settlement in the Luther Marsh areas occurred half a century later than settlement in the Grand River area due to the land conditions. By the early 20<sup>th</sup> century other settlements close to the Project Location include Colbeck, Wesley, Monticello, Leggatt, Tarbert, and Peepabun in East Luther Township and Campania in Amaranth Township. Landowners of all three parcels are noted on the Walker and Miles 1877 historic map (Table 2).

**Table 2: Land Owners of All Three Parcels (Walker and Miles 1877)**

Lot, Concession	Location	Owner
Lot 26, Concession 5	Turbine 112 Access Road	M. Foster and W. Thompson
Lot 28, Concession 5	Turbine 110 Pad and Access Road	J. Morrison
Lot 30, Concession 8	Transformer Station	G. O'Reily

ASI reviewed the 1877 *Topographical and Historical Atlas of the County of Wellington, Ont.* (Walker and Miles 1877) to determine the potential for the presence of historic archaeological resources within the study area during the 19<sup>th</sup> century (Figure 3). It was determined that the study area was a rural, agricultural landscape from the early township settlement period in the early 19<sup>th</sup> century. ASI also reviewed early 20<sup>th</sup> century mapping encompassing the Project Location.

The background research and historic mapping demonstrated to ASI that the study area retains archaeological potential due to the presence of historic features within and/or in close proximity to the study area. The study area also includes several historically surveyed roads, which are indicators of archaeological potential.

### 1.3.3 Recent Reports

The Project Location has been documented in a recent Stage 1 archaeological assessment, as summarized above. The Stage 1 archaeological assessment was conducted by ASI and was entitled *Stage 1 Background Study and Property Inspection, Grand Valley Phase 3 Wind Project, Former Townships of East Luther and Amaranth, Dufferin County, Town of Grand Valley and Amaranth Township, Dufferin County, Ontario* (ASI 2012) under PIF P347-145-2012. The most recent assessment of the Project Location was completed by Stantec in 2012 under the PIF P001-673-2012 entitled *Grand Valley Wind Farms – Phase 3 Wind Project, Various Lots and Concessions, Town of Grand Valley and Township of Amaranth, Dufferin County, Ontario*. This Stage 2 archaeological assessment report details the Stage 2 investigations already conducted on the majority of the Grand Valley Wind Farms – Phase 3 Wind Project development prior to the REA submission.

A number of archaeological assessments have been carried out in the vicinity of the study area as part of the previous phases of the Grand Valley Wind project. This includes work conducted by Fisher Archaeological Consulting in 2007 and by D.R. Poulton and Associates from 2010 to 2011. Fisher Archaeological Consulting had produced two Stage 1 archaeological assessments: *Grand Valley – Proposed Wind Turbine Project, Stage 1: Archaeological Background Research, Final Report* (Fisher Archaeological Consulting n.d.) and *Grand Valley II – Proposed Wind Farm Project, Stage 1: Archaeological Background Research, Final Report* (Fisher Archaeological

**STAGE 2 ARCHAEOLOGICAL ASSESSMENT, GRAND VALLEY WIND FARMS – PHASE 3  
WIND PROJECT**

Project Context

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Consulting 2007) under CIF P042-127-2007. D.R. Poulton and Associates produced various Stage 1 and 2 archaeological reports concerning various turbines and infrastructure: *The 2010 Stage 2 Archaeological Assessment of the Proposed Grand Valley Wind Farm Project, East Luther Grand Valley Township, Dufferin County, Ontario* (D.R. Poulton and Associates 2011a) under CIF P316-100-2010; *The 2011 Stage 1 Archaeological Assessment of Turbines 3, 23 & 24 of the Proposed Grand Valley Wind Farm Project, East Luther Grand Valley Township, Dufferin County, Ontario* (D.R. Poulton and Associates 2011b) under PIF P316-138-2011; *The 2011 Stage 2 Archaeological Assessment of Transformers 1 and 2 of the Proposed Grand Valley Wind Farm Project, East Luther Grand Valley Township, Dufferin County, Ontario* (D.R. Poulton and Associates 2011c) under PIF P316-106-2011; *The 2011 Stage 2 Archaeological Assessment of Turbines 13 & 15 of the Proposed Grand Valley Wind Farm Project, East Luther Grand Valley Township, Dufferin County, Ontario* (D.R. Poulton and Associates 2011d) under PIF P316-136-2011; and *The 2011 Stage 2 Archaeological Assessment of Turbine 21 of the Proposed Grand Valley Wind Farm Project, East Luther Grand Valley Township, Dufferin County, Ontario* (D.R. Poulton and Associates 2011e) under PIF P316-105-2011.

## 2.0 Field Methods

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For the three parcels subject to Stage 2 archaeological assessment in this report, approximately 95% of the land to be impacted by the Grand Valley Wind Farms Phase 3 Wind Project development was subject to pedestrian survey, 4% was test pitted in a manicured lawn; approximately 1% was determined to be disturbed from previous construction activities. All test pit surveys and disturbed lands were located within the study area for Turbine 112 Access Road.

As per the *Standards and Guidelines for Consultant Archaeologists* (Section 7.8.6, Standard 1a, Government of Ontario 2011), Photos 1, 2, 8, 9, 10, and 11 illustrate the parts of the study area that met the requirements for pedestrian survey (Figure 4B, 4.3 and 4.7). As the majority of study area (100% of the Turbine 110 Pad and Access Road; 100% of the Transformer Station; and 85% of the Turbine 112 Access Road) is characterized by ploughed and well-weathered agricultural fields, the Stage 2 assessment was conducted using pedestrian survey at five metre intervals. Photo locations and photograph directions are provided in Figures 4.3 and 4.7. Since no artifacts were found, no additional pedestrian survey methods were followed during the Stage 2 archaeological assessment.

As per the *Standards and Guidelines for Consultant Archaeologists* (Section 7.8.6, Standard 1a, Government of Ontario 2011), Photos 6 and 7 illustrate parts of the study area of Turbine 112 Access Road that confirm conditions met the requirements for test pit survey (Figure 4.3).

The southern portion of the Turbine 112 Access Road property is a manicured lawn surrounding a home, garage, and driveway. This area was assessed by the test pit survey method at five metre intervals (Photos 6 and 7) (Figure 4.3). Each test pit was approximately 30 centimetres in diameter and excavated five centimetres into sterile subsoil, examining the pit for stratigraphy, cultural features, or evidence of fill. All soil was screened through six millimetre mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit. No further field methods were followed for test pitting since no artifacts were recovered employing this method. The disturbed areas include a berm from a current laneway and from driveway construction, a driveway, and areas disturbed by construction of the garage on the path of the Turbine 112 Access Road (Figure 4.3). Photos 3, 4, and 5 illustrate the disturbance areas as per the *Standards and Guidelines for Consultant Archaeologists* (Section 7.8.6 Standard 1b, Government of Ontario 2011). A proposed access road route disturbed by modern-day laneway construction is documented in Photo 3. Disturbance from driveway construction is documented in Photo 4. The remaining photo illustrates a disturbed test pit placed directly west of the garage (Photo 5). None of these areas were subject to further Stage 2 archaeological assessment since they were documented as disturbed.

During the Stage 2 survey, the weather ranged from warm to cool and overcast on May 6, 2013 and May 14, 2013 (Table 3). At no time were the field or weather conditions detrimental to the

**STAGE 2 ARCHAEOLOGICAL ASSESSMENT, GRAND VALLEY WIND FARMS – PHASE 3  
WIND PROJECT**

Field Methods

June 6, 2013

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identification and recovery of archaeological material. Lighting conditions and visibility were excellent.

**Table 3: Weather and Field Conditions for Stage 2 Archaeological Assessment**

Date	Weather	Location and Methods	Field Conditions
May 6, 2013	Warm and overcast	Turbine 112 Access Road, test pit and pedestrian survey	98% visibility
May 6, 2013	Warm and overcast	Turbine 110 Pad and Access Road, pedestrian survey	95% visibility
May 14, 2013	Cool and overcast	Transformer Station, pedestrian survey	98% visibility

Four First Nations monitors –one from the Haudenosaunee Development Institute, one from the Saugeen First Nation, and two from Six Nations – also participated in the Stage 2 archaeological assessment; their roles are summarized in the Supplementary Documentation.

### 3.0 Record of Finds

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The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0. An inventory of the documentary record generated by fieldwork is provided in Table 4 below. Stantec's Stage 2 survey of the Project Location identified no archaeological sites or cultural material.

**Table 4: Inventory of Documentary Record**

Document Type	Current Location of Document Type	Additional Comments
4 Pages of Field Notes	Stantec office in Stoney Creek	In original field book and photocopied in project file
1 Hand Drawn Map	Stantec office in Stoney Creek	In original field book and photocopied in project file
2 Maps Provided by Client	Stantec office in Stoney Creek	Hard and digital copies in project file
53 Digital Photographs	Stantec office in Stoney Creek	Stored digitally in project file

#### 3.1 TURBINE 112 ACCESS ROAD

The Turbine 112 Access Road is located in a level, ploughed agricultural field and a manicured lawn (Figure 4.3). The portion of the land located within the Project Location was surveyed and documented. No archaeological finds were recovered.

#### 3.2 TURBINE 110 PAD AND ACCESS ROAD

The Turbine 110 Pad and Access Road is located in a level, ploughed agricultural field (Figure 4.3). The portion of the land located within the Project Location was surveyed and documented. No archaeological finds were recovered.

#### 3.3 TRANSFORMER STATION

The Transformer Station is located in a rolling, ploughed agricultural field (Figure 4.7). The portion of the land located within the Project Location was surveyed and documented. No archaeological finds were recovered.

## **4.0 Analysis and Conclusions**

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During the Stage 2 assessment of the Turbine 112 Access Road; the Turbine 110 Pad; and the Transformer Station of the Grand Valley Wind Farms – Phase 3 Wind Project, no archaeological sites were identified.

## **5.0 Recommendations**

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The Stage 2 assessment of the Turbine 112 Access Road; the Turbine 110 Pad and Access Road; and Transformer Station of the Grand Valley Wind Farms – Phase 3 Wind Project did not identify any archaeological sites. Therefore **the Turbine 112 Access Road; the Turbine 110 Pad and Access Road; and the Transformer Station do not require any further archaeological assessment.**

The Ministry of Tourism, Culture and Sport is asked to accept this report into the Ontario Public Register of Archaeological Reports.



## 6.0 Advice on Compliance with Legislation

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This report is submitted to the Ontario Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act*.

The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ontario Ministry of Consumer Services.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

## 7.0 Bibliography and Sources

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**STAGE 2 ARCHAEOLOGICAL ASSESSMENT, GRAND VALLEY WIND FARMS – PHASE 3 WIND PROJECT**

