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March 28, 2013

RESS, EMAIL & COURIER

Ontario Energy Board
P.O. Box 2319
27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

Attention: Ms. K. Walli, Board Secretary

Dear Ms. Walli:

Re: Dufferin Wind Power Inc. - Application for Leave to Construct (EB-2012-0365) - Second Amendment to Application and Pre-filed Evidence

We are counsel to the applicant Dufferin Wind Power Inc. ("DWPI" or the "Applicant") in the above-referenced proceeding. DWPI filed its application and pre-filed evidence on September 21, 2012 (the "Application") and on November 23, 2012 filed an amendment to the Application. Recent developments necessitate a further amendment to the Application. Specifically, changes reflected in this amendment concern the proposed Transmission Line route and are necessary to ensure consistency between the Application and the routing contemplated by the Applicant's Renewable Energy Approval ("REA") application, as updated by a Changes Report that has recently been filed with the Ministry of the Environment. In DWPI's view, the changes are not material. In accordance with Section 11 of the Board's *Rules of Practice and Procedure*, DWPI therefore seeks to amend its Application as follows.

1. **REA Changes Report**

On March 27, 2013, the Applicant received confirmation from the Ministry of the Environment that certain REA changes do not have the potential to result in increased environmental effects of any significance and providing instructions to DWPI with respect to providing notice of the changes as part of the REA process. A copy of the REA Changes Report is attached as Appendix 'A'.[1]

[1] The complete REA Changes Report is over 500 pages long, the majority of which is comprised of appendices that are not relevant to the leave to construct amendment. As such, we are only including the main body of the report and Appendix A thereto. The complete report is available on the project website at http://www.dufferinwindpower.ca/ReportsApplications.aspx

2. **The Amendment**

(a) *Description of the Amendment*

To ensure consistency with the route now contemplated by the REA application, DWPI hereby amends the transmission line routing in the Application in one particular area, as follows. The relevant changes are contemplated by "Change #1" in the REA Changes Report.

Map 5(a) in Exhibit B, Tab 2, Schedule 4 of the Application, which is marked as Drawing No. 1248-P001-S01 - Revision A, currently shows that at the point where the transmission line route reaches the west side of 4th Line it will transition from overhead to underground. The line would then cross 4th Line underground and continue running to the west underground for approximately 250 m, at which point it would transition from underground back to overhead and continue in a south-westerly direction. The thick green line on Map 5(a) depicts the approximate length of this underground segment.

DWPI amends this portion of the transmission line route. At the point where the transmission line route reaches the west side of 4th Line, rather than transitioning from overhead to underground the line would remain overhead and run south along the east side of 4th Line within the municipal road right-of-way for a length of approximately 110 m. The line would then cross over 4th Line and continue to the west until the point where it meets the transmission line route as shown in the current version of Map 5(a). An amended set of maps, including in particular a revised Map 5(a), together with blacklined pages showing corresponding changes to the pre-filed evidence and certain interrogatory responses, is provided in Appendix 'B'.

(b) *Rationale and Physical Design*

The above change is needed to ensure consistency with the description of the route contemplated by DWPI's REA application, as updated pursuant to the REA Changes Report. As described in the REA Changes Report, this routing change resulted from a request by the property owner to minimize impacts on farming operations and the area available for agricultural use. Notably, the overhead to underground transition structures depicted in Figure 5(b) of Exhibit B, Tab 2, Schedule 5 will no longer be needed at each end of the previously planned underground segment in this location. Instead, two poles will be used along the municipal road right-of-way. Between 4th Line and the point where the revised route meets the route as originally sought, there is not expected to be any change in the number of poles from the current design. These poles will be of a design that is consistent with the other poles being used along this portion of the route, as currently contemplated in the Application.

(c) *Affected Landowners and Land Rights*

There are five landowners affected by the amendment. As described below, the amendment does not give rise to any concerns with respect to notice in this proceeding.

- First is the owner of the property to the east of 4th Line where the current Application contemplates overhead to underground transition facilities. This landowner was served with the initial Notice of Application and Hearing, is a participating land owner in the Dufferin Wind Farm Project and has already granted interests in lands to the Applicant for purposes of transmission facilities on the same property. The amendment will result in the transition facilities no longer being required on this landowner's property.

- Second is the owner of the municipal road within which the amended route will run for approximately 109 m. The owner of the road is the Township of Melancthon, which is already an intervenor in this proceeding.

- Third is the owner of the lands adjacent to the road right-of-way on the east side of 4th Line, which would therefore be indirectly affected. The owner of this property is 3191574 Nova Scotia Company doing business as The Highland Companies. The Highland Companies is also an intervenor in this proceeding.

- Fourth is the owner of a small parcel of land which the underground line would have crossed under the alignment initially sought. As the amended route will no longer cross this property, this land owner will not be adversely impacted by the amendment.

- Fifth is the owner of the property on the west side of 4th Line where the overhead transmission line will now run along the amended route and where underground to overhead transition facilities will no longer be required. This landowner was served with the initial Notice of Application and Hearing, is a participating landowner in the Dufferin Wind Farm project and has already granted interests in lands to the Applicant for purposes of transmission facilities on the same property.

The Applicant is in the process of finalizing amendments to the existing leases with the relevant landowners. No land rights are required from The Highland Companies. With respect to the use of the municipal road right-of-way, the Applicant relies on its statutory rights pursuant to section 41 of the *Electricity Act, 1998*.

3. **Updated Description of Underground Segments**

As indicated in the REA Changes Report, the Applicant has also amended its REA application so as to provide for the possibility of extending certain underground segments of the route. As these changes do not affect the transmission line routing being proposed in the Application, DWPI believes that these changes are not material. However, as the pre-filed evidence included descriptions of the locations and approximate lengths of the underground segments, it is appropriate to update the information that has been provided for consistency with the REA application.

Exhibit D, Tab 1, Schedule 1, p. 5 of the Application describes certain underground segments contemplated for the transmission line. In particular, this section indicates DWPI's plans for four discrete underground segments. As a result of the amendment described above, the underground segment near 4th Line and County Road 21 will no longer be required. With respect to the underground segment through the Town of Shelburne, the Application currently indicates that it will be approximately 1.7 km in length. Consistent with the REA Changes Report, DWPI is considering the possibility of extending this underground segment as far out as the Town limits, for a total length of up to 3.2 km. With respect to the two remaining underground segments described in the Application, for purposes of crossing a Hydro One line and for entering into the Switching Station, DWPI is considering the possibility of combining these two segments so as to have a continuous underground segment from just north of the existing Hydro One line all the way to the Switching Station, for a total length of approximately 1.6 km. These potential changes are the result of input received from the local communities and are still being assessed by the Applicant. Neither of these potential changes would have any impact on the proposed routing. The relevant changes are shown on the revised set of maps and blacklined pages provided in Appendix 'B'.

4. Project Substation Orientation

DWPI also amends the orientation of the project substation. Although the location of the substation will not change, rather than being situated with a north-south orientation, it will instead be situated with an east-west orientation. This change results from discussions with the affected landowner and is in response to the landowner's desire to maximize the area available for productive agriculture. Not only does this allow for a more compact layout, but it also allows for the transmission line running up the east side of the property to be positioned closer to the property boundary so as to minimize the impact on the remainder of the property. The Applicant has determined that no changes are required for purposes of the REA application to reflect this reorientation as the REA already contemplates an area that incorporates the revised station footprint. The revised orientation is shown in the amended Exhibit B, Tab 2, Schedule 4, Figure 5(a) and in the amended Exhibit B, Tab 2, Schedule 5, Figure 2(a), both of which are included in Appendix 'B' hereto.

5. Procedural Matters

As indicated, the Applicant believes that the changes and updates described herein are not material and, therefore, should not give rise to any additional procedural steps in the proceeding. Accordingly, DWPI intends to file its Argument-in-Chief concurrently with the filing of this amendment.

Procedural Order No. 5, which was issued simultaneously with the filing of a letter by the Applicant on March 27, 2013, requires DWPI to have filed its Argument in Chief by March 27, 2013. The Applicant's letter indicated its intention to file this amendment together with the Argument-in-Chief on March 28, 2013. Accordingly, should intervenors require an additional day to file their submissions beyond the April 9 deadline established in Procedural Order No. 5, DWPI would not object and would request the same courtesy so as to preserve the period of time afforded to DWPI for purposes of reply submissions.

Yours truly,

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cc: Mr. J. Hammond, Dufferin Wind
Mr. C. Keizer, Torys LLP
Intervenors

APPENDIX 'A'

REA Changes Report

Dufferin Wind Power Inc.

DUFFERIN WIND POWER INC.

Dufferin Wind Power Project

Renewable Energy Approval Changes Report

March 2013

DILLON CONSULTING

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1. INTRODUCTION

The Dufferin Wind Power Project (the Project) is a wind facility being developed by Dufferin Wind Power Inc. (DWP), an entity owned by Longyuan Canada Renewables Ltd. (Longyuan Canada) and Farm Owned Power (Melancthon) Ltd. (FOPM). The wind farm, located in the Township of Melancthon in the County of Dufferin and will consist of 18 General Electric (GE) 2.75 MW and 31 GE 1.6 MW wind turbines for a total of 49 wind turbines with a nameplate capacity of 99.1 MW and expected energy generation of 91.4 MW. The wind turbines will be situated entirely on privately owned land that is currently under agricultural production of row crops, pastureland or land that has been left fallow.

A 100 MW contract from the Ontario Power Authority (OPA) for the sale of electricity from wind power through the Province's Feed-in-Tariff (FIT) program (enabled by the *Green Energy and Green Economy Act*) has been received for the Project. The Project will require approval under *Ontario Regulation 359/09, Renewable Energy Approval* (REA or *Ontario Regulation 359/09)* under Section V.0.1 of the *Ontario Environmental Protection Act.* Based on the REA regulation, this project is a 'Class 4' wind facility.

In August 2012, DWP filed a REA application. In November 2012, a Clarification report was issued for the Project which included a revised Noise Study Report and the presentation of the entire route for the 230 kV power line. The REA application was deemed complete by the Ministry of the Environment (MOE) on December 27, 2012 and is currently under technical review with the MOE. The following reports are included in the final REA submission:

- Project Description Report
- Construction Plan Report
- Design and Operations Report
- Consultation Plan Report
- Decommissioning Report
- Property Line Setback Report
- Wind Turbine Specification Report
- Water Assessment Report
- Water Body Report
- Natural Heritage Assessment:
  - Records Review
  - Site Investigation Report
  - Evaluation of Significance Report
  - Environmental Impact Study Report
- Noise Study Report
- Stage 1 & 2 Archaeological Assessment
- Cultural Heritage Self-Assessment
- Clarification Report

Since November 2012, project design has continued and minor updates to the project site plan and proposed construction methods require that a Project Changes Report be submitted to the MOE. This Changes Report outlines the proposed changes since the submission of the Clarifications Report in November 2012. The changes can be generally described as minor modifications to the existing buildable area and the inclusion of two proposed extensions of the 230 kV power line underground sections that would have otherwise been aboveground. The latter are being presented as possible alternatives based on input from the stakeholder

consultation process. Technical studies are currently confirming whether or not these underground extensions are feasible. The project location would not change as a result of the proposed extensions of underground power line.

2. DESCRIPTION OF CHANGES

Please see **Figures 1 and 2a** through **2d** in **Appendix A** for revised site plans of the Project.