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June 6, 2013

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## **8.0 Images**

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### **8.1 PHOTOGRAPHS**

**Photo 1: Turbine 112 Access Road, pedestrian survey field conditions, facing east**



**Photo 2: Turbine 112 Access Road, pedestrian survey at 5 metre intervals, facing northwest**





**Photo 3: Turbine 112 Access Road, disturbed road right-of-way, not assessed, facing west**



**Photo 4: Turbine 112 Access Road, area of disturbance, not assessed, facing south**



**Photo 5: Turbine 112 Access Road, disturbed test pit directly west of garage, facing north**



**Photo 6: Turbine 112 Access Road, test pit survey at 5 metre intervals, facing northwest**





**Photo 7: Turbine 112 Access Road, test pit survey at 5 metre intervals, facing southwest**



**Photo 8: Turbine 110 Pad and Access Road, field conditions for pedestrian survey, facing northeast**



**Photo 9: Turbine 110 Pad and Access Road, pedestrian survey at 5 metre intervals, facing south**



**Photo 10: Transformer Station, Field Conditions for pedestrian survey, facing north**





**Photo 11: Transformer Station, pedestrian survey at 5 metre intervals, facing southwest**

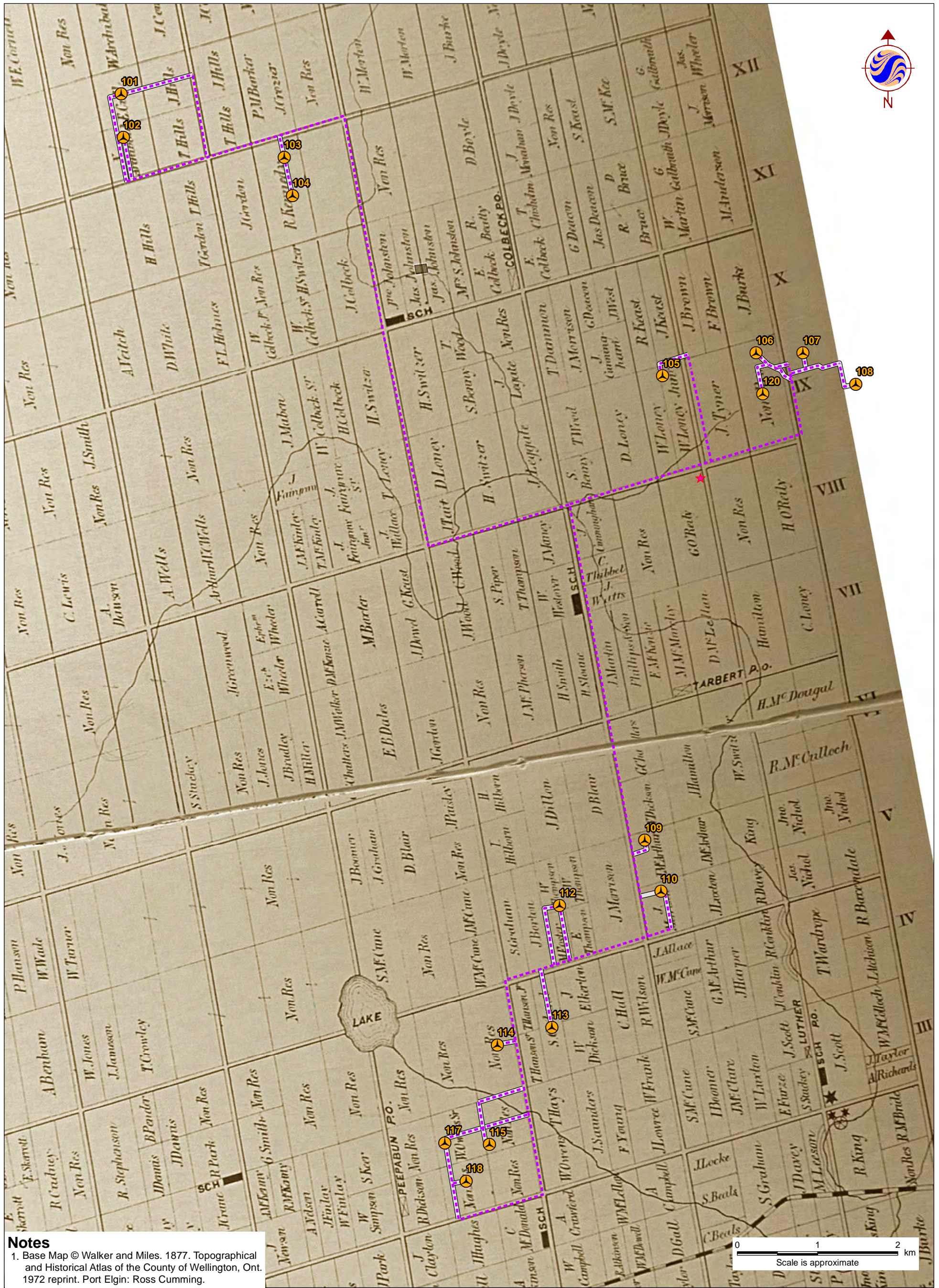


## **9.0 Maps**

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All maps will follow on succeeding pages.





**Notes**

1. Base Map © Walker and Miles. 1877. Topographical and Historical Atlas of the County of Wellington, Ont. 1972 reprint. Port Elgin: Ross Cumming.

**Legend**

**Proposed Project Components**

- Turbines
- Access Roads
- Collector Lines
- Transformer Location/  
HONI Connection Point/  
Met Tower/ Construction  
Laydown

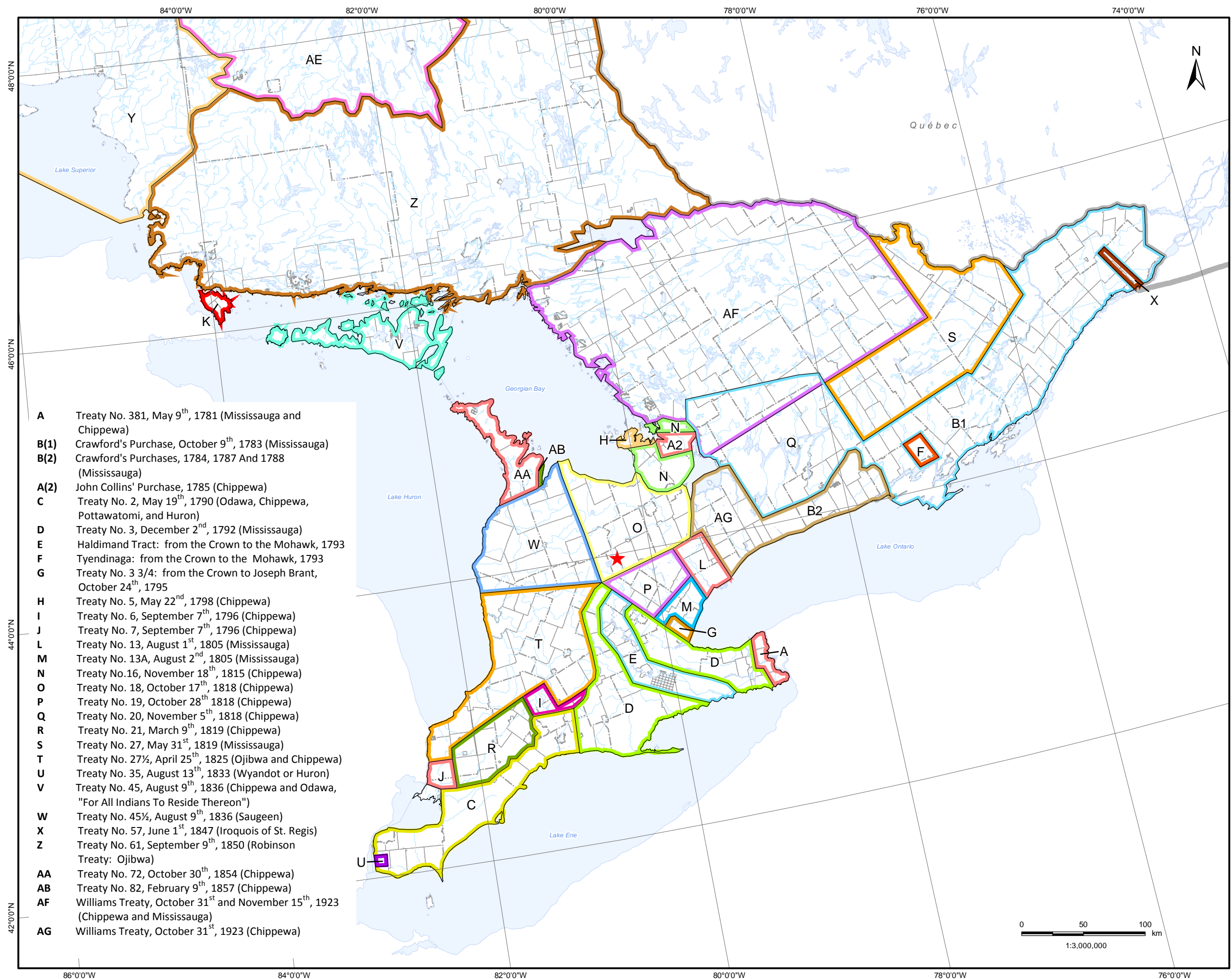
Client/Project  
 Grand Valley Phase 3  
 Veresen Inc.

Figure No.  
 3

Title  
**A Portion of the Map of  
 Luther Township**







**Legend**

- ★ Project Location
- Municipal Boundary - Upper
- Municipal Boundary - Lower
- Watercourse
- Waterbody

- A** Treaty No. 381, May 9<sup>th</sup>, 1781 (Mississauga and Chippewa)
- B(1)** Crawford's Purchase, October 9<sup>th</sup>, 1783 (Mississauga)
- B(2)** Crawford's Purchases, 1784, 1787 And 1788 (Mississauga)
- A(2)** John Collins' Purchase, 1785 (Chippewa)
- C** Treaty No. 2, May 19<sup>th</sup>, 1790 (Odawa, Chippewa, Pottawatomi, and Huron)
- D** Treaty No. 3, December 2<sup>nd</sup>, 1792 (Mississauga)
- E** Haldimand Tract: from the Crown to the Mohawk, 1793
- F** Tyendinaga: from the Crown to the Mohawk, 1793
- G** Treaty No. 3 3/4: from the Crown to Joseph Brant, October 24<sup>th</sup>, 1795
- H** Treaty No. 5, May 22<sup>nd</sup>, 1798 (Chippewa)
- I** Treaty No. 6, September 7<sup>th</sup>, 1796 (Chippewa)
- J** Treaty No. 7, September 7<sup>th</sup>, 1796 (Chippewa)
- L** Treaty No. 13, August 1<sup>st</sup>, 1805 (Mississauga)
- M** Treaty No. 13A, August 2<sup>nd</sup>, 1805 (Mississauga)
- N** Treaty No.16, November 18<sup>th</sup>, 1815 (Chippewa)
- O** Treaty No. 18, October 17<sup>th</sup>, 1818 (Chippewa)
- P** Treaty No. 19, October 28<sup>th</sup>, 1818 (Chippewa)
- Q** Treaty No. 20, November 5<sup>th</sup>, 1818 (Chippewa)
- R** Treaty No. 21, March 9<sup>th</sup>, 1819 (Chippewa)
- S** Treaty No. 27, May 31<sup>st</sup>, 1819 (Mississauga)
- T** Treaty No. 27½, April 25<sup>th</sup>, 1825 (Ojibwa and Chippewa)
- U** Treaty No. 35, August 13<sup>th</sup>, 1833 (Wyandot or Huron)
- V** Treaty No. 45, August 9<sup>th</sup>, 1836 (Chippewa and Odawa, "For All Indians To Reside Thereon")
- W** Treaty No. 45½, August 9<sup>th</sup>, 1836 (Saugeen)
- X** Treaty No. 57, June 1<sup>st</sup>, 1847 (Iroquois of St. Regis)
- Z** Treaty No. 61, September 9<sup>th</sup>, 1850 (Robinson Treaty: Ojibwa)
- AA** Treaty No. 72, October 30<sup>th</sup>, 1854 (Chippewa)
- AB** Treaty No. 82, February 9<sup>th</sup>, 1857 (Chippewa)
- AF** Williams Treaty, October 31<sup>st</sup> and November 15<sup>th</sup>, 1923 (Chippewa and Mississauga)
- AG** Williams Treaty, October 31<sup>st</sup>, 1923 (Chippewa)

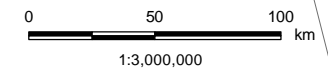
- Notes**
1. Coordinate System: NAD 1983 Statistics Canada Lambert
  2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.
  3. Treaty boundaries adapted from MNR July 1980, based on map compiled by J.L. Morris 2 March 1931. For cartographic representation only.



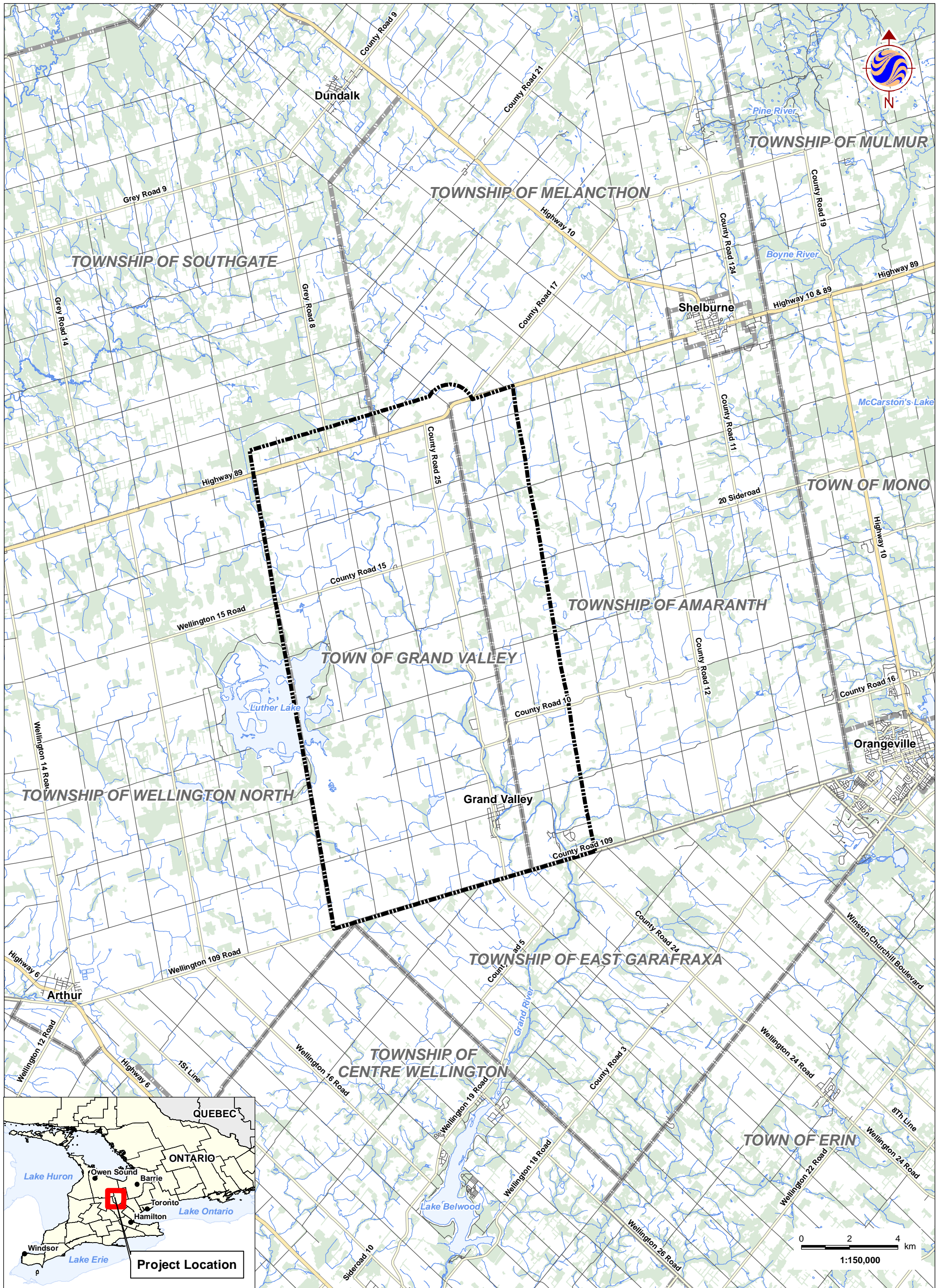
Client/Project  
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Figure No.  
2