Change 1: Expansion of Transmission Line Easement on T31 and T32 Properties

DWP received a request from a property owner whose preference would be to have the project's power line closer to his property line to minimize impacts on his farming operations. As a result of this request, DWP is proposing to alter the 230 kV transmission line easement and expand the buildable area. This results in the power line easement shifting south on the property west of 4th Line (the property with Turbine 32) (**Inset 1**) and 20 m closer to the property line on the T32 property. The transmission line is along the edge of Wetland 97/Woodland S (**Inset 1**). The proposed transmission line infrastructure is situated in a similar location to the previous alignment. The result of this minor shift would increase the amount of productive agricultural land on this property. As the components will remain outside of the natural features, no new effects are anticipated and no revisions to the previously confirmed mitigation approach submitted and approved by the Ministry of Natural Resources (MNR) are needed.

Change 2: New Alignment for Underground Collector Line to Connect T32 and T33

The previous alignment of this collector line would require Horizontal Directional Drilling (HDD) under Wetland 12. To reduce the impact to this wetland feature, a new alignment is proposed to avoid the wetland. The new feeder line would be located on the adjacent property that is under agricultural production (**Inset 2**). The new location for the feeder line does not encroach into natural features although it is adjacent to Wetland 12, Significant Amphibian Breeding Habitat and Generalized Candidate Significant Wildlife Habitat.

The following mitigation measures, which have already been outlined and approved by the MNR, are presented again here and will be applied to the wetland feature and associated habitats to reduce the potential for negative environmental impacts of the proposed alternative feeder line:

- Spoils from the site will be removed in a timely manner. If storage of spoils is required they should be no closer than 30 m from Wetland 30

- An Erosion and Sediment Control (ESC) plan, based on standard construction practices, will include silt fencing around the work area if within 30 m of a wetland, woodland or waterbody and stockpiling of excavated materials will be minimized to prevent runoff into adjacent areas and to protect surrounding areas prior to site preparation
- ESC structures should be monitored regularly to ensure that they are fully functional. Should the structures not be functional, they should be immediately repaired
- Disturbed areas will be re-graded to preconstruction conditions and revegetated using native plant species typical of the adjacent habitat
- The construction area adjacent to sensitive natural features should be clearly delineated by silt fencing or other similar boundary, to avoid impacting the adjacent feature(s).

This project change would bring another participating property owner into the Project. Agreements are currently in place with this property owner.

Change 3: Shift of Feeder Line within Existing Buildable Area of T48

To avoid an existing archaeological resource that was identified through the Stage 2 survey work, DWP is proposing to alter the underground collection system path to Turbine 48, moving it further to the south, but still contained within the previously identified buildable area (**Inset 3**). The alteration will result in a section of the feeder line being further from a significant wetland and only 2 m closer to Woodland Z. As such, no additional effects are expected and the previously confirmed mitigation approach with the MNR will still be used.

Change 4: Reroute of Feeder Line between T38 and T39

The existing feeder line between T38 and T39 currently runs parallel to Significant Woodland T and Significant Wetland 28 (**Inset 4**). To reduce the impact to these natural features and to minimize the distance of the collector system, the feeder line will be rerouted and installation would use HDD to connect the collector system under these natural features. Previously the feeder line would have been trenched adjacent to the woodland and wetland features.

Potential effects relating to HDD include:

- Limited potential for increased erosion and sedimentation into wetlands
- Localized temporary displacement of wildlife due to noise and vibration.

The effects are temporary and with the following mitigation measures, no residual effects are anticipated:

- Develop and implement an erosion and sediment control (ESC) plan (based on standard construction practices) which will include silt fencing around work area if within 30 m of a wetland, woodland or waterbody and minimize any stock piled or excavated materials in the project location to prevent runoff into adjacent areas and to protect surrounding

areas prior to site preparation. Any stockpiled material will be stored more than 30 m away from a wetland, woodland or waterbody
- Erosion and sediment control structures should be monitored regularly to ensure that they are fully functional. Should erosion and sediment control measures not be functional, they should be immediately repaired
- Construction area adjacent to sensitive natural features should be clearly delineated by sediment or erosion control fencing or other similar boundary, to avoid impacting the adjacent feature(s)
- Develop a frac-out plan for HDD areas.

This project change would bring another participating property owner into the Project. Agreements are currently in place with this property owner.

Change 5: 230 kV Transmission Line – Overhead through Wetland Features

An amendment to *Ontario Regulation 359/09* was made under the *Environmental Protection Act* and was filed on November 2, 2012, with the Registrar of Regulations as *Ontario Regulation 333/12*. The amendment "*allow[s] for the construction, installation or expansion of a transmission or distribution line…within provincially significant southern and provincially significant coastal wetlands, subject to the completion of an environmental impact study prepared in accordance [with] MNR's Natural Heritage Assessment Guide."*

For the 230 kV transmission line, DWP originally planned to HDD under all provincially significant wetland features. Since the above noted regulation change, DWP now plans to install its 230 kV transmission line across wetland boundaries of Provincially Significant Wetland units.

Extensive mapping, potential environmental impacts and mitigation measures to be employed during construction are outlined in great detail in DWP's Addendum 4 to the Dufferin Wind Project – Update to the Natural Heritage Assessment Environmental Impact Study in Accordance with Natural Heritage Amendments to *O.Reg 359/09*, attached as **Appendix C**. Please see **Inset 5** for revised mapping. This addendum was submitted to the MNR and DWP received the MNR's sign-off for this change on February 20, 2013 (see **Appendix C**).

There is no change to the project location associated with this proposed change.

Possible Change 6: Extend the Underground Section of 230 kV Transmission Line through Shelburne

DWP has committed to installing the 230 kV transmission line underground through the Town of Shelburne (**Option 1** on **Inset 6**). Specifically, the 230 kV transmission line in the portion of the rail corridor between Silk Drive and Victoria Street will be installed using a combination of HDD and open-cut trenching. HDD will be used to install the line underneath the watercourse

(Water Crossing 27), Wetlands 53 and 54, and Significant Woodland AS. Mitigation measures that have been proposed in the Environmental Impact Study and NHA Addendum 1 associated with transmission line installation and maintenance will be implemented.

Mitigation measures include:

- Developing an Erosion and Sediment Control (ESC) Plan
- Locating HDD staging areas at least 10 m from wetland boundaries
- Developing a frac-out response plan
- Committing to stockpiling materials, dewatering discharge and refueling outside of the 30 m setback to wetlands and woodlands.

The open-cut trenching areas proposed do not encroach into natural features.

The local community has requested that the underground section of the power line be extended to the Town limits. As a result, DWP is responding to community comments and is seeking to permit both the current configuration of aboveground and underground power line and an alternative, whereby the underground portion of the power line through Shelburne is extended to the Town limits (i.e., along the rail corridor starting north of 4th Line Road and to 30th Side Road in the south – **Option 2** on **Inset 6**). There would be no change to the project location. There are no significant natural features that would be affected by this alternative. This alternative is currently being considered from a technical and cost perspective. DWP would like to obtain approval for the original underground section and the extended underground section. If through technical feasibility studies it is found to be a viable option, DWP would like to already have permitting in place. The MNR has sanctioned the approach of approving both alternatives.

Possible Change 7: Extend the Underground Section of 230 kV Transmission Line in Amaranth

DWP has planned to install the 230 kV transmission line underground near the Orangeville Transformer Station in order to avoid crossing an existing Hydro One High Voltage Transmission Line (**Inset 7**). DWP has proposed installing the transmission line underground using open-cut trenching and HDD where applicable (i.e., under County Road 11).

DWP is currently examining the option of extending the length of the underground section of the transmission line to the DWP Switch Station near the Orangeville Transformer Station. This would eliminate the need for a secondary aboveground-to-underground transition station. As stakeholders have expressed they would like to see the power line underground, DWP feels that the community would prefer an extension of the underground section of the transmission line. There would be no change to the project location. This alternative is currently being considered from a technical and cost perspective. For the same reasons mentioned above for Change 6, DWP would like to obtain approval for the original underground section and the

extended underground section. There are no significant natural features in the area, thus no mitigation measures are required.

3. MINISTRY OF TOURISM, CULTURE AND SPORT

DWP has secured all required acceptance letters from the Ministry of Tourism, Culture and Sport (MTCS), for the changes presented in this report. Please see **Appendix E** for the Acceptance Letters. Although not required prior to REA approval, DWP has initiated stage 3 archaeological assessments on the site. The first Stage 3 Archaeological Assessment Report and MTCS acceptance letter is provided in **Appendix E**.

4. MINISTRY OF NATURAL RESOURCES

DWP has secured an acceptance letter from the MNR for Change 6 (**Appendix C**). On March 6, 2013, DWP submitted Addendum 5 to the MNR for their review and comment (**Appendix D**). DWP has discussed the changes with the MNR. The nature of the above noted changes all act to improve the site plan from a natural environment perspective by placing project infrastructure further away or beneath natural features. No new construction or mitigation methods are being proposed through these changes. The MNR has already signed off on all of the methods that would be utilized to construct and mitigation impacts from these changes and an acceptance letter for Changes 1 through 5 and 7, is expected in the near future.

5. IMPACT OF PROPOSED CHANGES ON REA DOCUMENTATION

Table 1 is a summary of changes required to the REA documentation.

Table 1: Summary of Changes Required to REA Documentation

Report Page Reference	Previous Wording/Figure	Revised Wording/Figure
Clarification Report		
Appendix A	Final Plan Maps, Figure 1a, b	See revised Figures 1 and 2a through 2d, dated March 2013
Project Description Report		
Figure 2a	Figure 2a displays the site plan as of August 2012	See Revised Figures 1 and 2a through 2d, dated March 2013
Figure 2b	Figure 2b shows the previous underground installation sections of the 230 kV power line	See Revised Figures 2a through 2d, dated March 2013
Figure 3	Figure 3 shows the site plan with REA setbacks	See Revised Figures 2a through 2d, dated March 2013
Figure 4 and 4b	Figure 4 shows the locations of underground installations of the collector line and 230 kV power line routes	See Revised Figures 2a through 2d, dated March 2013
Page 28	DWP currently holds 84 land lease options	DWP currently holds 89 land lease options
Page 31	The Stage 2 report is expected to be available in September 2012	See Clarification Report, dated November 2012
Section 6, Page 41	Consultation Summary	See updates on Consultation activities within Clarification Report and **Section 7** of this Changes Report
Note that the 69 kV power line option was dropped from the application in December 2012. All reference to this power line option should be ignored.		
Construction Plan Report		
Figures 1, 2a, 2b	Figures 1, 2a and 2b display the site plan as of August 2012.	See Revised Figures 1 and 2a through 2d, dated March 2013
Table 3	Table 3 outlines a mobilization and construction start date of spring 2013.	Revised schedule would have mobilization and construction activities starting in summer 2013. The table would remain the same other than pushing back the mobilization and construction start dates to summer 2013.
Figure 3	Figure 3 shows the site plan with REA setbacks	See Revised Figures 2a through 2d, dated March 2013
Page 38	"The 230 kV line will be installed underground in these sections to avoid environmental features and populated areas as well as for some road and line crossings"	"The 230kV line will be installed underground in these sections to avoid populated areas, road crossings and hydro line crossings"
Page 45	"As per the project schedule, installation activities will occur from late spring through winter 2013"	"As per the project schedule, installation activities will occur from summer through winter 2013"
Figures 4a and 4b	Figure 4 shows the locations of underground installations of the collector line and 230 kV power line routes	See Revised Figures 2a through 2d, dated March 2013

Report Page Reference	Previous Wording/Figure	Revised Wording/Figure
Section 5.8 Impacts to Cultural Heritage		Updates to Archaeological Assessment work can be found in the Clarification Report, dated November 2012 and **Section 3** of this report
Note that the 69 kV power line option was dropped from the application in December 2012. All reference to this power line option should be ignored.		
Design and Operations Report		
Figures 1, 2a, 2b	Figure 1, 2a and 2b displays the site plan as of August 2012	See Revised Figures 1 and 2a through 2d dated March 2013
Appendix A	Property Level Site Plans as of August, 2012	Please see revised Property Level Site Plans in **Appendix B** of this report
Note that the 69 kV power line option was dropped from the application in December 2012. All reference to this power line option should be ignored.		
Decommissioning Plan Report		
Figures 1, 2a, 2b	Figure 1, 2a and 2b displays the site plan as of August 2012	See Revised Figures 1 and 2a through 2d, dated March 2013
Note that the 69 kV power line option was dropped from the application in December 2012. All reference to this power line option should be ignored.		
Wind Turbine Specification Report		
Figure 1	Figure 1 displays the site plan as of August 2012	See revised Figure 1 and 2a through 2d, dated March 2013
Note that the 69 kV power line option was dropped from the application in December 2012. All reference to this power line option should be ignored.		
Property Line Setback Report		
No Changes		
Water Assessment Report		
Figures 1, 2a, 2b, 2c, 2d	Figures 2a through 2d displays the site plan as of August 2012	See revised Figures 1 and 2a through 2d, dated March 2013
Figures 3a through 3d	Figures 3a to 3d display the watercrossings required for project infrastructure	The watercrossings remain the same although the sections of 230 kV power line that will be underground or overhead have changed and can be seen in Figures 2a through 2d
Note that the 69 kV power line option was dropped from the application in December 2012. All reference to this power line option should be ignored.		
Water Body Report		
Figures 1, 2a, 2b, 2c, 2d	Figures 2a through 2d displays the site plan as of August 2012	See revised Figures 1 and 2a through 2d dated March 2013
Figures 3a through 3d	Figures 3a through 3d display the watercrossings required for project infrastructure	The watercrossings remain the same although the sections of 230 kV power line that will be underground or overhead have changed and can be seen in Figures 2a through 2d

Report Page Reference	Previous Wording/Figure	Revised Wording/Figure
Table 1	Table 1 outlines the summary of the Water Assessment Site Investigation	The only change to this table would be the 230kV power line crossing overhead over all wetland (watercourse) features instead of directionally drilled underneath. See revised Figures 2a through 2d, dated March 2013 for locations of underground and aboveground section of the 230kV power line.
Table 2	Table 2 outlines a mobilization and construction start date of spring 2013	Revised schedule would have mobilization and construction activities starting in summer 2013. The table would remain the same other than pushing back the mobilization and construction start dates to summer 2013.
Table 7	*230 kV Private Easement Study Area Routing*	As described in the November 2012 Dufferin Clarification Report, a specific route has been determined for the area described as the 230 kV Private Easement Study Area in the water reports. Waterbodies within this area were originally grouped and summarized as one area. Now that the line has been established, the waterbodies falling within 120 m of the project location can be defined and are outlined in **Table 1a**.

Report Page Reference	Previous Wording/Figure	Revised Wording/Figure

Table 1a – Waterbodies within the Area Previously Defined as the 230 kV Private Easement Study Area

Waterbody Crossing	Watershed	Project Components within 120 metres	Distance to Nearest Project Location	Drain Classification
15	Upper Grand	230 kV Overhead Line	In project location	Unclassified
16	Upper Grand	230 kV Overhead Line	65 m	Class C Municipal Drain: Permanent, warm system with no sensitive species or communities present
17	Upper Grand	230 kV Overhead Line	10 m	Class C Municipal Drain: Permanent, warm system with no sensitive species or communities present
18	Upper Grand	230 kV Overhead Line	In project location	Class F Municipal Drain: Intermittent or ephemeral; dry for more than two consecutive months
19	Upper Grand	230 kV Overhead Line	In project location	Class F Municipal Drain: Intermittent or ephemeral; dry for more than two consecutive months
20	Upper Grand	230 kV Overhead Line	In project location	Class C Municipal Drain: Permanent, warm system with no sensitive species or communities present

Section 8.1.3.2	No wording regarding installation activities for the 230 kV power line	*230 kV Line Installation Methodology* Horizontal Directional Drilling (HDD) was the proposed installation method at multiple waterbody crossings along the 230 kV Line. Due to regulation changes allowing overhead poles to be installed in provincially significant wetlands, areas where HDD was proposed have been changed to overhead line installation. Additionally, two options were presented for other waterbody crossings along the 230 kV Line: overhead line or HDD. Overhead line will be the chosen methodology in these areas. The mitigation measures relating to the installation of an overhead line and the waterbodies that are impacted by these changes are shown in the description of mitigation measures below.

Report Page Reference	Previous Wording/Figure	Revised Wording/Figure
Table 8	Table 8 outlines Potential Environmental Effects of the Project on waterbodies within 120 m. This table provides a summary of mitigation measures	The following mitigation measures would be included in Table 8. These mitigation measures relate to waterbodies: 11, 21, 23, 25, 27, 29, 31, 32, 34, 35, 38, 39, 40, 41, 42, 44, 45, 50. • Follow DFO Operational Statement for Overhead Line Construction • Design construction approaches to be perpendicular to water bodies to minimize disturbance to riparian vegetation • Avoid placing poles on meander bends, braided streams, active floodplains or other unstable areas that may result in erosion and scouring of the stream bed or overhead line. Locate poles sufficiently above the high water mark where possible • Operate machinery on land and minimize disturbance to the banks of adjacent water bodies • Install effective sediment and erosion control measures to prevent entry of sediment into the water bodies. Avoid work during wet, rainy conditions • Stabilize waste materials removed from the work site to prevent them from entering water bodies • Vegetate any disturbed areas by planting native trees, shrubs, grasses and cover to prevent erosion
Note that the 69 kV power line option was dropped from the application in December 2012. All reference to this power line option should be ignored.		

6. UPDATE ON CONSULTATION ACTIVITIES

DWP remains committed to ongoing public consultation and community involvement. Since the submission of the project's Clarification Report on November 2, 2012, DWP has actively continued consultation activities.

7. PUBLIC CONSULTATION ACTIVITY UPDATES

General Public Consultation Activities

DWP has continued to make the public and larger community aware of project activities. Since the submission of the Clarification Report on November 2, 2012, DWP has continued with large community advertisement activities including:

- Continuation of weekly newspaper advertisements providing project updates and requesting continued public input. Ads were placed in the Orangeville Banner, Orangeville Citizen, Dundalk Herald, Creemore Echo and Shelburne Free Press
- Continuation of radio advertisements advising of project updates and requesting continued public input. Ads were aired on Jewel FM, based in Orangeville and on AM 740 News Radio based in Toronto
- November 13, 2012 – A public press conference was held at the Dufferin Wind Power Project Office in Shelburne to officially open the office and reach out to the broader community
- On-going updates have been provided on the project website with the latest project news and activities.

DWP has also continued one-on-one landowner consultation activities to ensure the public is fully aware of project activities. One-on-one landowner consultation which has taken place since November 2, 2012 includes:

- Continued responses to formal and informal questions and comments regarding the project
- Ongoing "Kitchen Table Talks" with residents and landowners wishing to ask questions and provide feedback on the project
- January 15, 2013 – Landowner mailings were sent to residents of Shelburne along the abandoned rail corridor to confirm with residents that the 230 kV transmission line would be located underground through the Town of Shelburne and provide resources for additional information
- January 27, 2013 – Door-to-door landowner visitation of residents along the 230 kV transmission line in Shelburne to personally discuss impacts and opportunities with landowners directly affected

- January 29, 2013 – DWP created photo visualizations of the proposed 230 kV power line and overhead-to-underground transition stations and related mapping for the County of Dufferin to present at their open house, where information was to the community relating to the 230 kV power line easement within the rail corridor (see **Appendix F**)
- February to March 2013 – An information package regarding the 230 kV power line was created and distributed to the community and is posted on the project website to respond to concerns relating to the safety of the power line (see **Appendix F**)
- March 6, 2013 – A Project Information Guide was sent out to every household in Melancthon Township. This guide outlined frequently asked questions, provided responses and contact information for DWP (see **Appendix F**)

Municipal Consultation

As the project progresses municipal consultation remains a high priority for DWP. Ongoing consultation activities include:

- December 20, 2012 – DWP dropped the 69 kV power line as an alternative option. All municipalities were immediately notified of the change in the project. Letters were sent to both Mulmur and Mono Townships to advise them of the change and that the project no longer fell within their municipal boundaries
- December 21, 2012 – Farm Owned Power Melancthon provided a delegation to Melancthon Town Council
- January 12, 2013 – Meeting with County of Dufferin to discuss the right-of-way easements, public concerns and address county information requests
- January 23, 2013 – Project representatives met with Town of Shelburne CAO to discuss the 230 kV power line
- January 24, 2013 – Presentation given to the Orangeville Real Estate Board to present information regarding the project and opportunities and impacts to the real estate community
- January 28, 2013 – Information package sent to the County of Dufferin as a supplemental package for a county-held public information session regarding the use of the abandoned rail corridor for the 230 kV power line
- February 14, 2013 – DWP met with the Dufferin County Forest Manager to provide an overview of the project. DWP has prepared a Vegetation Management Plan and will be presenting it to the County Forest Manager for review and comment
- February 22, 2013 – A draft Environmental Management Plan and other information pertaining to the proposed 230 kV Power line was sent to the County of Dufferin for their review and comment.

First Nations Consultation

Saugeen Ojibway Nation

Discussions and consultation with the Saugeen Ojibway Nation are ongoing. The SON have reviewed and provided comments on the archaeological studies and the Natural Heritage Assessment for the Project. DWP has addressed these comments and are continuing to engage with the SON through technical working teams as well as through the SON's administration team and Council.

Six Nations

DWP has a second meeting with the Six Nations First Nations in early March and are working towards building a positive working relationship with this community.