Title  
**Treaties and Purchases  
(Adapted from Morris 1931)**







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 Revised: 2013-05-23 By: cweeks

May 2013  
160960698



**Stantec**

**Legend**

- Study Area
- Highway
- Major Road
- Local Road
- Watercourse
- Municipal Boundary
- Waterbody
- Woodland

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

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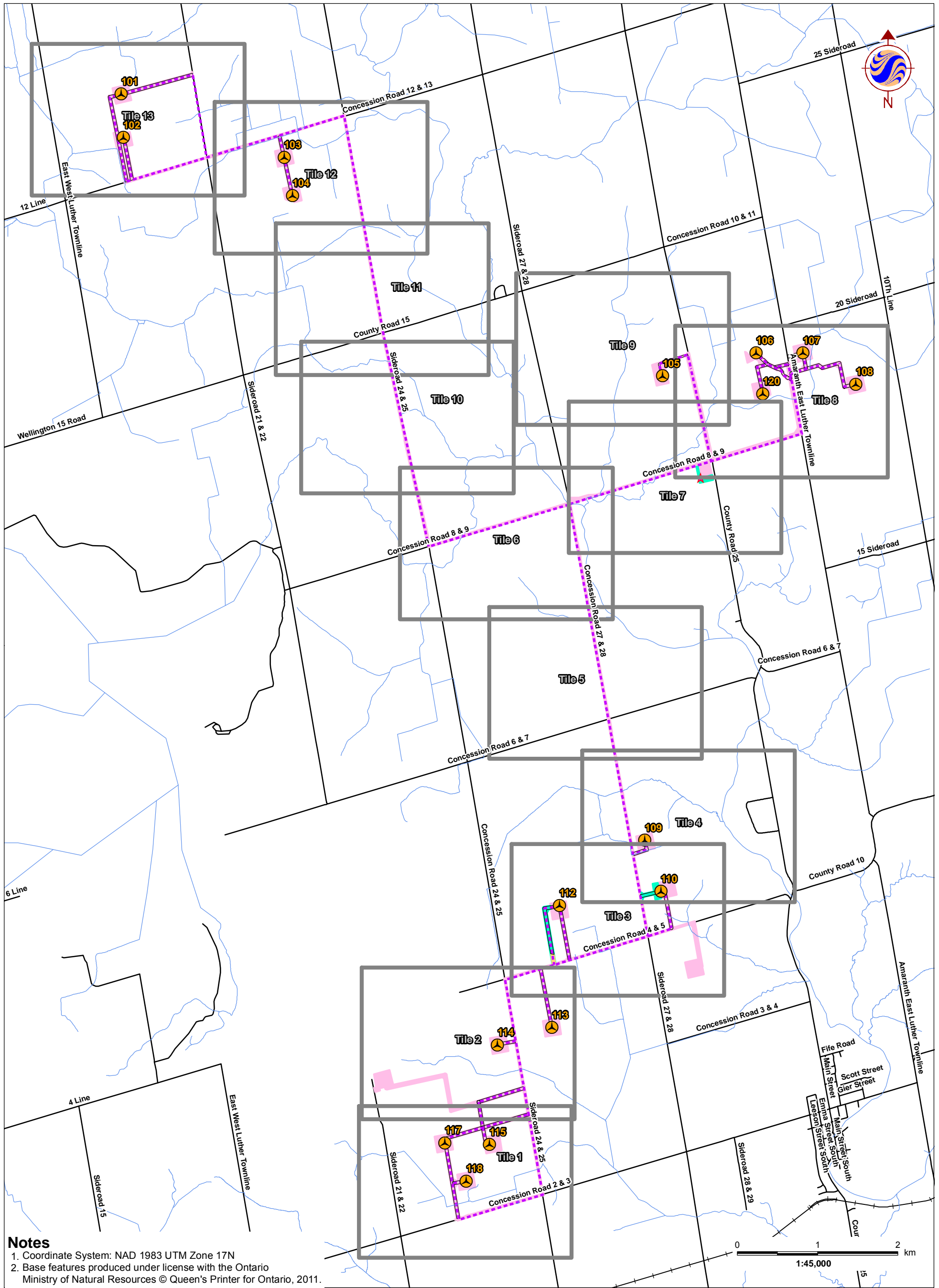
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1

Title

**Location of Study Area**





**Notes**  
 1. Coordinate System: NAD 1983 UTM Zone 17N  
 2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.

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 Revised: 2013-06-05 By: dharvey

June, 2013  
 160960698



**Legend**

Proposed Project Components	Existing Features	Survey Method
Turbines	Road	Previously Assessed and Reported – Stantec 2012 (P001-673-2012)
Access Road Corridor	Railway	Pedestrian Survey, Assessed at 5m Intervals
Collector Lines	Waterbody	Previously Disturbed, Not Assessed
Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown	Watercourse	Test Pit Survey, Assessed at 5m Intervals

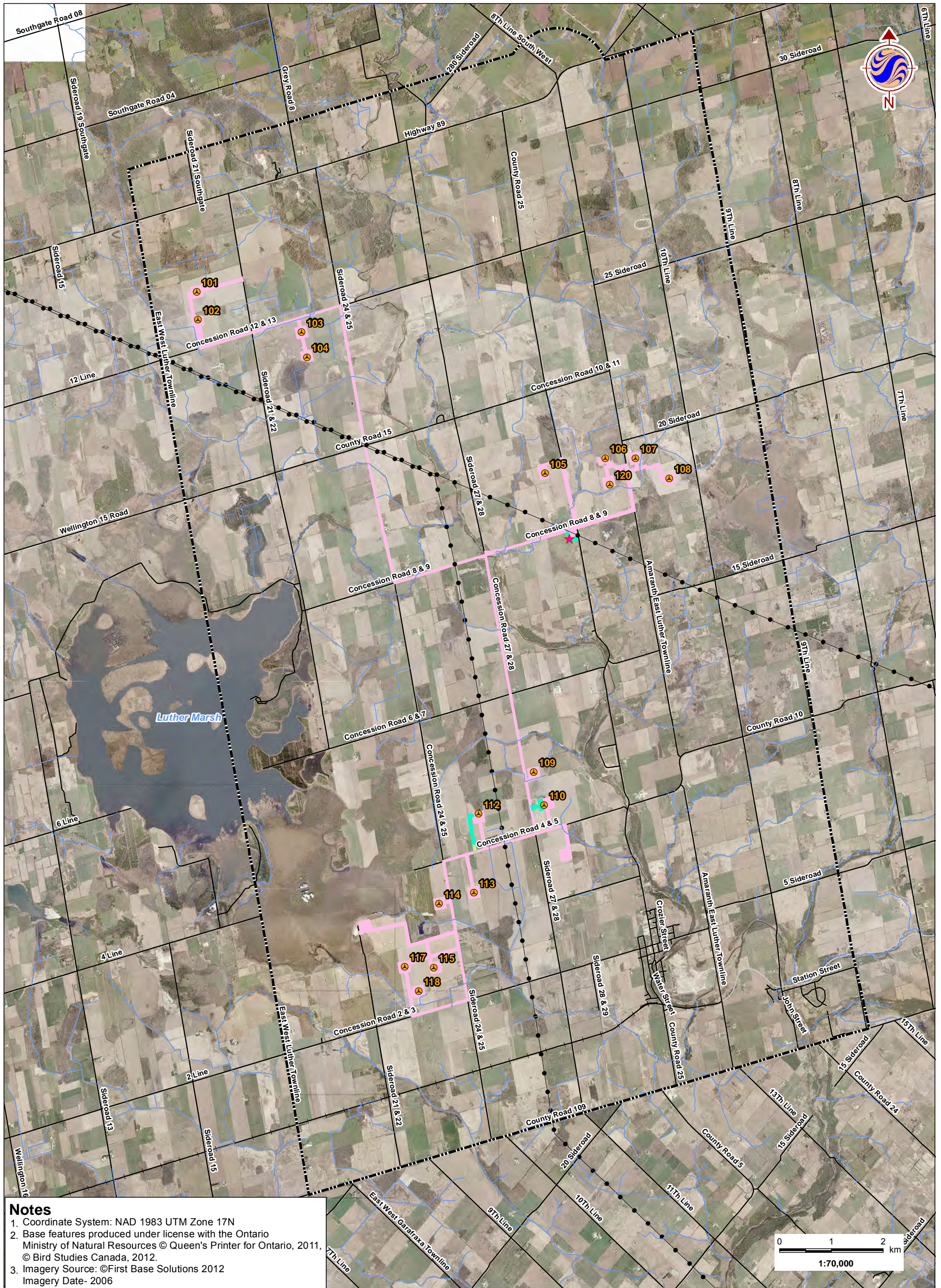
Client/Project  
 Grand Valley Phase 3  
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Figure No.  
 4A

Title

**Key Plan**





**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011, © Bird Studies Canada, 2012.
3. Imagery Source: ©First Base Solutions 2012  
Imagery Date- 2006

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June, 2013  
160960688



**Legend**

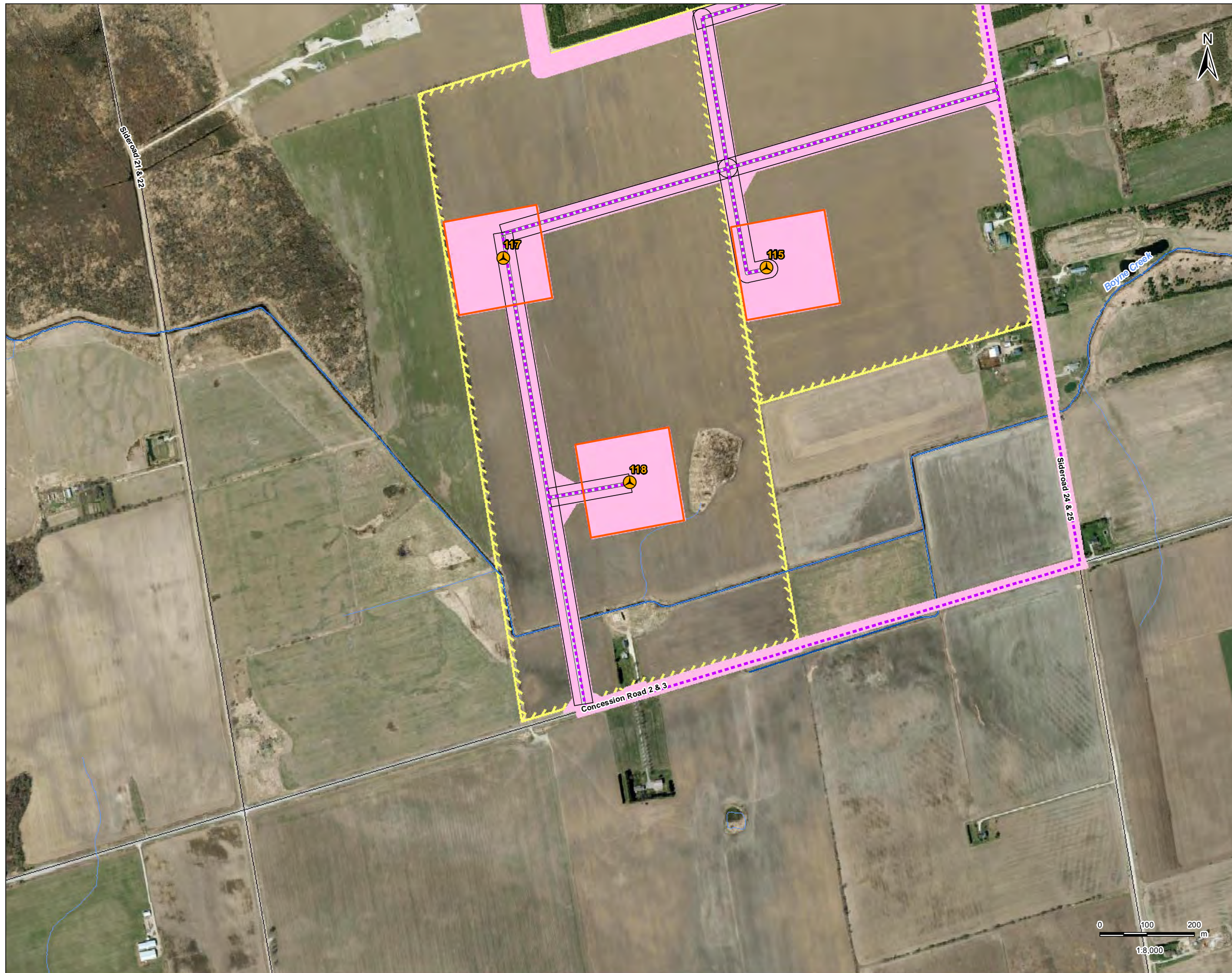
Study Area	Existing Features	Survey Method
Proposed Project Components	Road	Previously Assessed and Reported – Stantec 2012 (P001-673-2012)
Turbines	Railway- Active	Pedestrian Survey, Assessed at 5m Intervals
Transformer Location	Railway Abandoned	Previously Disturbed, Not Assessed
	Transmission Line	Test Pit Survey, Assessed at 5m Intervals
	Watercourse	

Client/Project  
Grand Valley Phase 3  
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Figure No.  
4B

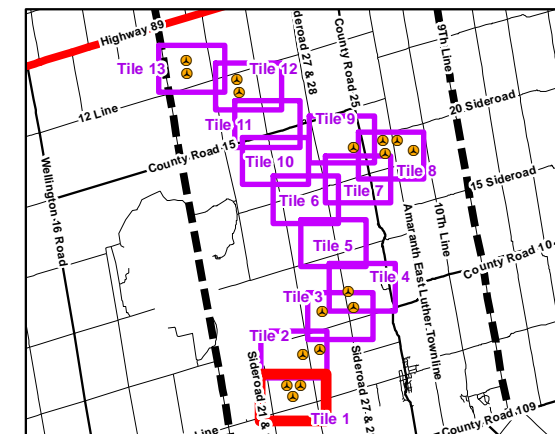
Title  
**Stage 2 Survey Methods  
Overview**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
  - Optioned Property
- Existing Features**
- Road
  - Constructed Drain
  - Watercourse
  - Waterbody
- Survey Method**
- Previously Assessed and Reported – Stantec 2012 (P001-673-2012)
  - Pedestrian Survey, Assessed at 5m
  - Previously Disturbed, Not
  - Test Pit Survey, Assessed at 5m
  - Photo Location



**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.
3. Orthographic imagery provided by Grand River Conservation Authority © First Base Solutions, 2011. Imagery taken in Spring 2010.



**Stantec**

June 2013  
160960698

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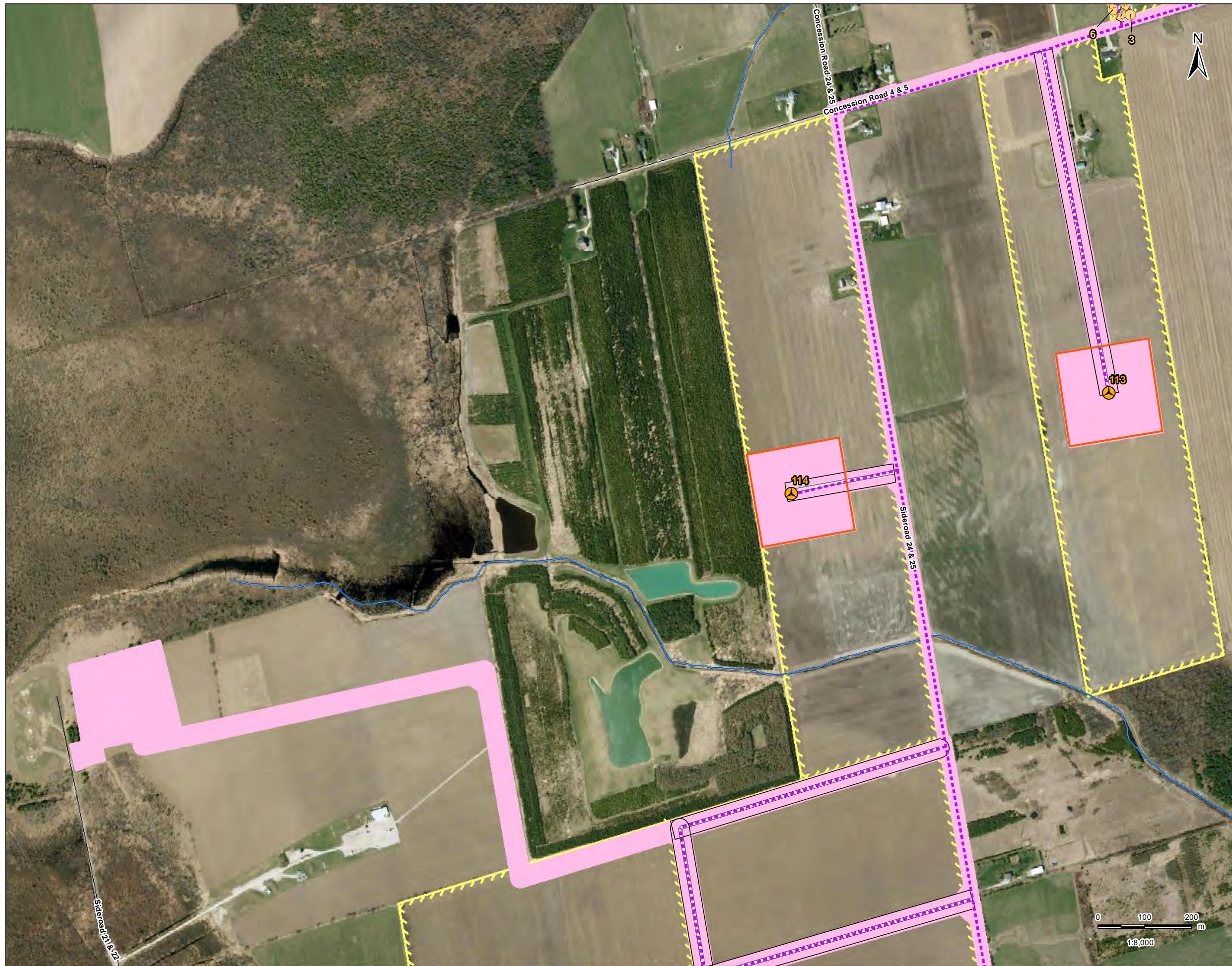
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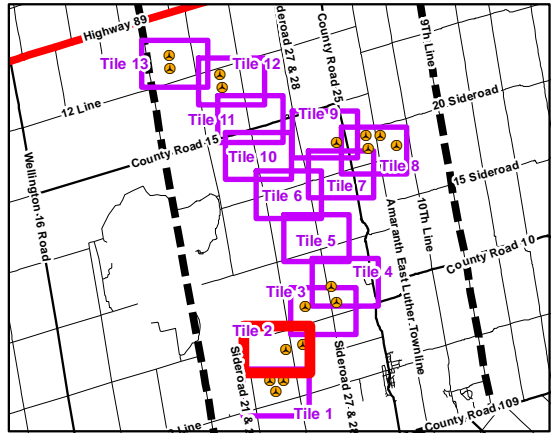
**Stage 2 Survey Methods**  
**Tile 1 of 13**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/HONI Connection Point/Met Tower/ Construction Laydown
  - Turbine Construction
  - Optional Property
- Existing Features**
- Road
  - Constructed Drain
  - Watercourse
  - Waterbody
- Survey Method**
- Previously Assessed and Reported – Stantec 2012 (P001-673-2012)
  - Pedestrian Survey, Assessed at 5m
  - Previously Disturbed, Not
  - Test Pit Survey, Assessed at 5m
  - Photo Location



**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
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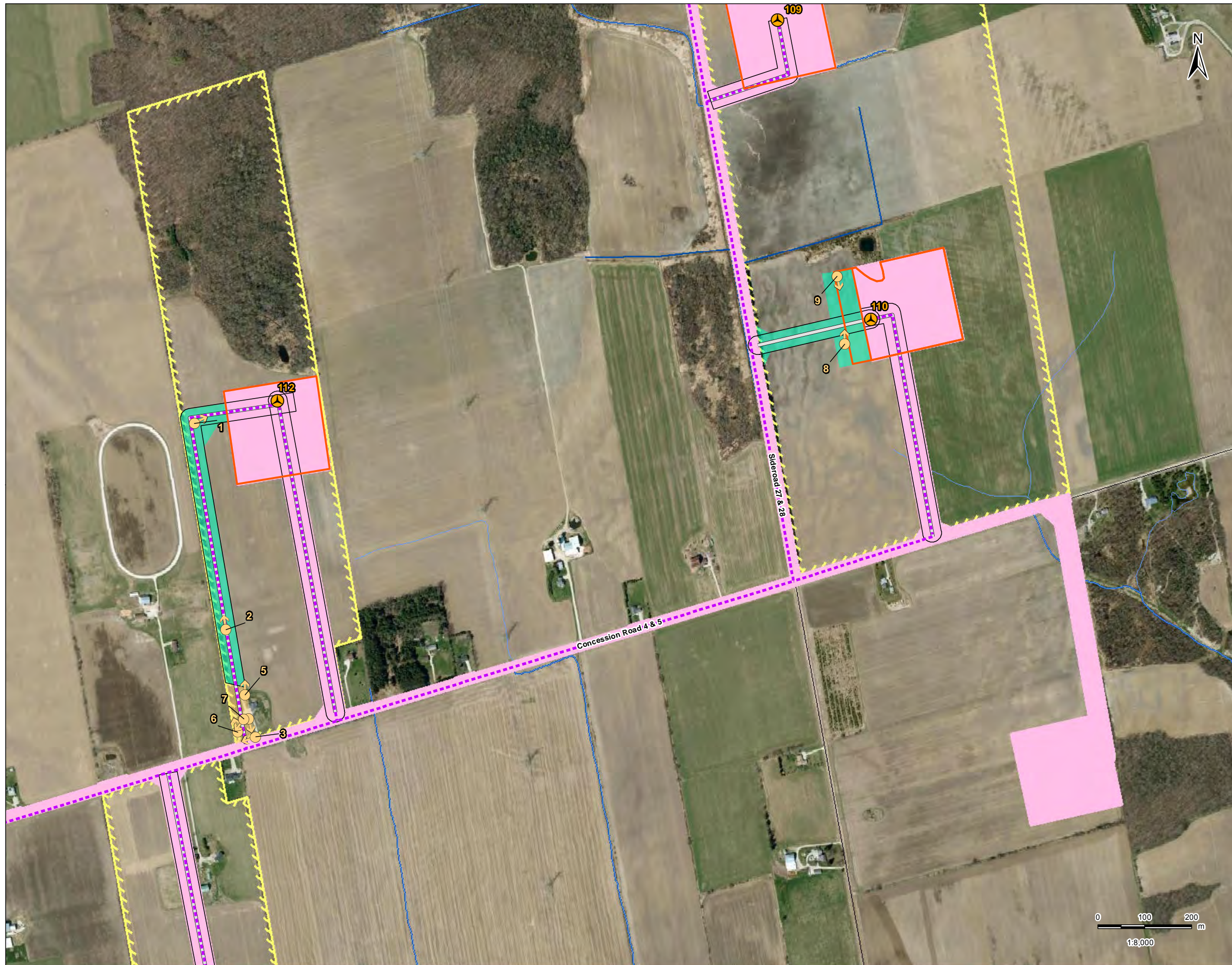
June 2013  
160960698

Client/Project  
Grand Valley Phase 3  
Veresen Inc.

Figure No.  
4.2

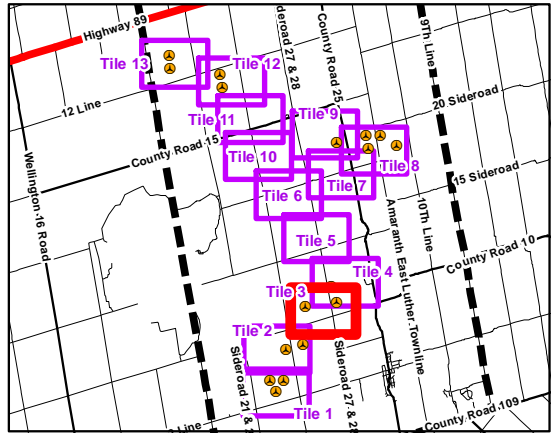
Title  
**Stage 2 Survey Methods**  
**Tile 2 of 13**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
  - Optioned Property
- Existing Features**
- Road
  - Constructed Drain
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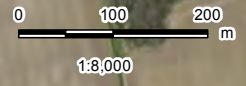
**Stantec**

June 2013  
160960698

Client/Project  
Grand Valley Phase 3  
Veresen Inc.

Figure No.  
4.3

Title  
**Stage 2 Survey Methods**  
**Tile 3 of 13**

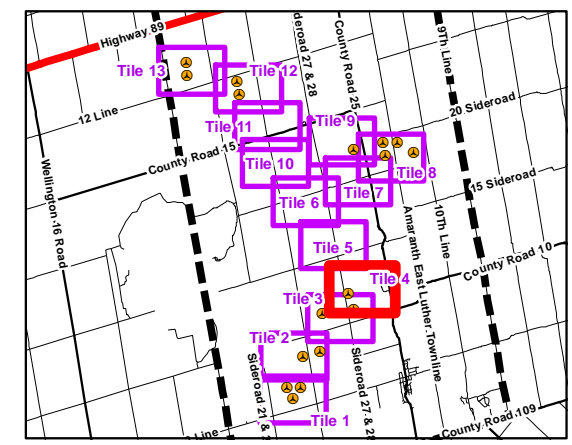






**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
  - Optioned Property
- Existing Features**
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- Survey Method**
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160960698

Client/Project  
Grand Valley Phase 3  
Veresen Inc.

Figure No.  
4.4

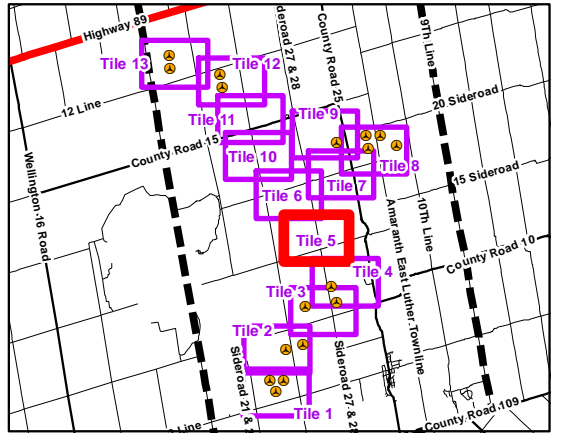
Title  
**Stage 2 Survey Methods**  
**Tile 4 of 13**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
  - Optioned Property
- Existing Features**
- Road
  - Constructed Drain
  - Watercourse
  - Waterbody
- Survey Method**
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  - Previously Disturbed, Not
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June 2013  
160960698

Client/Project  
Grand Valley Phase 3  
Veresen Inc.