Haudenosaunee Development Institute (HDI)

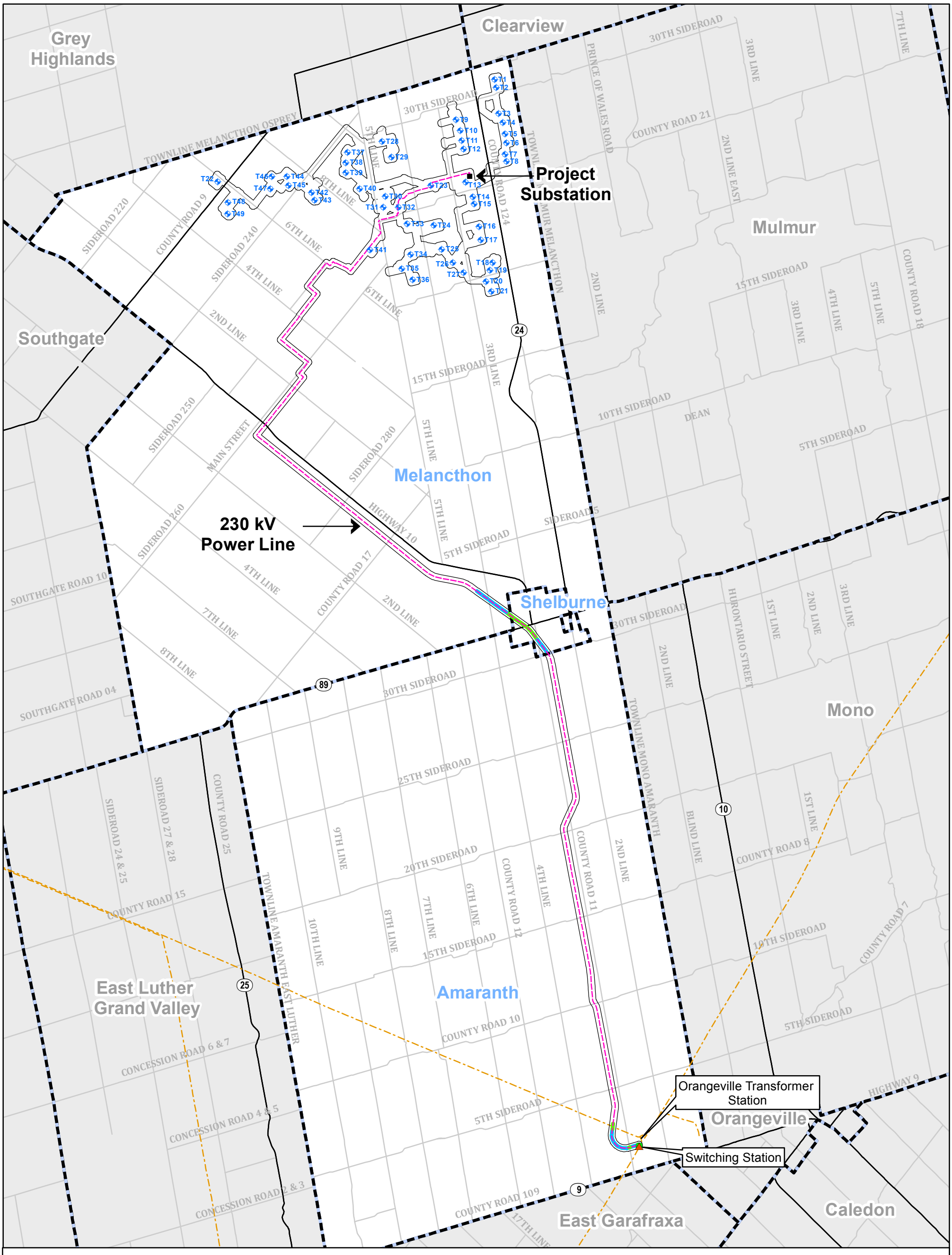
DWP had previously met with HDI and are continuing to contact them to determine their interest in the Project.

Beausoleil First Nation

Dillon Consulting Limited is continuing to try and reach out to this community to determine their interest in the Project.

DILLON CONSULTING LIMITED

Appendix A
Revised Site Plan



Dufferin Wind Power Project
Figure 1: Project Location

Legend

- Turbine Locations
- Substation
- Orangeville Transformer Station
- Switching Station
- Road
- Highway
- Horizontal Direction Drilling and/or Underground Installation
- Potential Horizontal Direction Drilling and/or Underground Installation
- 230 kV Power Line
- Existing Hydro One Transmission Line
- 120 m Project Location Setback
- Municipalities

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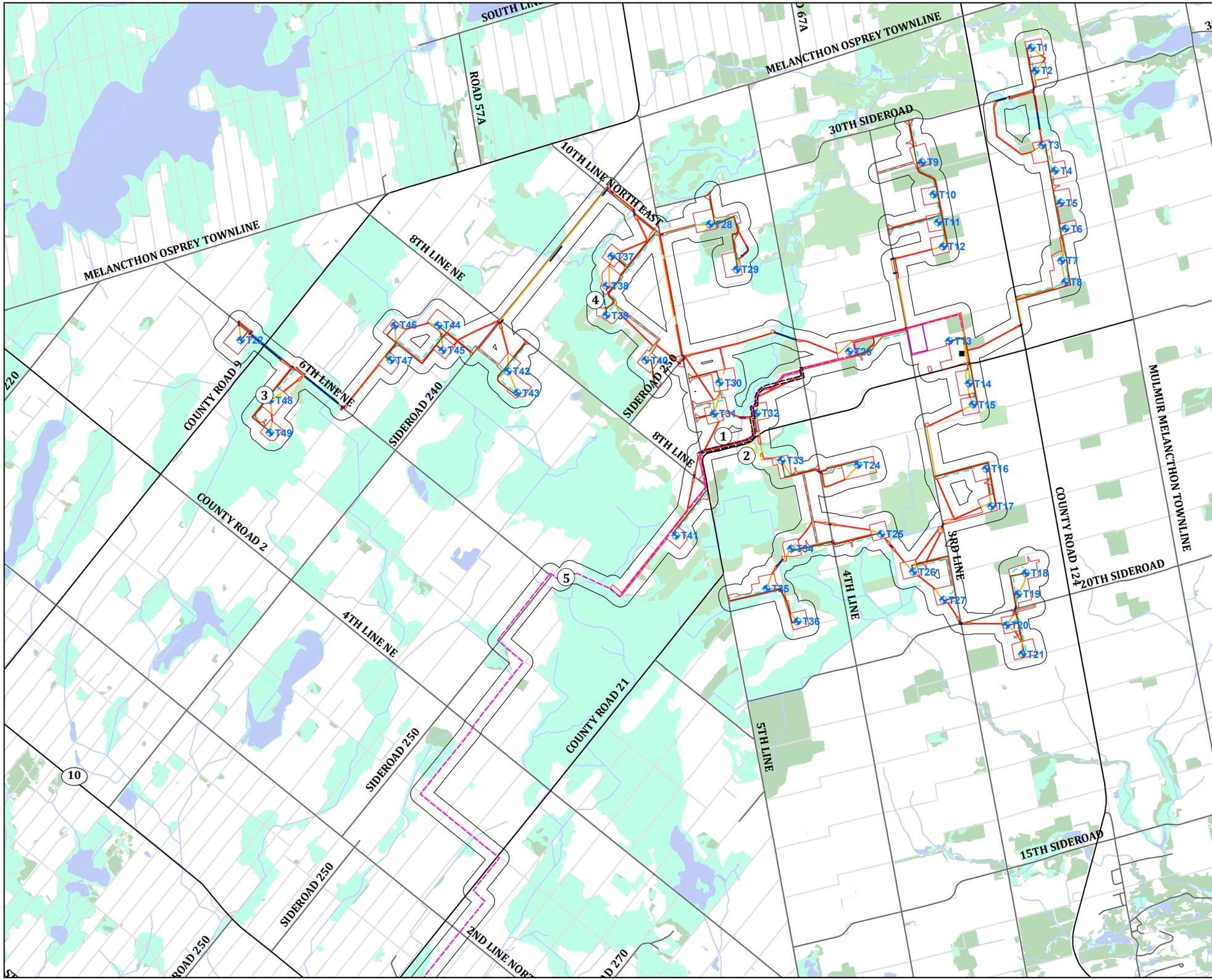
Dufferin Wind Power Project

Figure 2a: Project Location Changes



Legend

- Alternative Project Location Changes
- Major Roads
- Local Roads
- Watercourse
- 120 m Project Location Setback
- Wetland
- Woodland
- Waterbody
- Lots/Concessions

Project Components

- Turbine Location
- Substation
- Directional Drilling
- Crane Paths
- Underground Collector System Path
- Underground Collector Alternate Path
- Access Roads
- 230 KV Line (Overhead)
- O&M Building
- Buildable Area

Project Alternatives

- Alternative Feeder Line
- Alternative Horizontal Directional Drilling
- Alternative Overhead 230 kV Line
- 230 kV Alternative Route

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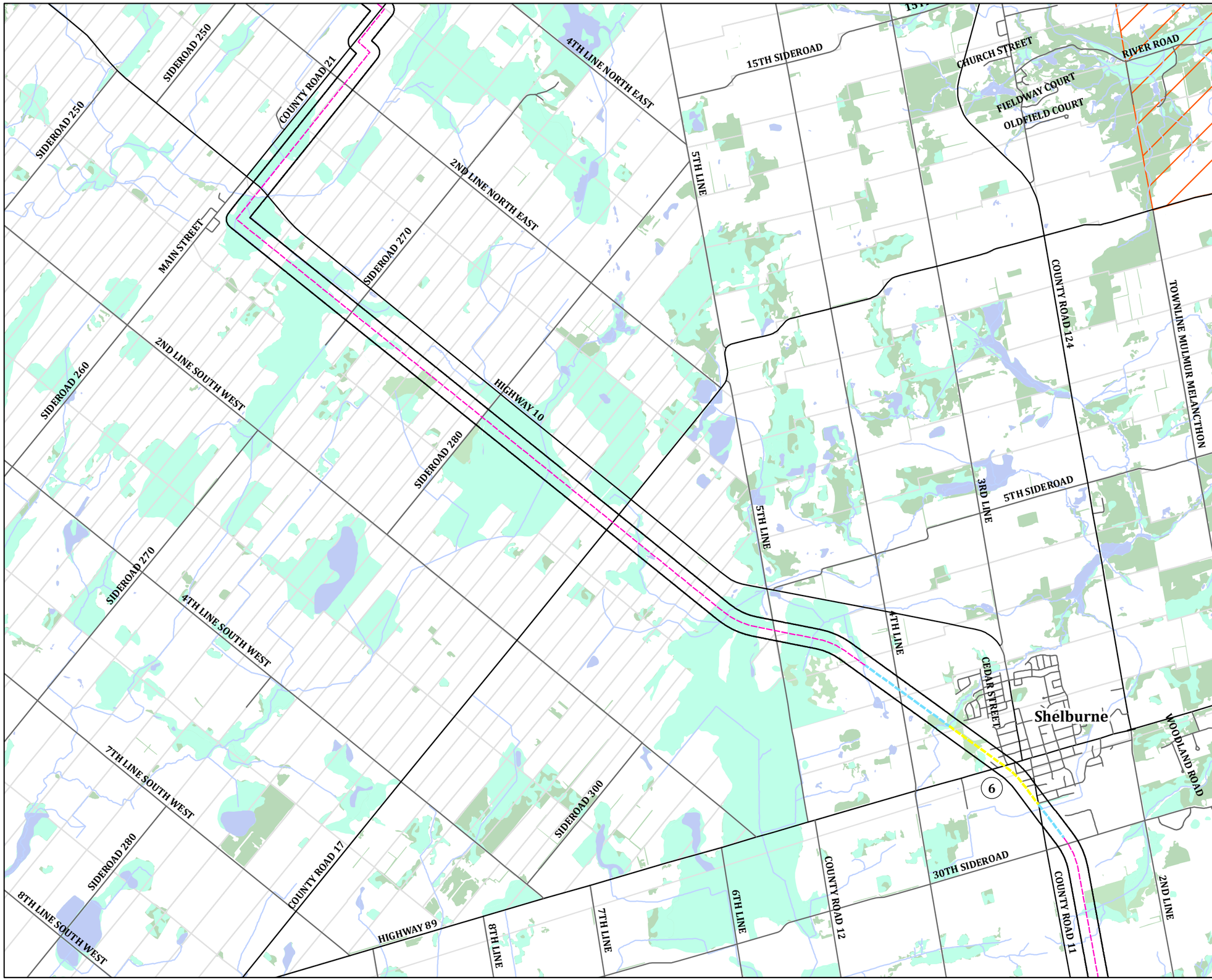
Dufferin Wind Power Project