Figure No.  
4.5

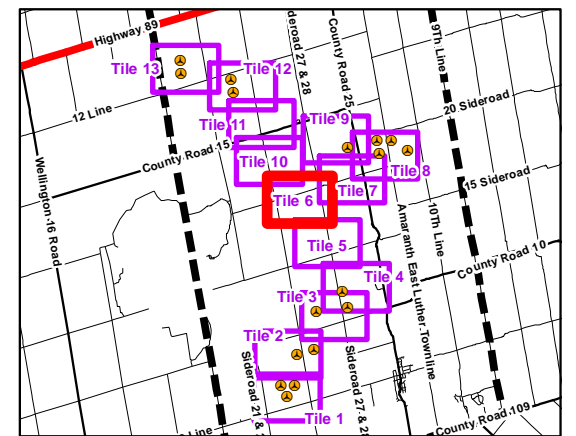
Title  
**Stage 2 Survey Methods  
Tile 5 of 13**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
  - Optioned Property
- Existing Features**
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  - Waterbody
- Survey Method**
- Previously Assessed and Reported – Stantec 2012 (P001-673-2012)
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Client/Project

Grand Valley Phase 3  
Veresen Inc.

Figure No.

4.6

Title

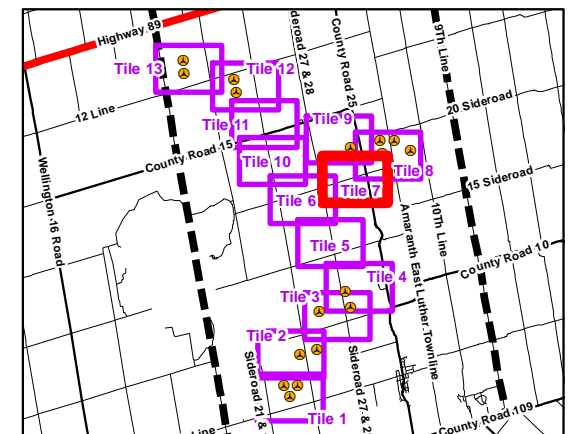
**Stage 2 Survey Methods  
Tile 6 of 13**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
  - Optional Property
- Existing Features**
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  - Watercourse
  - Waterbody
- Survey Method**
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**Stantec**

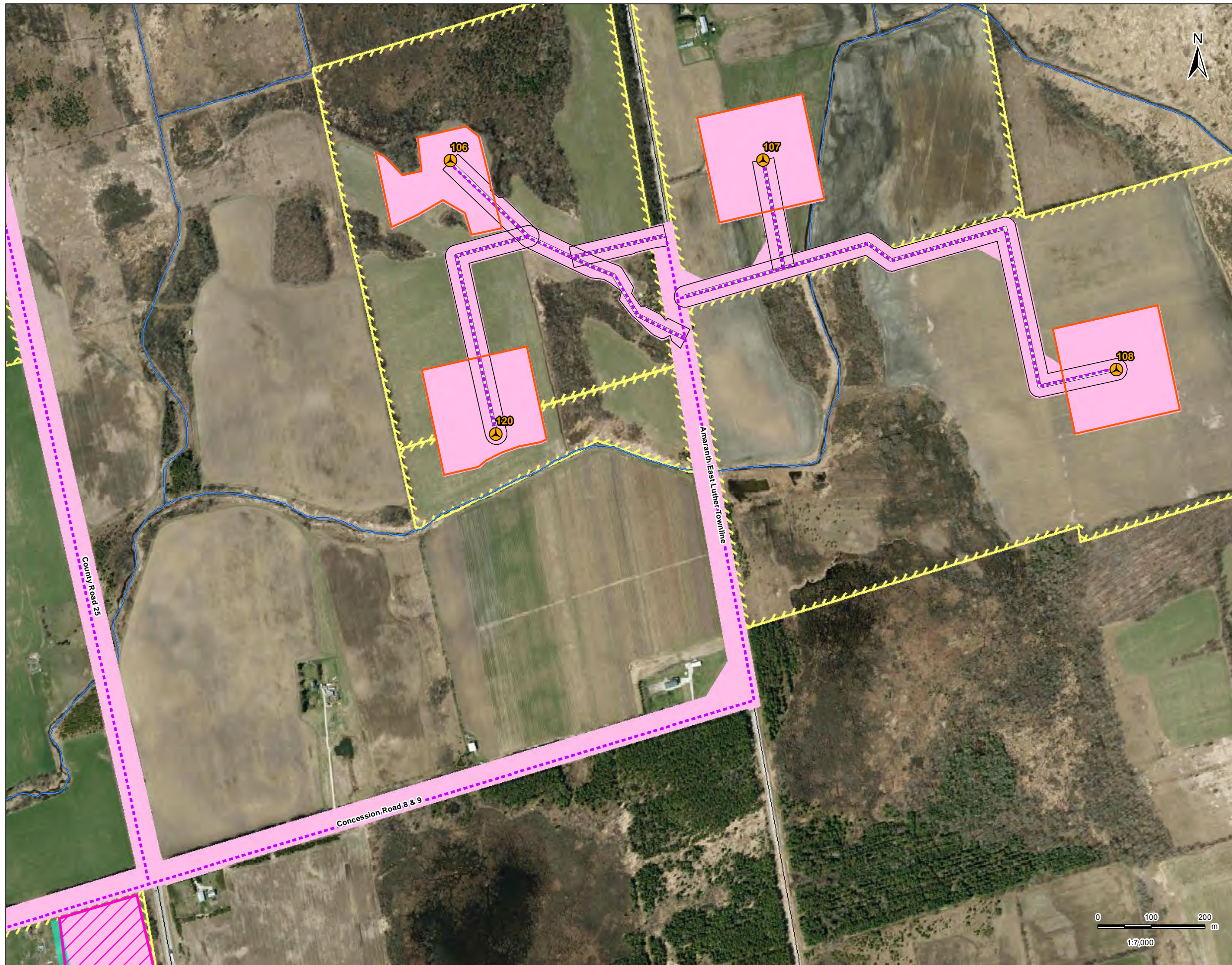
June 2013  
160960698

Client/Project  
Grand Valley Phase 3  
Veresen Inc.

Figure No.  
4.7

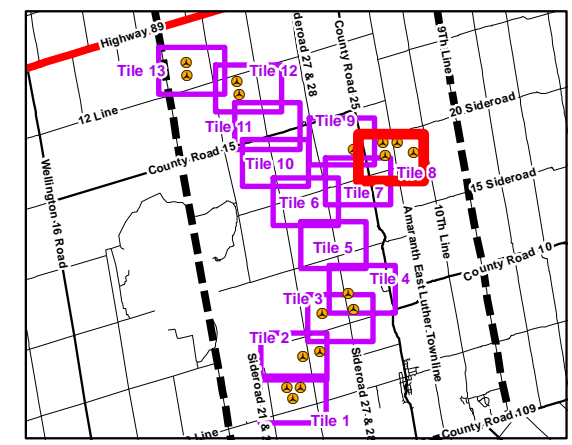
Title  
**Stage 2 Survey Methods  
Tile 7 of 13**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
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June 2013  
160960698

Client/Project  
Grand Valley Phase 3  
Veresen Inc.

Figure No.  
4.8

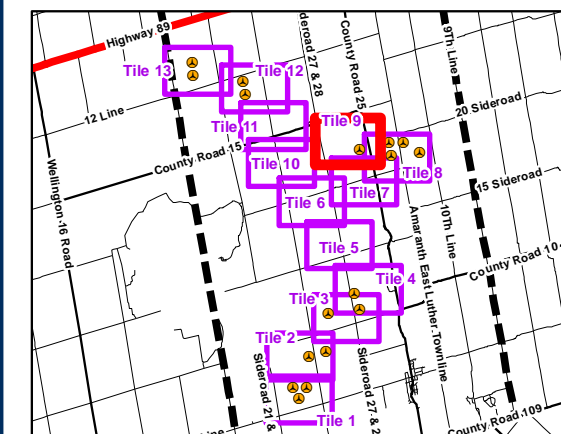
Title  
**Stage 2 Survey Methods**  
**Tile 8 of 13**





### Legend

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/HONI Connection Point/Met Tower/Construction Laydown
  - Turbine Construction
  - Optioned Property
- Existing Features**
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  - Waterbody
- Survey Method**
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Client/Project

Grand Valley Phase 3  
Veresen Inc.

Figure No.

4.9

Title

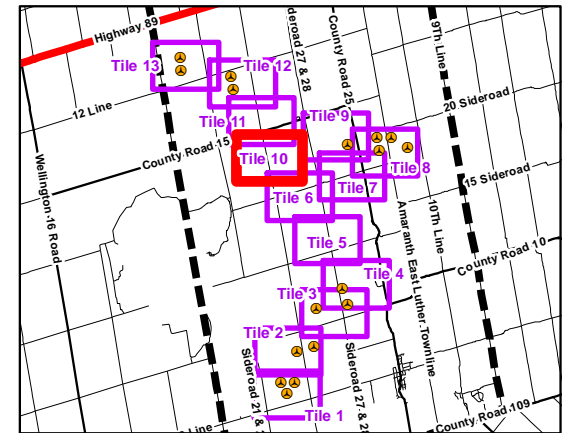
**Stage 2 Survey Methods  
Tile 9 of 13**





### Legend

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
  - Optioned Property
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  - Waterbody
- Survey Method**
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Client/Project

Grand Valley Phase 3  
Veresen Inc.

Figure No.

4.10

Title

**Stage 2 Survey Methods  
Tile 10 of 13**





**Legend**

**Proposed Project Components**

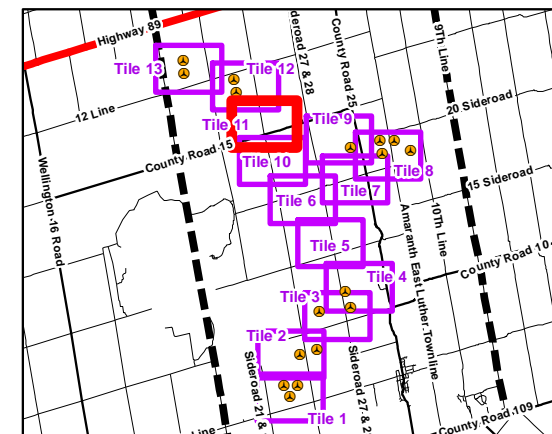
- Turbines
- Access Roads
- Collector Lines
- Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
- Turbine Construction
- Optioned Property

**Existing Features**

- Road
- Constructed Drain
- Watercourse
- Waterbody

**Survey Method**

- Previously Assessed and Reported – Stantec 2012 (P001-673-2012)
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Client/Project

Grand Valley Phase 3  
Veresen Inc.

Figure No.  
4.11

Title

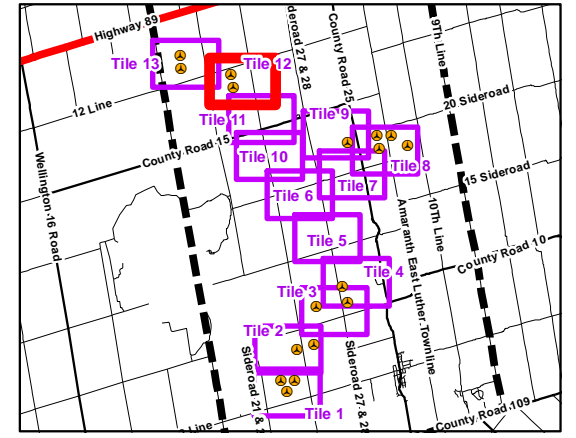
**Stage 2 Survey Methods**  
**Tile 11 of 13**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/HONI Connection Point/Met Tower/Construction Laydown
  - Turbine Construction
  - Optioned Property
- Existing Features**
- Road
  - Constructed Drain
  - Watercourse
  - Waterbody
- Survey Method**
- Previously Assessed and Reported – Stantec 2012 (P001-673-2012)
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  - Previously Disturbed, Not
  - Test Pit Survey, Assessed at 5m
  - Photo Location



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Grand Valley Phase 3  
Veresen Inc.

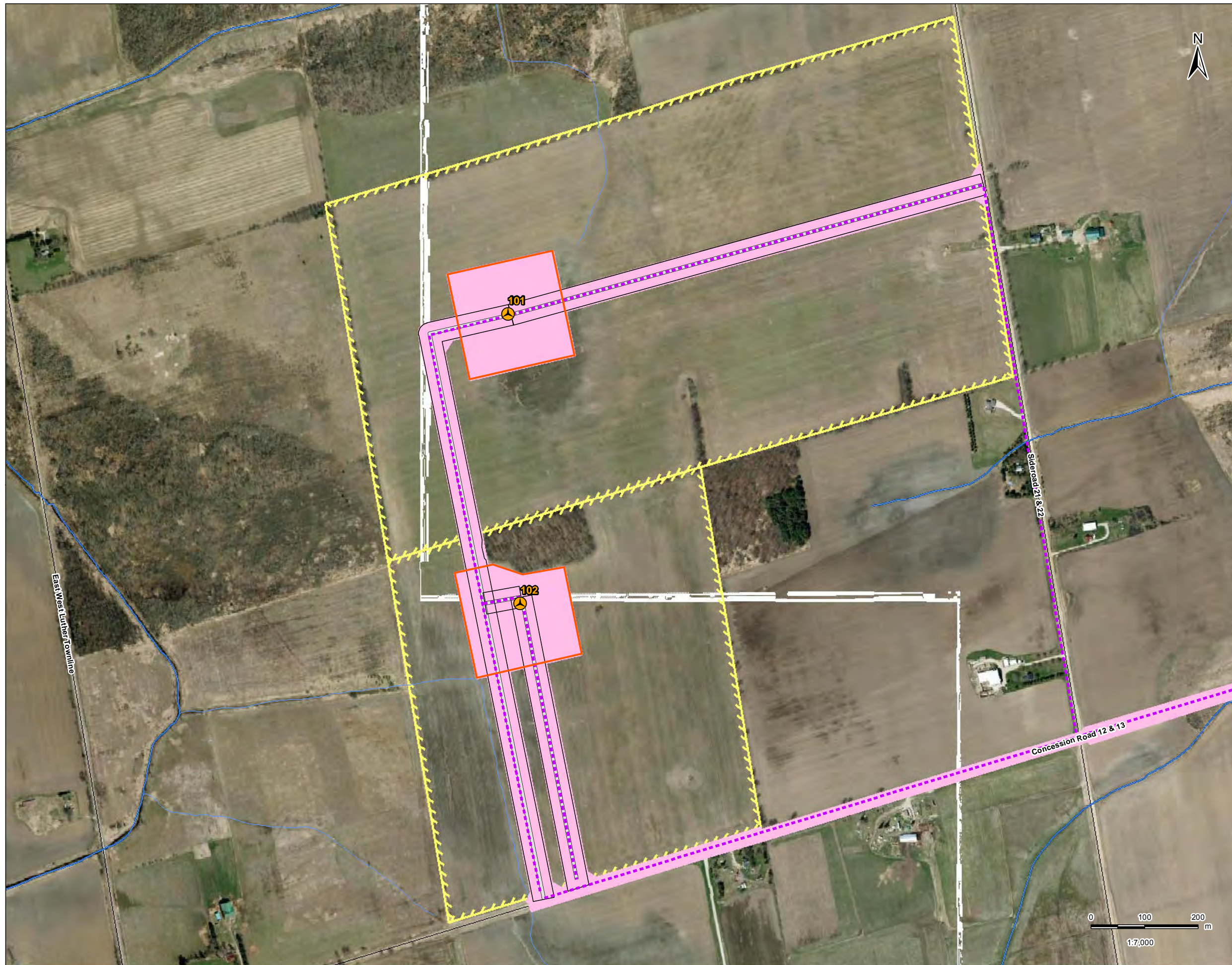
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4.12

Title

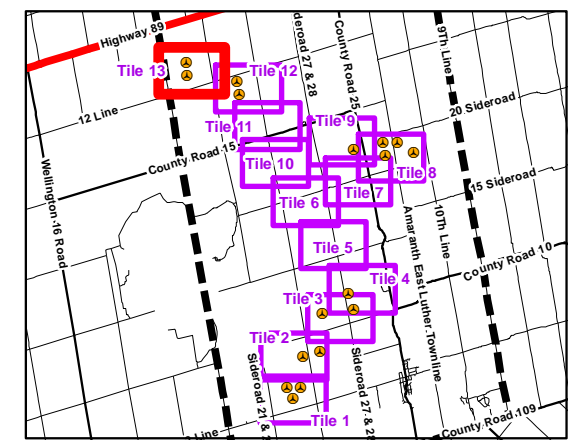
**Stage 2 Survey Methods  
Tile 12 of 13**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/HONI Connection Point/Met Tower/Construction Laydown
  - Turbine Construction
  - Optioned Property
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Figure No.  
4.13

Title  
**Stage 2 Survey Methods**  
**Tile 13 of 13**



## **10.0 Closure**

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This report has been prepared for the sole benefit of Grand Valley Wind Farms Inc., and may not be used by any third party without the express written consent of Stantec Consulting Ltd. and Grand Valley Wind Farms Inc. Any use which a third party makes of this report is the responsibility of such third party.

We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

Yours truly,



Jeffrey Muir, BA  
Senior Archaeologist  
Tel: (905) 381-3209  
Fax: (905) 385-3534  
[Jeff.Muir@Stantec.com](mailto:Jeff.Muir@Stantec.com)



Jim Wilson, MA  
Regional Discipline Leader, Archaeology  
Tel: (613) 722-4420  
Fax: (613) 722-2799  
[Jim.Wilson@Stantec.com](mailto:Jim.Wilson@Stantec.com)



July 10, 2014

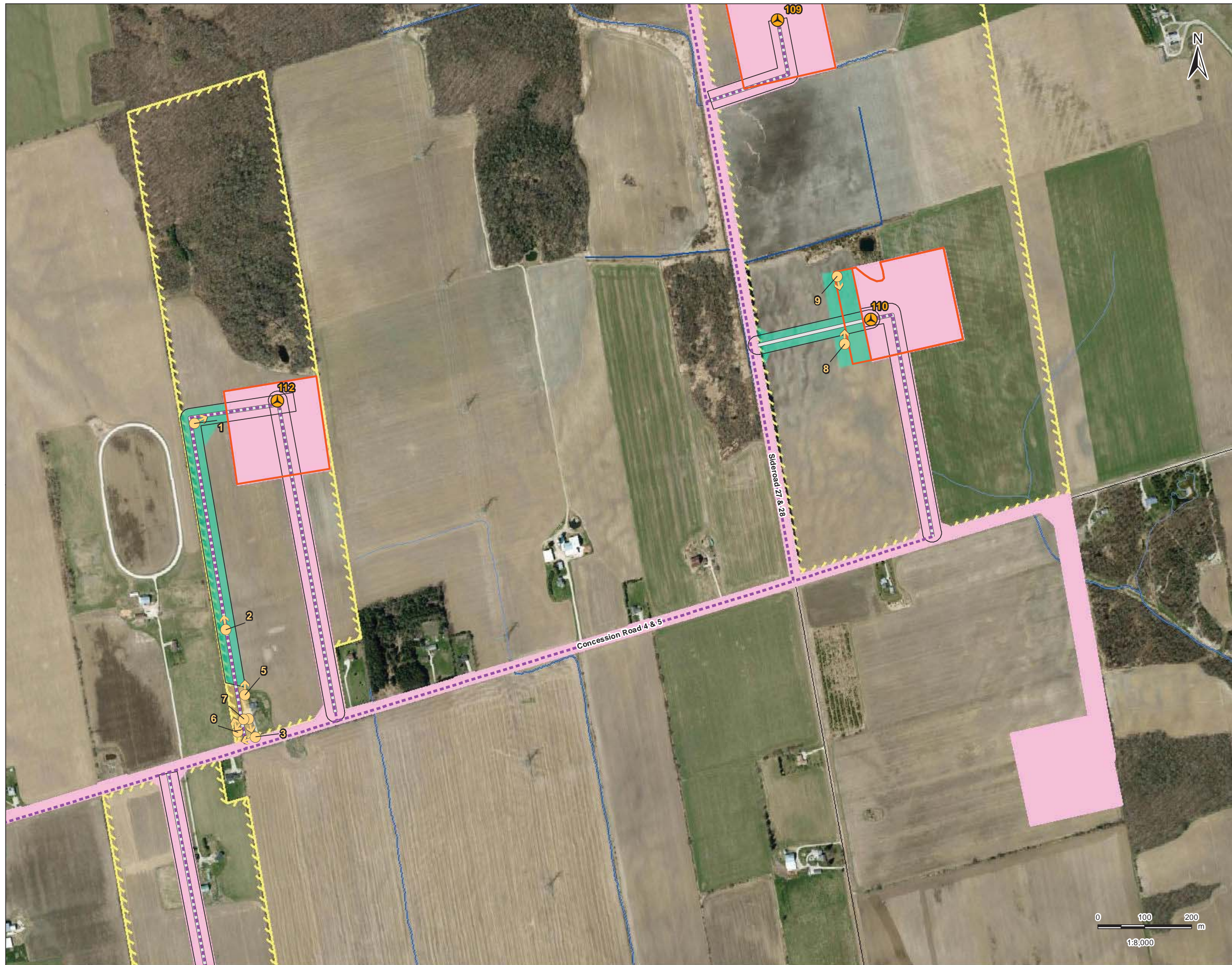
Sue Edwards, Senior Project Evaluator

**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

## **Attachment D**

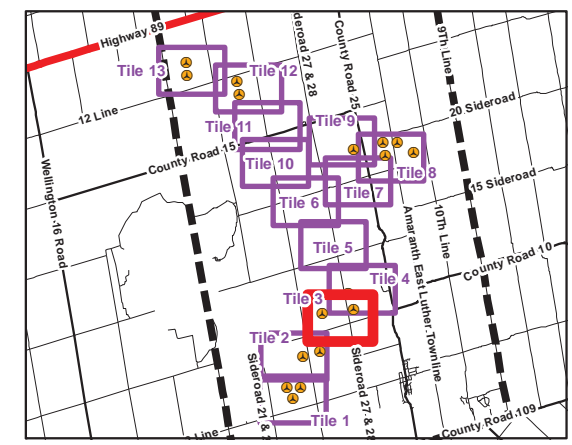
### **Location of Alternative Access – T110 and T112**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
  - Optional Property
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June 2013  
160960698

Client/Project  
Grand Valley Phase 3  
Veresen Inc.

Figure No.  
4.3

Title  
**Stage 2 Survey Methods**  
**Tile 3 of 13**





July 10, 2014

Sue Edwards, Senior Project Evaluator

**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

## **Attachment E NHA/EIS Addendum Report and MNR Confirmation Letter**



**Ministry of  
Natural Resources**  
Regional Resources Section  
Southern Region  
300 Water Street  
4<sup>th</sup> Floor, South Tower  
Peterborough, Ontario K9J 8M5

**Ministère des  
Richesses naturelles**



---

June 26, 2014

Hali Zigomanis,  
Environmental Manager, East  
Versen Inc. .  
Suite 502, 216 Chrislea Road,  
Woodbridge, Ontario, L4L 8S5

**RE: NHA Addendum – Technical and Project Design Changes  
Grand Valley Wind Farms – Phase 3 Wind Project**

Dear Hali Zigomanis,

The Ministry of Natural Resources (MNR) has received the document dated June 20, 2014 that describes modifications to the Grand Valley Wind Farm – Phase 3 Wind Project made subsequent to MNR's letter confirming the Natural Heritage Assessment in respect of the project.

Upon review of the modifications, MNR is satisfied that the Natural Heritage Assessment requirements of Ontario Regulation 359/09 have been met. Please add this letter as an addendum to the confirmation letter issued June 4, 2013 for the Grand Valley Wind Farm – Phase 3 Wind Project.

If you wish to discuss, please contact me at [Amy.Cameron@Ontario.ca](mailto:Amy.Cameron@Ontario.ca).

Sincerely,

A handwritten signature in blue ink that reads "Amy Cameron".

Amy Cameron  
*for*  
Kathy Woeller  
Regional Land Use Planning Supervisor  
Regional Resources Section, Southern Region

Cc Kathy Woeller, Regional Land Use Planning Supervisor, MNR  
Narren Santos, Environmental Approvals Access & Service Integration Branch, MOE  
Shawna Peddle, Senior Project Manager, Stantec Consulting



Stantec Consulting Ltd.  
70 Southgate Drive, Suite 1, Guelph ON N1G 4P5

June 20, 2014  
File: 160960698

**Attention: Kathy Woeller, Regional Land Use Planning Supervisor**

Regional Resources Section  
Ministry of Natural Resources  
4th Flr S  
300 Water St  
PO Box 7000  
Peterborough ON K9J8M5

Dear Ms. Woeller,

**Reference: NHA Addendum - Technical and Project Design Changes  
Grand Valley Wind Farms - Phase 3 Wind Project**

Grand Valley Wind Farms Inc. (GVWF) proposes to install and operate the 40MW Grand Valley Wind Farms - Phase 3 Wind Project (the Project) in the Town of Grand Valley and the Township of Amaranth, Ontario. Site plan maps for the Project are provided as Attachment A. The Renewable Energy Approval (REA) application for the Project was received by the Ministry of the Environment (MOE) on June 3, 2013, and is currently under technical review.

The Natural Heritage Assessment/Environmental Impact Study (NHA/EIS) confirmation letter for the Project was provided by the Ministry of Natural Resources (MNR) on June 4, 2013. Since receipt of the MNR confirmation letter, GVWF has identified two minor modifications based on stakeholder consultation and facilitation of construction that would benefit the Project and the local community. There is no change to the Project's nameplate capacity of 40 MW.

The purpose of this letter is to provide the MNR with an understanding of the proposed changes that have been made to the Project Layout since the NHA/EIS Report was confirmed by MNR on June 4, 2013, and provide an assessment of the proposed changes in order to identify any additional potential effects, mitigation measures, or monitoring requirements that were not considered within the NHA/EIS.

Two minor Project modifications are proposed:

**MOVEMENT OF ACCESS ROAD/UNDERGROUND CABLE AND CONSTRUCTION AREA FOR  
TURBINE T110**

Due to the earlier removal of turbine T111 from the Project Layout based on stakeholder feedback (as documented in the REA application), the original access road and underground cable location heading north from Concession Road 4/5 were determined unnecessary. GVWF proposes relocating the access road to head east to turbine T110 from Sideroad 27/28, as shown in Figure 1 (Attachment B).



June 20, 2014  
Kathy Woeller, Regional Land Use Planning Supervisor  
Page 2 of 4

**Reference: NHA Addendum - Technical and Project Design Changes  
Grand Valley Wind Farms - Phase 3 Wind Project**

This modification would considerably shorten the amount of road and underground cabling, thus reducing potential impacts to the agricultural field. Both the original and proposed access road locations are within agricultural lands (AG-till).