Figure 2b: Project Location Changes



Legend

- (1) Alternative Project Location Changes
- Major Roads
- Local Roads
- Watercourse
- 120 m Project Location Setback
- Wetland
- Woodland
- Waterbody
- Lots/Concessions

Project Components

- Current 230 KV Line (Underground)
- Potential 230 KV Line (Underground)
- 230 KV Line (Overhead)

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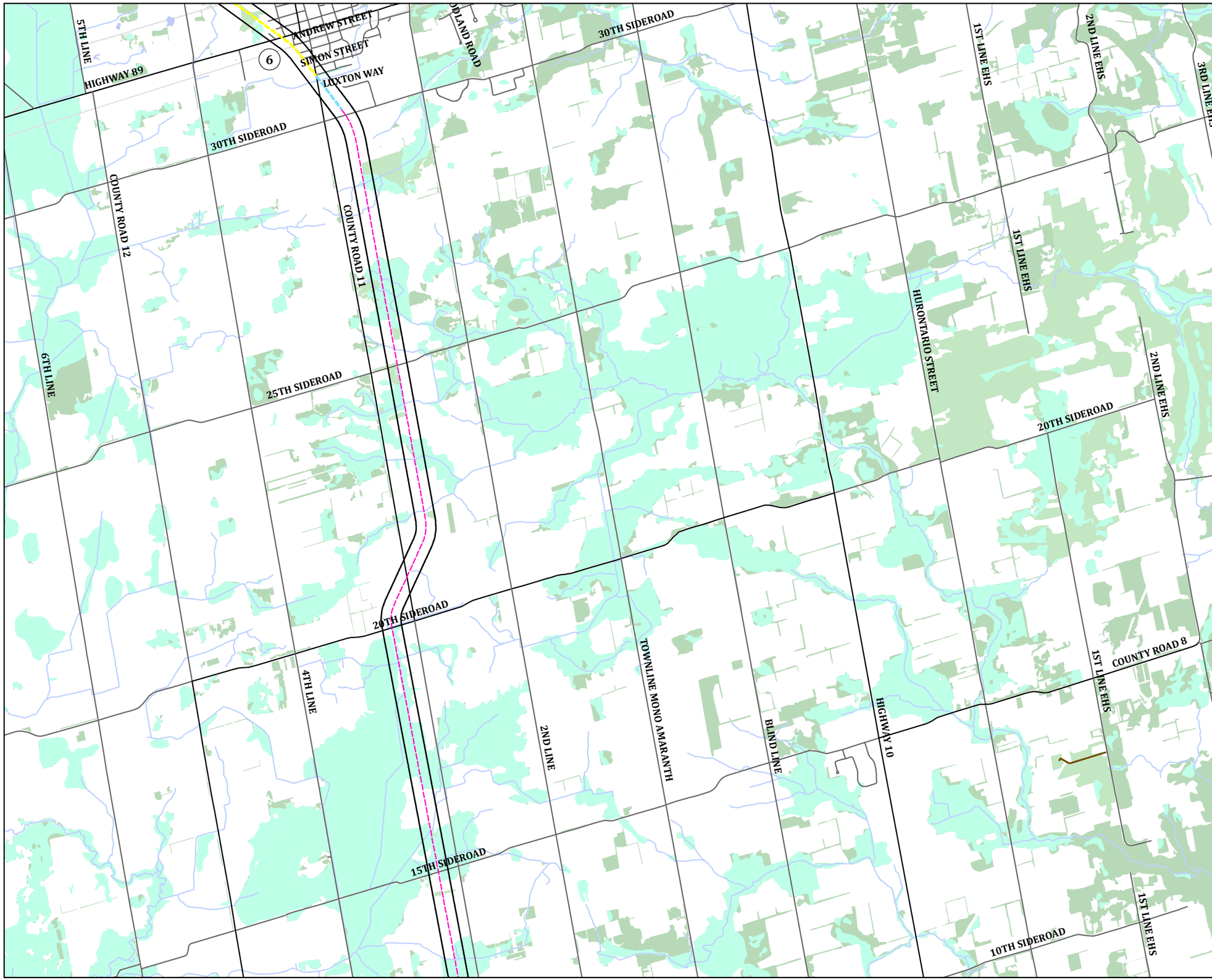
Dufferin Wind Power Project

Figure 2c: Project Location Changes



Legend

- (1) Alternative Project Location Changes
- Major Roads
- Local Roads
- Watercourse
- 120 m Project Location Setback
- Wetland
- Woodland
- Waterbody
- Lots/Concessions

Project Components

- Current 230 KV Line (Underground)
- Potential 230 KV Line (Underground)
- 230 KV Line (Overhead)

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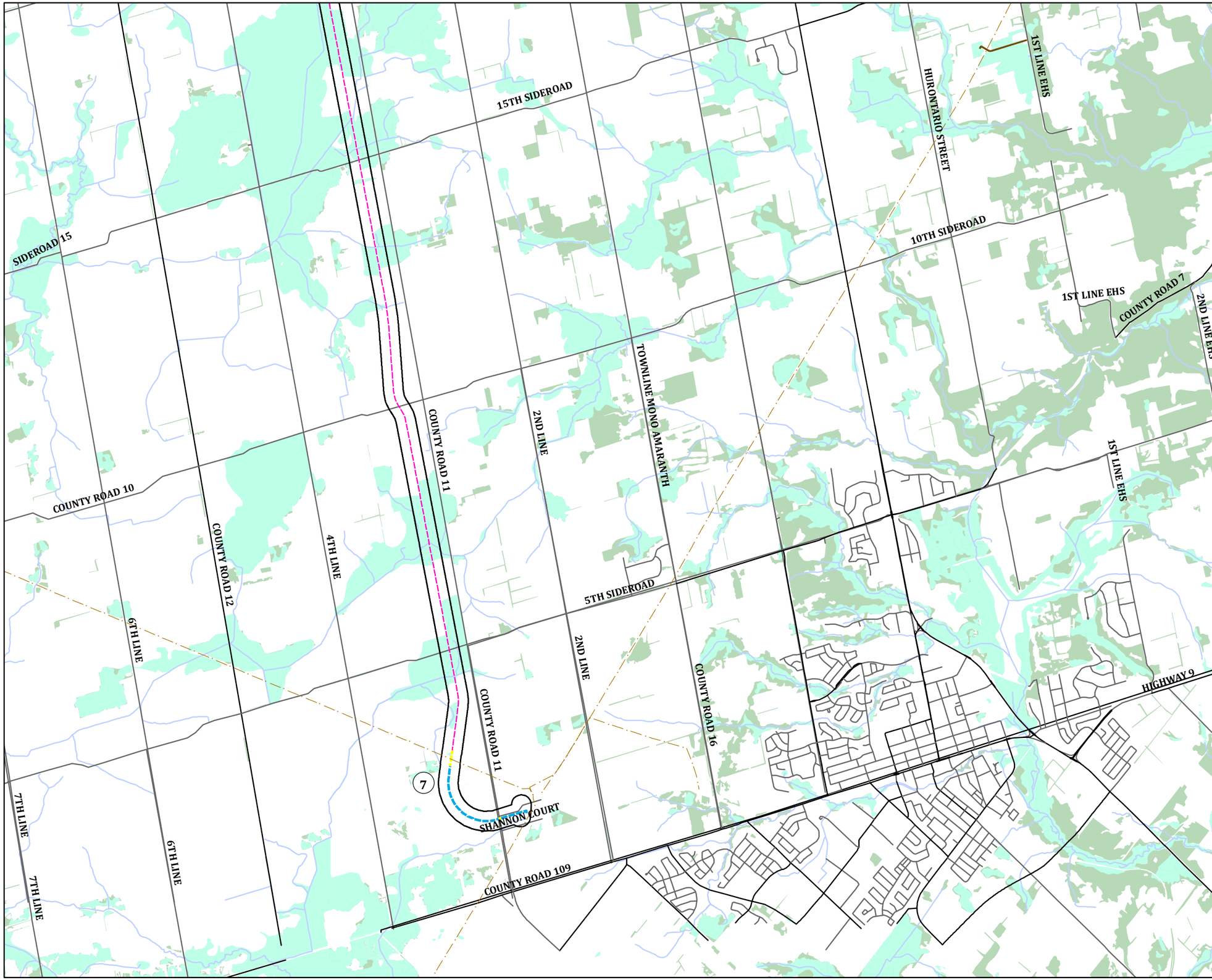
Dufferin Wind Power Project

Figure 2d: Project Location Changes



Legend

- (1) Project Location Changes
- Major Roads
- Local Roads
- Watercourse
- Existing Hydro One Transmission Line
- 120 m Project Location Setback
- Wetland
- Woodland
- Waterbody
- Lots/Concessions

Project Components

- Current 230 KV Line (Underground)
- Potential 230 KV Line (Underground)
- 230 KV Line (Overhead)

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APPENDIX 'B'

Amendments and Revised Maps

The following replacement pages are included in Appendix ‘B’:

- B-1-1, p. 3
- B-2-1, p. 3
- B-2-3, p. 2
- B-2-4, Figure 2
- B-2-4, Figure 3
- B-2-4, Figures 4(a) - (d)
- B-2-5, Figures 5(a), (h), (i), (n) and (o)
- B-2-5, Figure 2(a)
- B-4-1, p. 2
- D-1-1, p. 3
- D-1-1, p. 5
- F-1-1, p. 1-2
- Response to Board Staff IR #5(i)
- Response to CORE IR #11(a)

20-year contract with the Ontario Power Authority (the "**OPA**") in respect of the Wind Farm pursuant to the OPA's Feed-in Tariff ("**FIT**") Program.

7. The proposed Transmission Project is required by the Applicant to connect the Wind Farm to the Independent Electricity System Operator ("**IESO**") controlled grid. This will enable the Applicant to supply renewable energy to the IESO-controlled grid, consistent with its obligations under its FIT contract, the objectives of the FIT Program and the renewable energy policies of the Government of Ontario.

8. The Applicant proposes to locate the Project Substation on private lands amid the Wind Farm in the Township of Melancthon, as well as to locate the Switching Station on private lands adjacent to Orangeville TS in the Township of Amaranth.

9. The Applicant proposes to locate 31.2 km of the Transmission Line along a former rail corridor that is now owned by the County of Dufferin, as well as 15.6 km of the Transmission Line primarily along private lands situated between the Wind Farm site and the former rail corridor, for a total length of nearly 47 km. While these private lands along which the Transmission Line will run are entirely within the Township of Melancthon, the former rail corridor runs through the Township of Melancthon, the Town of Shelburne and the Township of Amaranth, all of which are in the County of Dufferin, Ontario.