In addition, the location of turbine T110 was shifted 10m to the west prior to the final open house for the Project, based on stakeholder feedback. For the purposes of this NHA/EIS Addendum, Stantec has assessed an adjustment of the construction area for the turbine to reflect this turbine shift.

This new access road/buried cable location and adjustment to the construction area were not assessed as part of the original NHA/EIS for the Project. However, the new access to turbine T110 and adjustment to the construction area were contained entirely within a tilled agricultural field (corn in 2012) (AG-till), and field data was collected by Stantec for this area in 2012, as the currently proposed access road location has reverted back to that originally proposed prior to the 2012 field season (Attachment C). This area is also mostly within the 120 m Zone of Investigation for the previously assessed construction area for turbine T110 and the collector line along Sideroad 27 & 28.

The original footprint of the T110 construction area was 5.5ha; new portions of the construction area, as proposed, total 2ha. A small amount of new agricultural land will be temporarily removed due to this proposed modification, but no new natural features will be impacted, and the findings of the NHA/EIS for this area remain unchanged.

### **INCREASE IN CONSTRUCTION AREA, TRANSFORMER STATION**

In discussion with their proposed construction contractor, GVWF wishes to propose an increase in the construction area required for the transformer station from 2.3 ha to 3.3 ha, as shown in Figure 2 (Attachment B). This modification would facilitate construction of the transformer station, and would also result in moving transformer station construction activities (and associated noise and construction disturbance) further from the closest non-participating residence.

This expanded area was not assessed as part of the original NHA/EIS for the Project. However, the expansion is contained entirely within pasture land (AG-pasture), and field data was collected by Stantec for this area in 2012.

The original footprint of the transformer station construction area was 2.3ha; new portions of the construction area, as proposed, total 1.3ha. A small amount of new agricultural land will be removed due to this increase in construction area, but no new natural features will be impacted, and the findings of the NHA/EIS for this area remain unchanged.

Potential habitat for Bobolink and Eastern Meadowlark in the Study Area is comprised of actively managed agricultural lands (hayfields), as well as pasture and isolated patches of cultural meadow (grass-dominated). Both species were observed in the Project area during 2012 and 2013 surveys.



June 20, 2014

Kathy Woeller, Regional Land Use Planning Supervisor

Page 3 of 4

**Reference: NHA Addendum - Technical and Project Design Changes  
Grand Valley Wind Farms - Phase 3 Wind Project**

While there is habitat within 120m of the transformer station site, neither species was documented at this location, and no habitat will be displaced by the proposed expansion of the transformer station construction area. This change therefore has no impact on the Species at Risk Report, its conclusions, or recommendations, and has no impact on the land securement and registration process (O. Reg. 176/13, under the Endangered Species Act, 2007).

Project modifications are described in Table 1, below. Natural features mapping was prepared to show the Project modifications in relation to the original proposed Project as provided in Attachment B.

For both proposed modifications, no new natural features are in or within 120 m of the Project Location. The proposed modifications have been sited within actively managed agricultural lands. No natural features occur in the Project Location for the proposed modifications.

<b>Mod. No.</b>	<b>General Description of Modification</b>	<b>Change to Identification of Natural Features within 120 m of the New Project Location</b>	<b>Change to Assessment of Impacts and Mitigation Measures</b>	<b>Overall Assessment of Changes to NHA/EIS</b>
1	relocating the T110 access road to head east from Sideroad 27/28 and increase of the turbine construction area from 5.5ha to 7.5ha	None. There are no new natural features within 120 m of the Project Location as a result of proposed modification. No changes are required to the Records Review, Site Investigation or Evaluation of Significance reports as a result of the proposed change.	Not applicable.	None required.
2	Increasing the construction area required for the transformer station from 2.3 ha to 3.3 ha	None. There are no new natural features within 120 m of the Project Location as a result of proposed modification. No changes are required to the Records Review, Site Investigation or Evaluation of Significance reports as a result of the proposed change.	Not applicable.	None required.

## **SUMMARY AND CONCLUSION**

Given that the Project design changes have not changed the Project significantly, the modifications can be implemented with no new net negative environmental effects.



June 20, 2014  
Kathy Woeller, Regional Land Use Planning Supervisor  
Page 4 of 4

**Reference: NHA Addendum - Technical and Project Design Changes  
Grand Valley Wind Farms - Phase 3 Wind Project**

In addition, no changes are required to the Records Review, Site Investigation or Evaluation of Significance reports as presented in the NHA/EIS (June, 2013) as a result of the proposed modifications.

No changes are required to the assessment of impacts or proposed mitigation measures as presented in the NHA/EIS (June, 2013) as a result of the proposed modifications.

No changes are required to the Construction Plan Report and the Environmental Effects Monitoring Plan as a result of the proposed modifications.

No changes are required to the Species at Risk Report, and no considerations are necessary for registration under the Endangered Species Act, as no habitat for Endangered Species will be removed.

We request a confirmation that the MNR has no issues with the Project design changes as proposed, due to the absence of new effects on natural features.

If you have any questions or concerns, please do not hesitate to contact me (contact information provided below) at any time.

Regards,

**STANTEC CONSULTING LTD.**

**Sean Spisani, B.Sc., ERGC**  
Senior Ecologist  
Phone: (905) 381-3223  
Fax: (905) 385-3534  
Sean.spisani@stantec.com

**Shawna Peddle, M.Sc.**  
Senior Project Manager  
Assessment, Permitting, and Compliance  
Phone: (519) 836-6966 x231  
Fax: (519) 836-2493  
Shawna.Peddle@stantec.com

Attachment: A - Site Plan Maps  
B - Proposed Project Modification Maps  
C - 2012 ELC Field Map - original location of T110 access road

c. Hali Zigomanis, Meaghan Brown, and Jose Menendez, Grand Valley Wind Farms Inc.  
Susanne Edwards, Ministry of the Environment

sp w:\active\60960698\reports\modification data package may 2014\nha addendum - t110 access and ts site\gwvf\_nhaeis\_addendum\_20140620\_fnl.docx



June 20, 2014

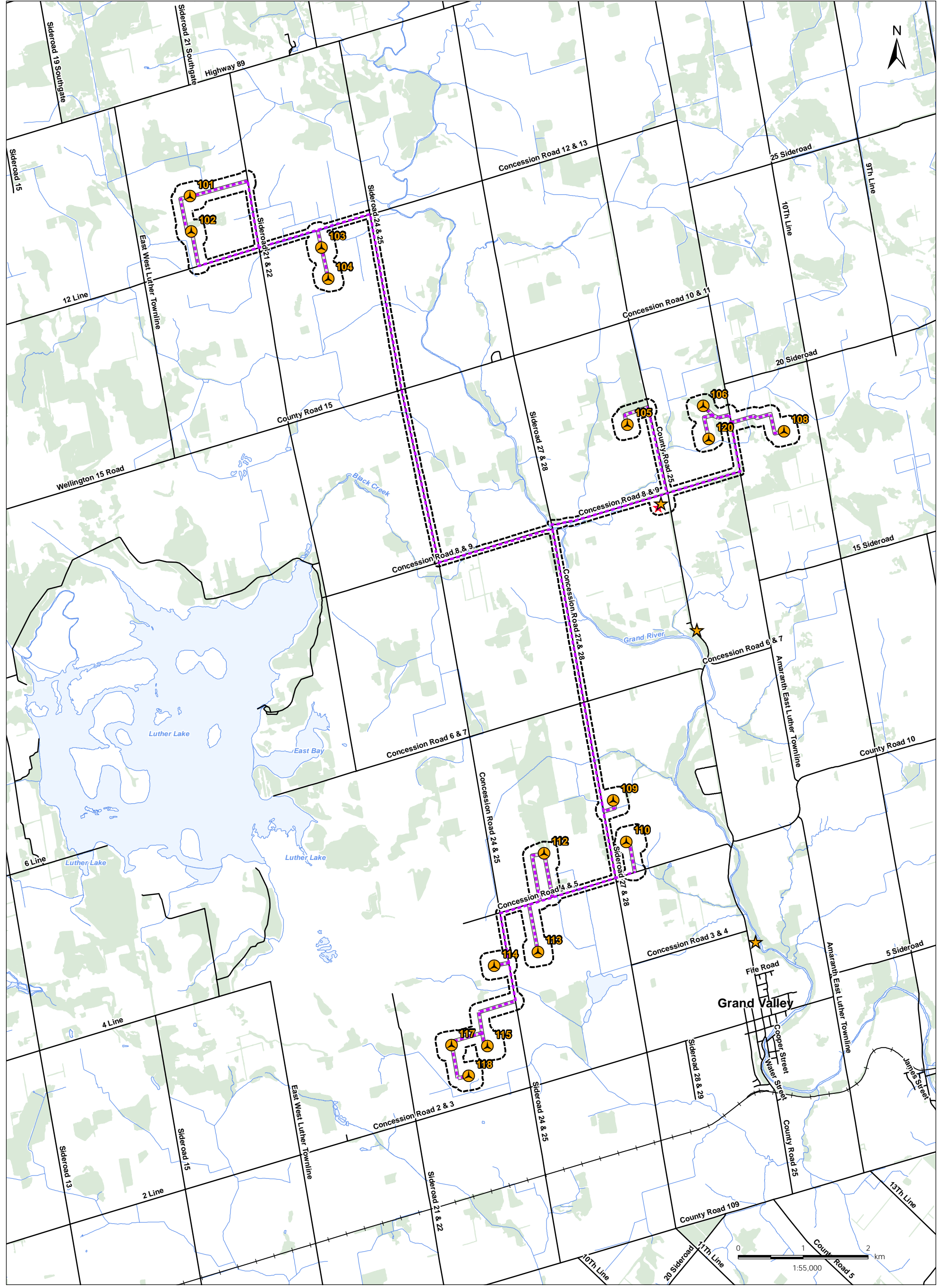
Kathy Woeller, Regional Land Use Planning Supervisor

**Reference: NHA Addendum - Technical and Project Design Changes  
Grand Valley Wind Farms - Phase 3 Wind Project**

## **Attachment A**

## **Site Plan Maps**





**Stantec**

**Notes**

- Coordinate System: NAD 1983 UTM Zone 17N
- Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.

**Legend**

Study Area	Existing Features
Proposed Project Components	Railway
Turbines	Watercourse
Access Roads	Waterbody
Collector Lines	Wooded Area
Construction Trailer/ Parking Area (Previously Disturbed)	
Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown	

Client/Project  
Grand Valley Phase 3  
Veressen Inc.

Figure No.  
1

Title  
Study Area

May 2014  
160960698



June 20, 2014

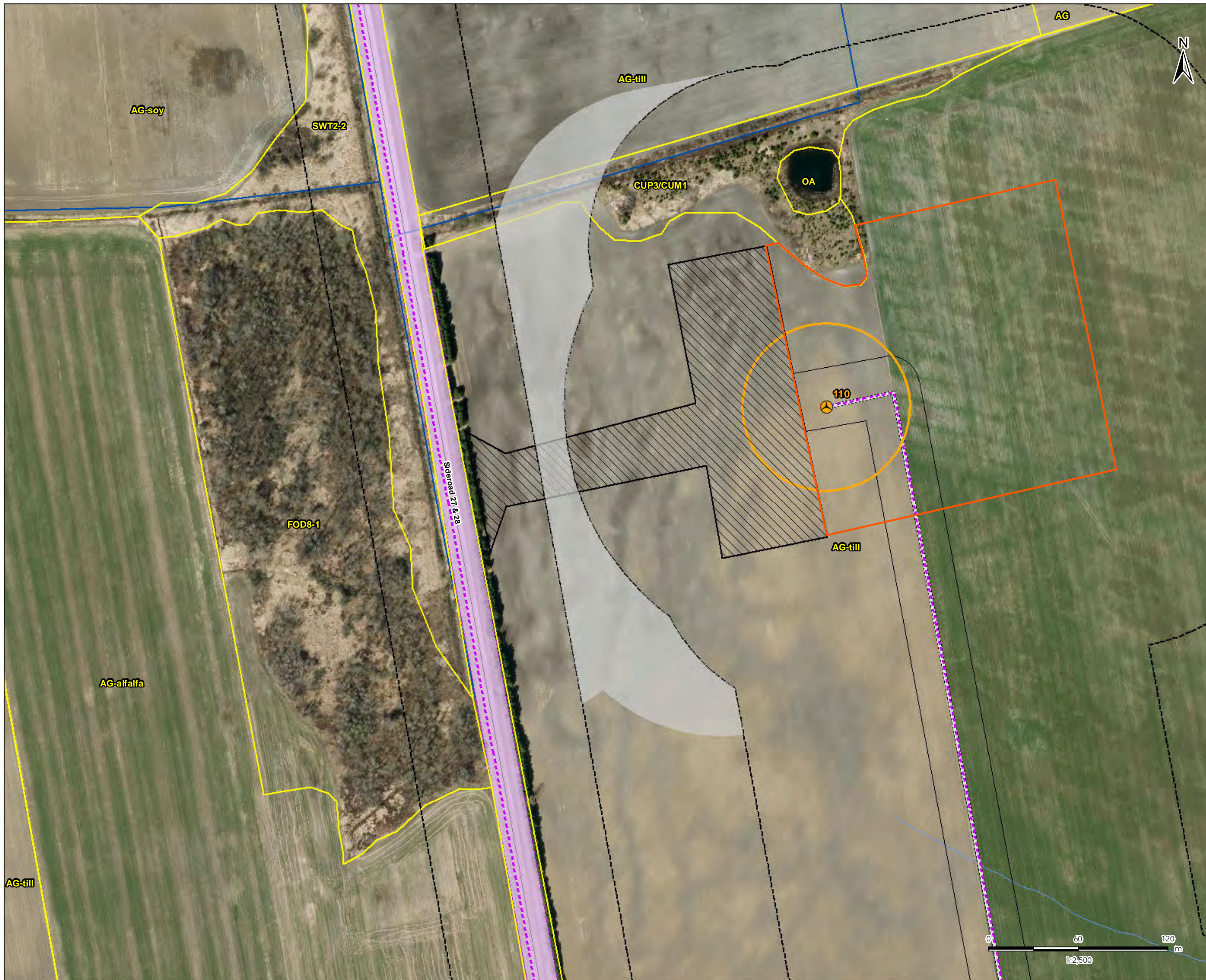
Kathy Woeller, Regional Land Use Planning Supervisor