10. The proposed Transmission Project was selected from among other transmission alternatives and routes (see Exhibit B, Tab 4, Schedule 1) on the basis of consultations with members of the local community and municipal governments in the vicinity of the Wind Farm and Transmission Project and with a view to minimizing impacts on residents and the affected communities. The proposed Transmission Project is also preferred because it minimizes line losses relative to lower voltage options that were considered.

in south-central Ontario. The proposed Transmission Project, which is the subject of this Application, is comprised of the Project Substation, the Transmission Line, the Switching Station and the Interconnection. The Project Substation will be located on private lands in the Township of Melancthon amidst the Wind Farm site. At the Project Substation, the collector lines will converge and the voltage will be stepped up from 34.5 kV to 230 kV. The 230 kV single circuit Transmission Line will run from the Project Substation for 15.6 km primarily along private lands in the Township of Melancthon to a former railway corridor that is currently owned by the County of Dufferin (the "**Rail Corridor**"), and will then run for 31.2 km along the Rail Corridor in the Township of Melancthon, through the Town of Shelburne and in the Township of Amaranth, until reaching the Switching Station. The total length of the Transmission Line will therefore be approximately 47 km. The Switching Station will be located adjacent to both the Rail Corridor and Hydro One Networks Inc.'s existing Orangeville Transmission Station, in the Township of Amaranth. A short 230 kV line will connect the Switching Station directly with the Orangeville Transmission Station.

A detailed description of the Transmission Project location is provided in Exhibit B, Tab 2, Schedule 3, with maps being provided in Exhibit B, Tab 2, Schedule 4. A detailed description of the physical design features of the Transmission Project is provided in Exhibit D, Tab 1, Schedule 1, with technical drawings being provided in Exhibit B, Tab 2, Schedule 5.

To date, the Applicant has secured a lease with the owner of the private lands on which the Project Substation is to be located. This lease concerns a wind turbine on the same property. The Applicant intends to finalize an additional lease with the landowner for the Project Substation and related facilities. Moreover, the Applicant has secured an option to purchase the private lands on which the Switching Station is to be located. In respect of the private lands along which the Transmission Line will run, the Applicant has secured transmission easements or leases for all but two properties and expects to conclude agreements for those remaining properties shortly. In respect of the transmission easement required from the County of Dufferin along the Rail Corridor, the Applicant has been engaged in discussions with the County since the

voltage from the underground collector system will be stepped up from 34.5 kV to 230 kV. The location of the Project Substation has been determined based on its proximity to the wind turbines, proximity to the planned location for the Wind Farm's Operations and Maintenance Building, as well as in response to community concerns for minimizing the need for tree removal.

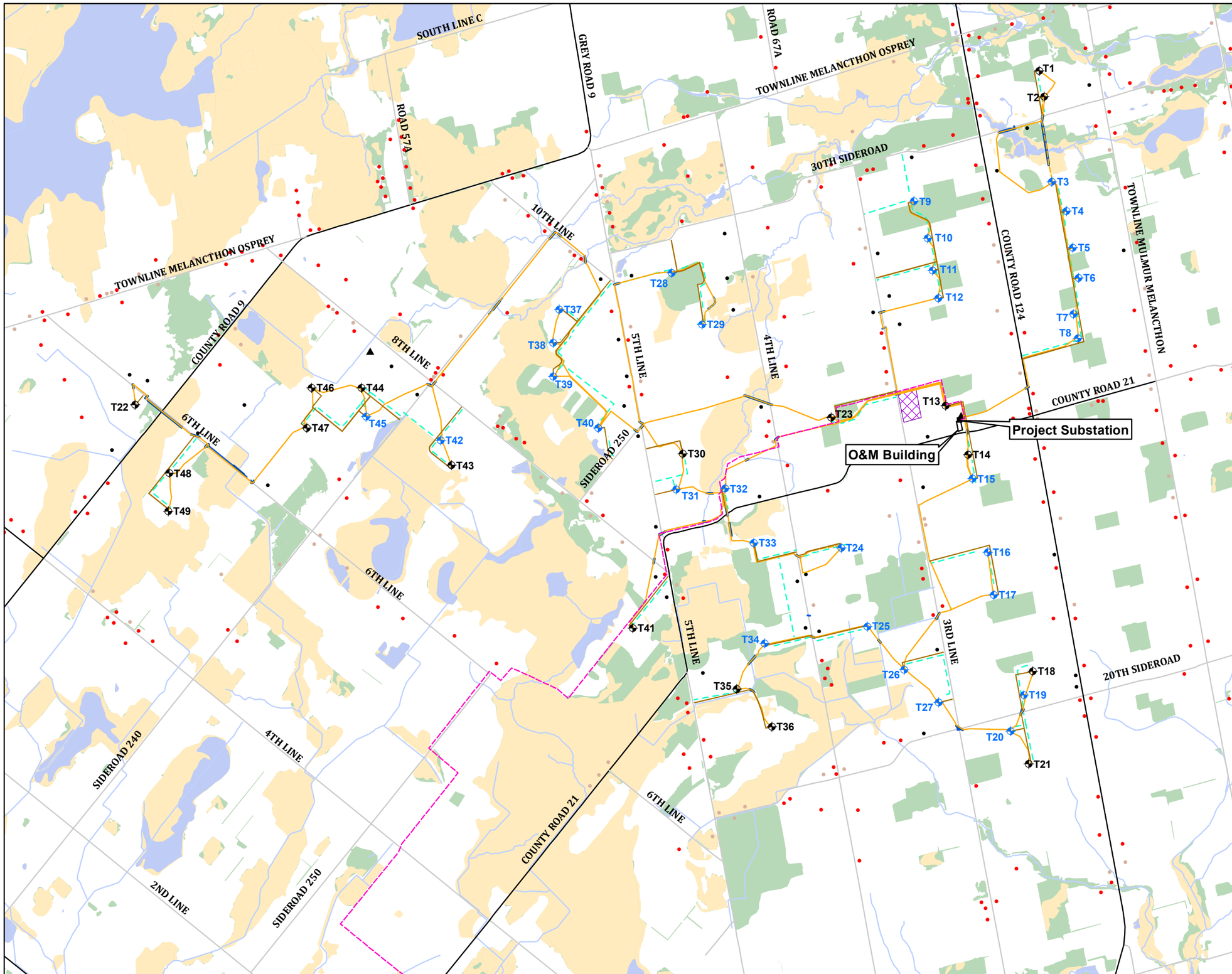
(b) The Transmission Line

The Transmission Line will generally run southwest from the Project Substation for 15.6 km primarily along private lands in the Township of Melancthon to a former railway corridor that is now owned by the County of Dufferin (the **"Rail Corridor"**). From a point along the Rail Corridor that is immediately to the west of Highway 10 and south of Sideroad 260, the Transmission Line will run southeast along the Rail Corridor towards the Town of Shelburne (generally alongside Highway 10) and, after passing through the west side of the Town of Shelburne, will enter into the Township of Amaranth and run in a southward direction (generally alongside County Road 11) before turning briefly to the east and terminating at the Switching Station. The portion of the Transmission Line that runs along the Rail Corridor is approximately 31.2 km in length. The length of the Transmission Line is therefore approximately 47 km in total. The proposed route for the Transmission Line is shown in its entirety in Figure 3 of Exhibit B, Tab 2, Schedule 4, with portions of the proposed route being shown in greater detail in Figures 4(a)-(d).

The location and route for the Transmission Line was selected based on a number of factors and considerations, including feedback received through consultations with members of the local community and municipal officials in the vicinity of the Wind Farm and the Transmission Project, as well as with a view to minimizing the impacts on residents and the affected communities. These considerations are discussed in Exhibit B, Tab 4, Schedule 1.

Dufferin Wind Power Project

Figure 2: Wind Facility Site Plan



Legend

- Participating Receptors
- Non Participating Receptors
- Vacant Lot Receptors
- MET Tower
- Major Roads
- Local Roads
- Wetlands
- Woodlands
- Waterbody

Project Components

- GE 1.6 MW Turbine
- GE 2.75 MW Turbine
- Underground Collector System Feeder Lines
- Underground Collector Alternate Feeder Lines
- Access Roads
- Horizontal Directional Drilling
- 230 kV Powerline
- Construction Laydown Area
- Substation
- O&M Building

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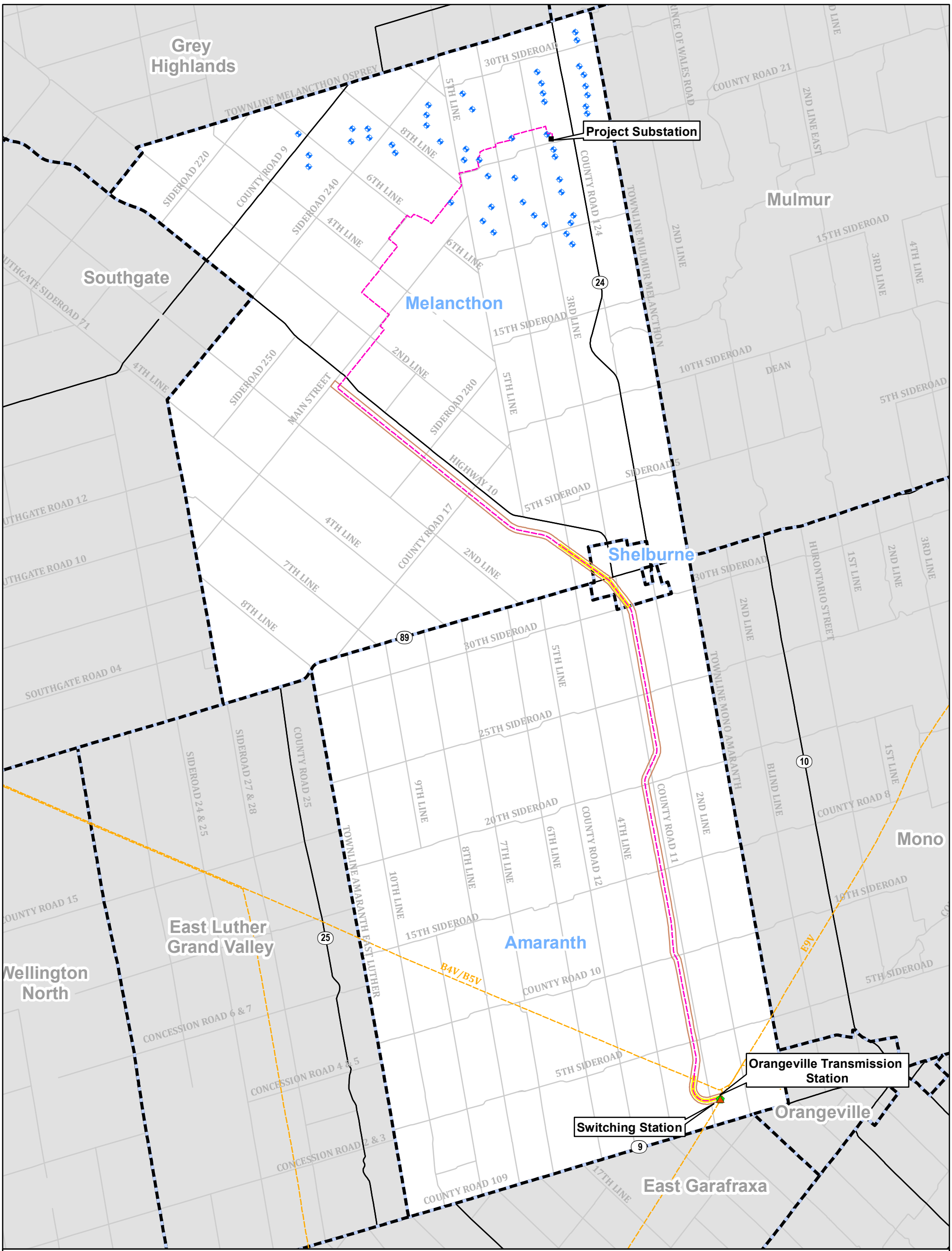

Dufferin Wind Power Project
Figure 3:Transmission Line Route

Legend

- Turbine
- Project Substation
- Orangeville Transmission Station
- Switching Station
- Major Roads
- Local Roads
- Proposed Transmission Line (46,948 m)
- Potential Extent of Underground Section
- Existing Hydro One Transmission Line
- Rail Corridor
- Municipal Boundary

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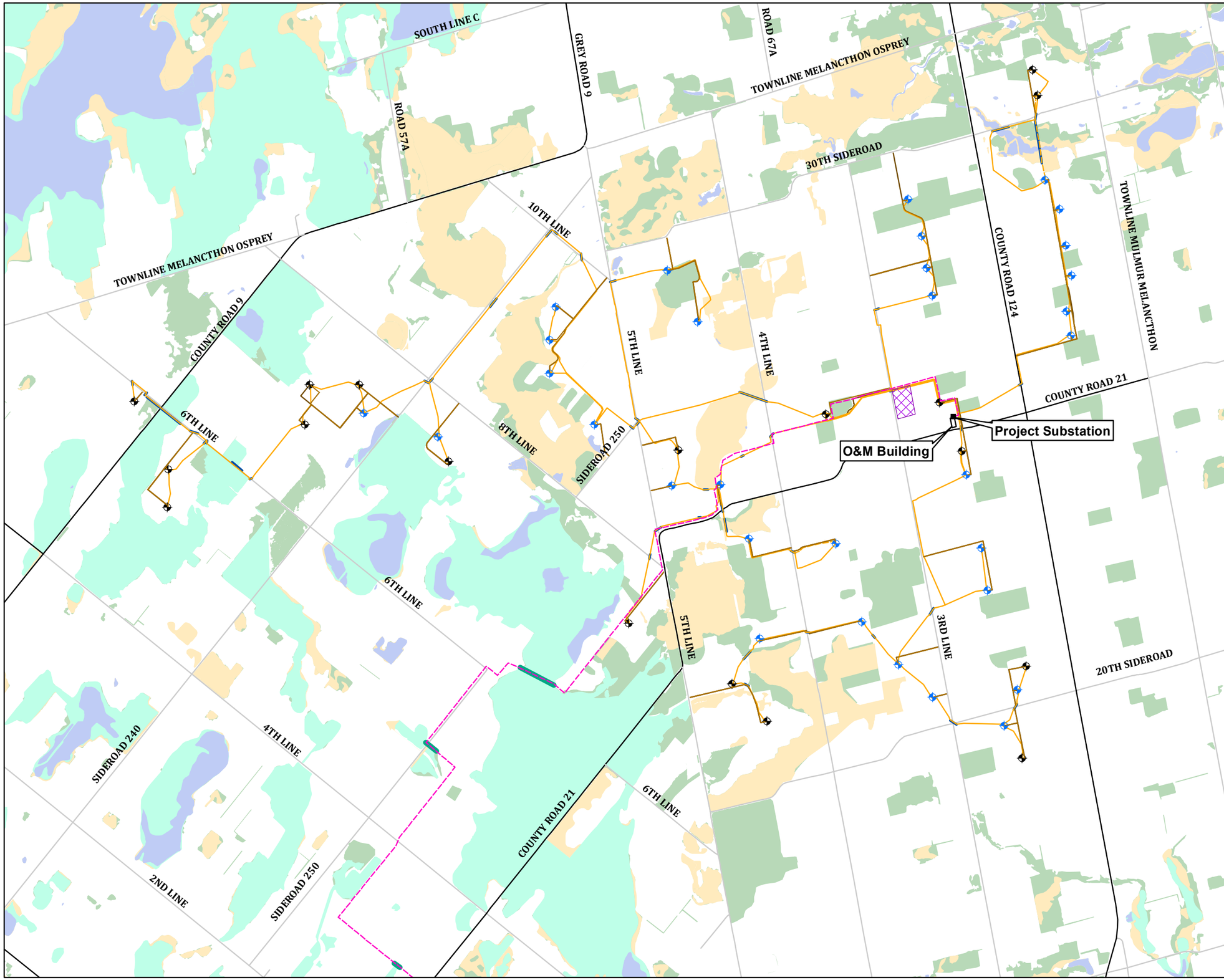
Dufferin Wind Power Project

Figure 4a: 230 kV Transmission Line



Legend

- GE 1.6 MW Turbine
- GE 2.75 MW Turbine
- Major Roads
- Local Roads
- Provincially Significant Wetland Crossing
- Underground Collector System Feeder Lines
- Underground Collector Alternate Feeder Lines
- Access Roads
- Horizontal Dirctional Drilling
- Proposed Transmission Line
- Construction Laydown Area
- Provincially Significant Wetland
- Wetlands
- Waterbody
- Woodland

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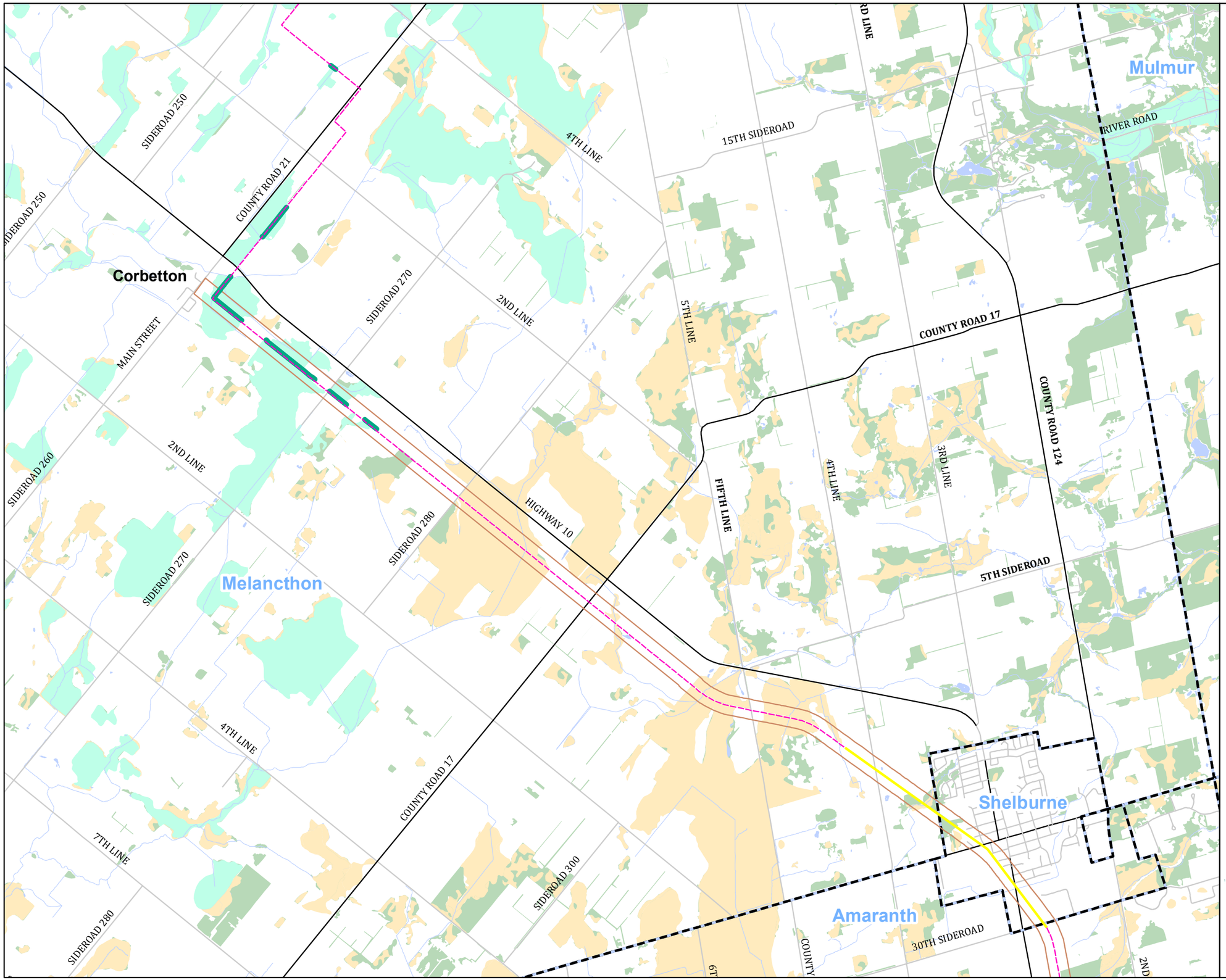

Dufferin Wind Power Project

Figure 4b: 230 kV Transmission Line

Legend

- Major Roads
- Local Roads
- Watercourse
- Provincially Significant Wetland Crossing
- Potential Extent of Underground Sections
- Proposed Transmission Line
- Rail Corridor
- Municipalities
- Provincially Significant Wetland
- Wetland
- Waterbody
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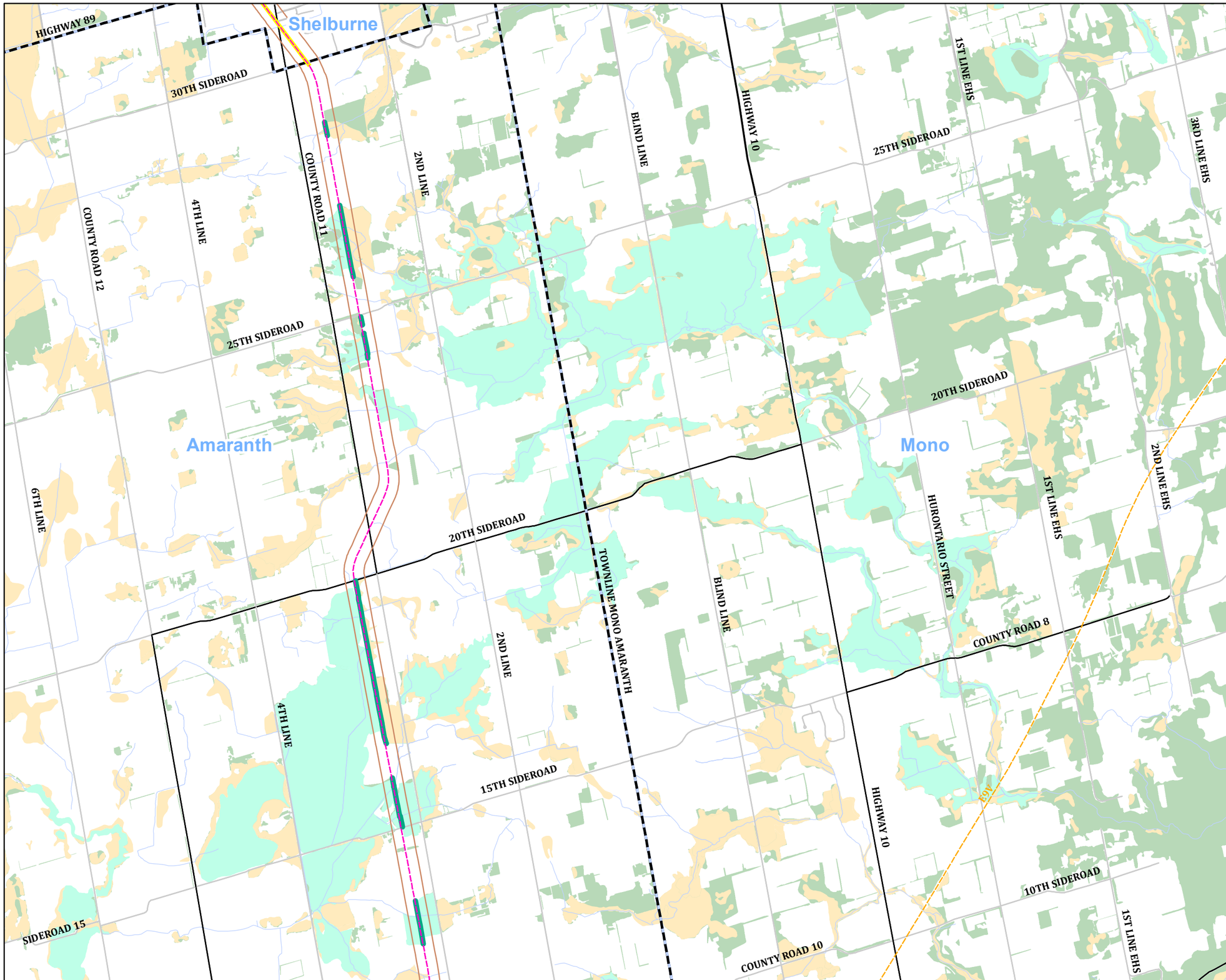