**Reference: NHA Addendum - Technical and Project Design Changes  
Grand Valley Wind Farms - Phase 3 Wind Project**

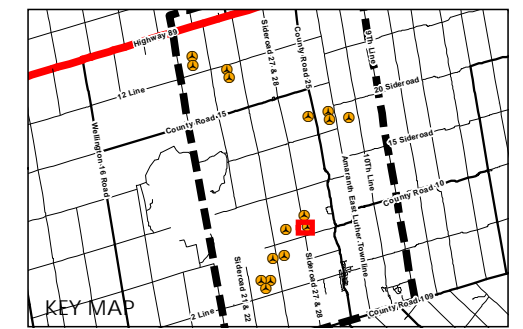
## **Attachment B**

# **Proposed Project Modification Maps**





- Legend
- Previously Unassessed Portion of 120m Zone of Investigation
  - Previously Assessed 120m Zone of Investigation
  - Additional Constructible Area (Assessed 2014)
  - Previously Assessed Proposed Project Components**
  - ⊙ Turbines
  - Access Roads
  - Collector Lines
  - Collector Line ROW
  - Turbine Blade Reach (56.5m)
  - Turbine Construction Area
  - Existing Features**
  - Road
  - Constructed Drain
  - Watercourse
  - ELC
  - Waterbody



- Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
  2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
  3. Orthoimagery © First Base Solutions, 2010

June 2014  
160960698

Client/Project  
Grand Valley Phase 3  
GVWF Inc.

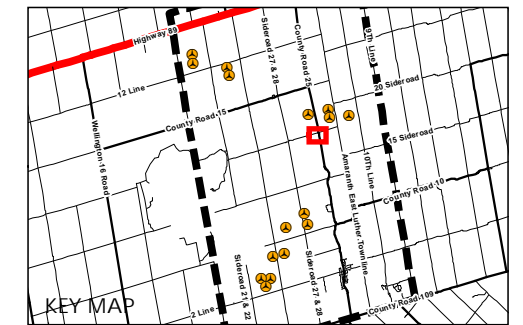
Figure No.  
1

Title  
T110- Modification





- Legend**
- Adjusted 120m Zone of Investigation
  - Original 120m Zone of Investigation
  - Additional Constructible Area (Assessed 2014)
  - Previously Assessed Proposed Project Components**
  - Turbines
  - Collector Lines
  - Collector Line ROW
  - Transformer Location/  
HONI Connection Point/  
Met Tower/ Construction  
Laydown (Previously Assessed)
  - Existing Features**
  - Road
  - Constructed Drain
  - Watercourse
  - ELC
  - Waterbody



- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
  2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
  3. Orthomagery © First Base Solutions, 2010

June 2014  
160960698

Client/Project

Grand Valley Phase 3  
GVWF Inc.

Figure No.  
2

Title

Transformer Site- Modification





June 20, 2014

Kathy Woeller, Regional Land Use Planning Supervisor

**Reference: NHA Addendum - Technical and Project Design Changes  
Grand Valley Wind Farms - Phase 3 Wind Project**

## **Attachment C**

### **2012 ELC Field Map – Original Location of T110 access road**





### Legend

- Study Area Boundary
- 120m Zone of Investigation
- Proposed Project Components**
- Turbines
- Turbine Blade Reach (56.5)
- Access Roads
- Collector Lines
- Existing Features**
- Railway - Active
- Railway - Non-Active
- Hydro Line
- Watercourse
- Optioned Property
- Property Parcel
- ANSI - Provincially Significant Life Science
- Waterbody
- ELC
- Wetland (Stantec)
- Candidate Significant Woodland

- ### Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
  2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.
  3. Orthographic imagery provided by Grand River Conservation Authority © First Base Solutions, 2011. Imagery taken in Spring 2010.



**Stantec**

October, 2012  
160960998

Client/Project  
Grand Valley Phase 3  
Veresen Inc.

Figure No.  
Tile 3 of 20

Title  
**ELC**





July 10, 2014

Sue Edwards, Senior Project Evaluator

**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

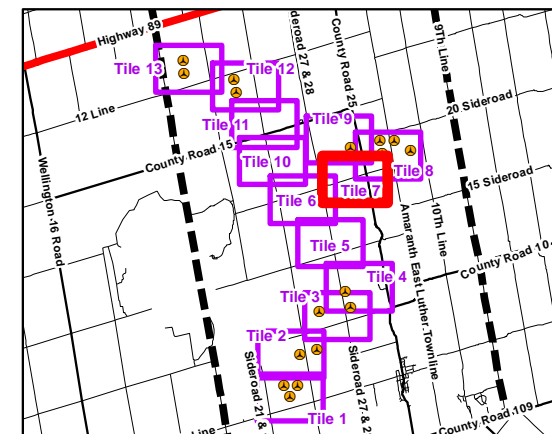
## **Attachment F Location of Expanded Transformer Station Site**





**Legend**

- Proposed Project Components**
- Turbines
  - Access Roads
  - Collector Lines
  - Transformer Location/ HONI Connection Point/ Met Tower/ Construction Laydown
  - Turbine Construction
  - Optional Property
- Existing Features**
- Road
  - Constructed Drain
  - Watercourse
  - Waterbody
- Survey Method**
- Previously Assessed and Reported – Stantec 2012 (P001-673-2012)
  - Pedestrian Survey, Assessed at 5m
  - Previously Disturbed, Not
  - Test Pit Survey, Assessed at 5m
  - Photo Location



**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2011.
3. Orthographic imagery provided by Grand River Conservation Authority © First Base Solutions, 2011. Imagery taken in Spring 2010.



**Stantec**

June 2013  
160960698

Client/Project

Grand Valley Phase 3  
Veresen Inc.

Figure No.

4.7

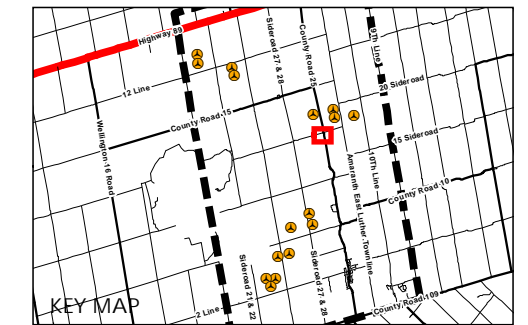
Title

**Stage 2 Survey Methods  
Tile 7 of 13**





- Legend**
- Adjusted 120m Zone of Investigation
  - Original 120m Zone of Investigation
  - Additional Constructible Area (Assessed 2014)
  - Previously Assessed Proposed Project Components**
  - Turbines
  - Collector Lines
  - Collector Line ROW
  - Transformer Location/  
HONI Connection Point/  
Met Tower/ Construction  
Laydown (Previously Assessed)
  - Existing Features**
  - Road
  - Constructed Drain
  - Watercourse
  - ELC
  - Waterbody



- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
  2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
  3. Orthomagey © First Base Solutions, 2010

June 2014  
160960698

Client/Project

Grand Valley Phase 3  
GVWF Inc.

Figure No.  
2

Title

Transformer Site- Modification





July 10, 2014

Sue Edwards, Senior Project Evaluator

**Reference: Notice of Technical and Project Design Changes – Grand Valley Wind Farms - Phase 3 Wind Project MOE Ref. No. 3624-98EQPN**

## **Attachment G**

### **Notice of Project Change**

# NOTICE OF PROPOSED CHANGE TO A RENEWABLE ENERGY PROJECT

**Project Name:** Grand Valley Wind Farms - Phase 3 Wind Project

**Project Location:** Town of Grand Valley and Township of Amaranth, County of Dufferin, Ontario. The Project Study Area is generally bordered on the north by Highway 89, on the south by County Road 109, on the east by 9th Line and on the west by East West Luther Townline (see map).

**MOE Reference Number:** 3624-98EQPN

**FIT Reference Number:** FIT-FBK61WV

**Dated At:** the Town of Grand Valley, this, the 14th of July, 2014.

Grand Valley Wind Farms Inc. (GVWF) is planning to engage in a renewable energy project in respect of which the issuance of a Renewable Energy Approval (REA) is required. The project is subject to the provisions of the *Environmental Protection Act* (Act) Part V.0.1 and Ontario Regulation 359/09 (Regulation). This notice must be distributed in accordance with Section 16.0.1 of the Regulation. This notice is being distributed to make the public aware of a proposed change to the project.

## Project Description:

Pursuant to the Act and Regulation, the facility, in respect of which this project was originally proposed to be engaged in, consisted of a Class 4 wind facility with between 14 and 17 turbines generating a maximum nameplate capacity of 40 MW. The Project continues to include ancillary works including an electrical collector system, a substation, temporary construction areas, and access roads.

## Proposed Change:

Following consultation with stakeholders, GVWF has decided to remove turbine T107 from the Project layout (see map). In addition, GVWF has opted to increase the size of the construction area for the transformer station, remove the eastern access road option for turbine T112, and move the access road to turbine T110 to run east-west from Sideroad 27/28. The locations for the remaining turbines, substation, and infrastructure, remain unchanged.

## Documents for Public Inspection:

Further details regarding the proposed change to the Project are provided in the Modification Document (July 2, 2014) on the Project website at: <http://www.vereseninc.com>

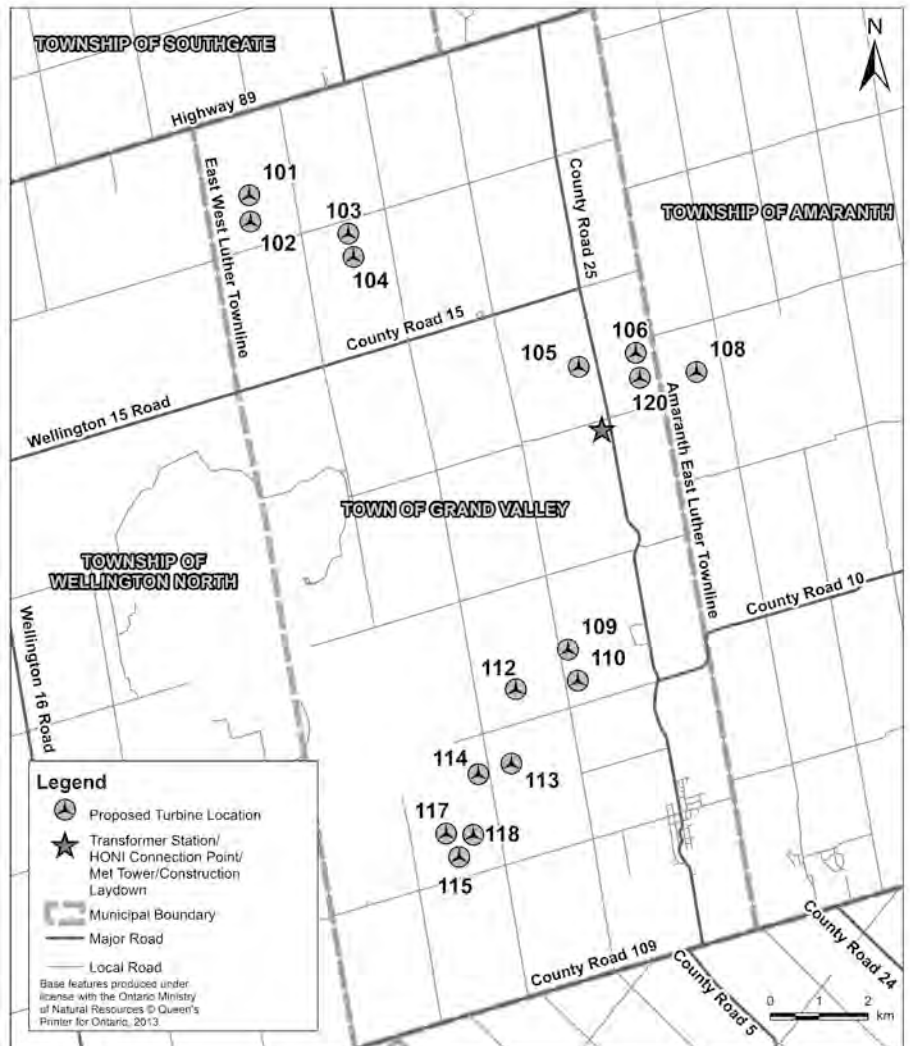
## Project Contacts and Information:

To learn more about the Project, to communicate questions or comments, or to be added to our Project distribution list, please contact the Project team via email at [gvwf@vereseninc.com](mailto:gvwf@vereseninc.com)

or by telephone at 1-855-705-3280.

Comments and questions can also be directed to:

**Grand Valley Wind Farms Inc.**  
P. O. Box 21103  
RPO Meadowvale  
Mississauga, ON L5N 6A2



**GRAND VALLEY WIND FARMS**  
ENERGY PROJECTS