Dufferin Wind Power Project

Figure 4c: 230 kV Transmission Line

Legend

- Major Roads
- Local Roads
- Watercourse
- Provincially Significant Wetland Crossing
- Potential Extent of Underground Section
- Proposed Transmission Line
- Existing Hydro One Transmission Line
- Rail Corridor
- Municipalities
- Provincially Significant Wetland
- Wetland
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- Woodland

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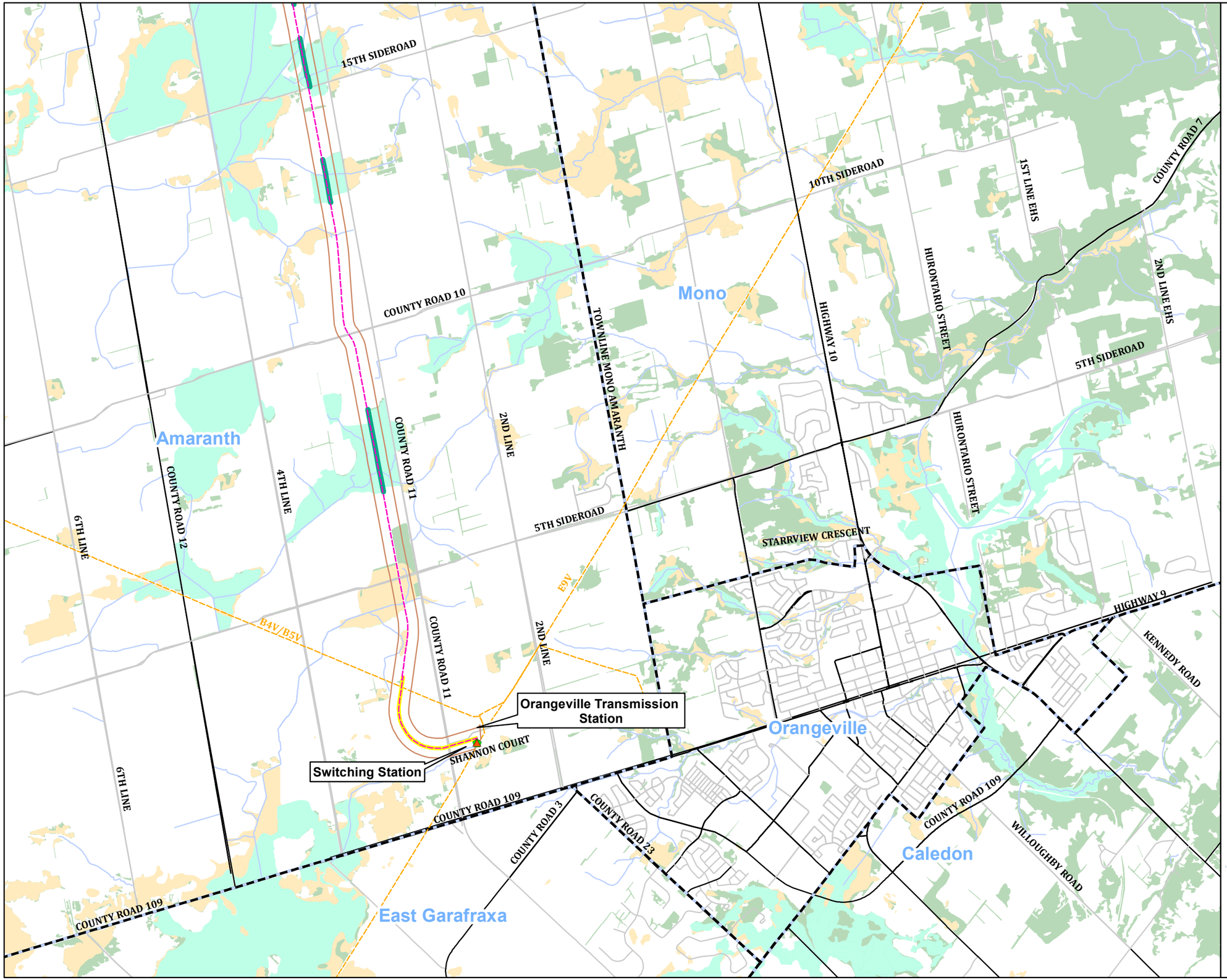
Dufferin Wind Power Project

Figure 4d: 230 kV Transmission Line



Legend

- Orangeville Transmission Station
- Switching Station
- Major Roads
- Local Roads
- Watercourse
- Provincially Significant Wetland Crossing
- Potential Extent of Underground Section
- Proposed Transmission Line
- Existing Hydro One Transmission Line
- Rail Corridor
- Municipalities
- Provincially Significant Wetland
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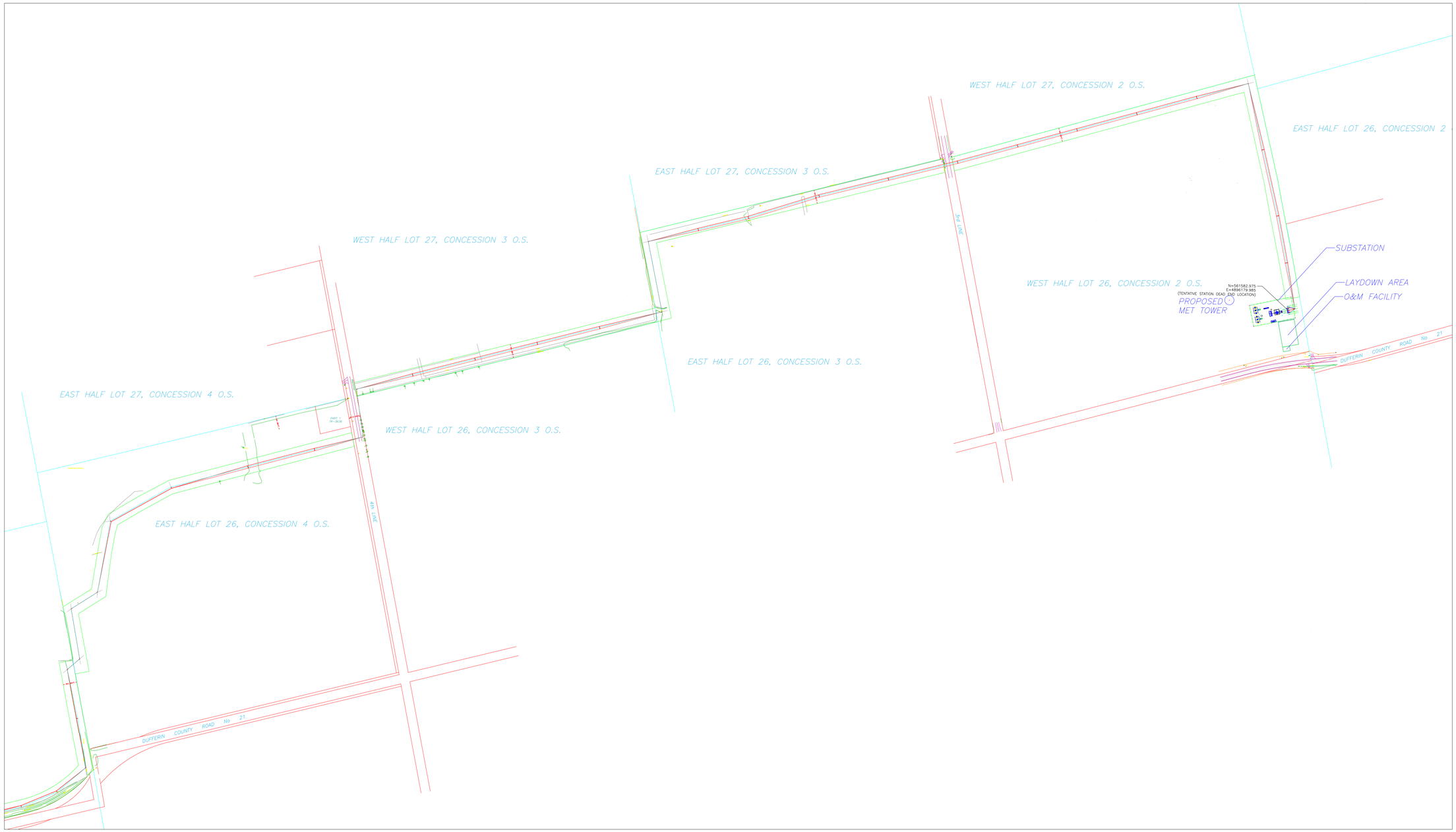

K-LINE MAINTENANCE
& CONSTRUCTION LIMITED
TORONTO, ONTARIO

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F	28/03/13	REVISED SUBSTATION LOCATION	E.K.					
E	26/02/13	GENERAL REVISION	E.K.					
D1	03/01/13	INCORPORATE GDF PLATEAU INFORMATION	E.K.					
D	14/12/12	REVISED ALIGNMENT & U/G SECTIONS	E.K.					
C	03/12/12	GENERAL REVISION	E.K.					
B	16/11/12	REVISED PROPERTY INFORMATION	D.M.	E.K.				
A	06/09/12	PRELIMINARY DESIGN	M.H.	E.K.				

ISS	DDMMYY	APP	ISSUED FOR
F	28/03/13		ISSUED FOR PERMIT UPDATE
E	26/02/13		ISSUED FOR REVIEW
D1	03/01/13		ISSUED FOR GDF & DWF DISCUSSION
D	14/12/12		ISSUED FOR COST COMPARISON
C	03/12/12		ISSUED FOR REVISED
B	16/11/12		ISSUED FOR LEAVE TO CONSTRUCT UPDATE
A	06/09/12		ISSUED FOR LEAVE TO CONSTRUCT APPLICATION

REF	NUMBER	TITLE

REFERENCES

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CLIENT PROJECT MGR. DEPARTMENT MGR. PROJECT MGR.

PROJECT PHASE

PROJECT NO. | ACTIVITY NO. | PACKAGE CODE

SCALE: N.T.S.

	BY	DDMMYY
DSN	E.KWONG	05/09/12
DRN	M.HUANG	05/09/12
CHK		
APP		

AREA: DUFFERIN WIND POWER PROJECT
230 kV TRANSMISSION LINE

SUBJECT: OVERALL PLAN
PRIVATE EASEMENT SECTION
SHEET 1

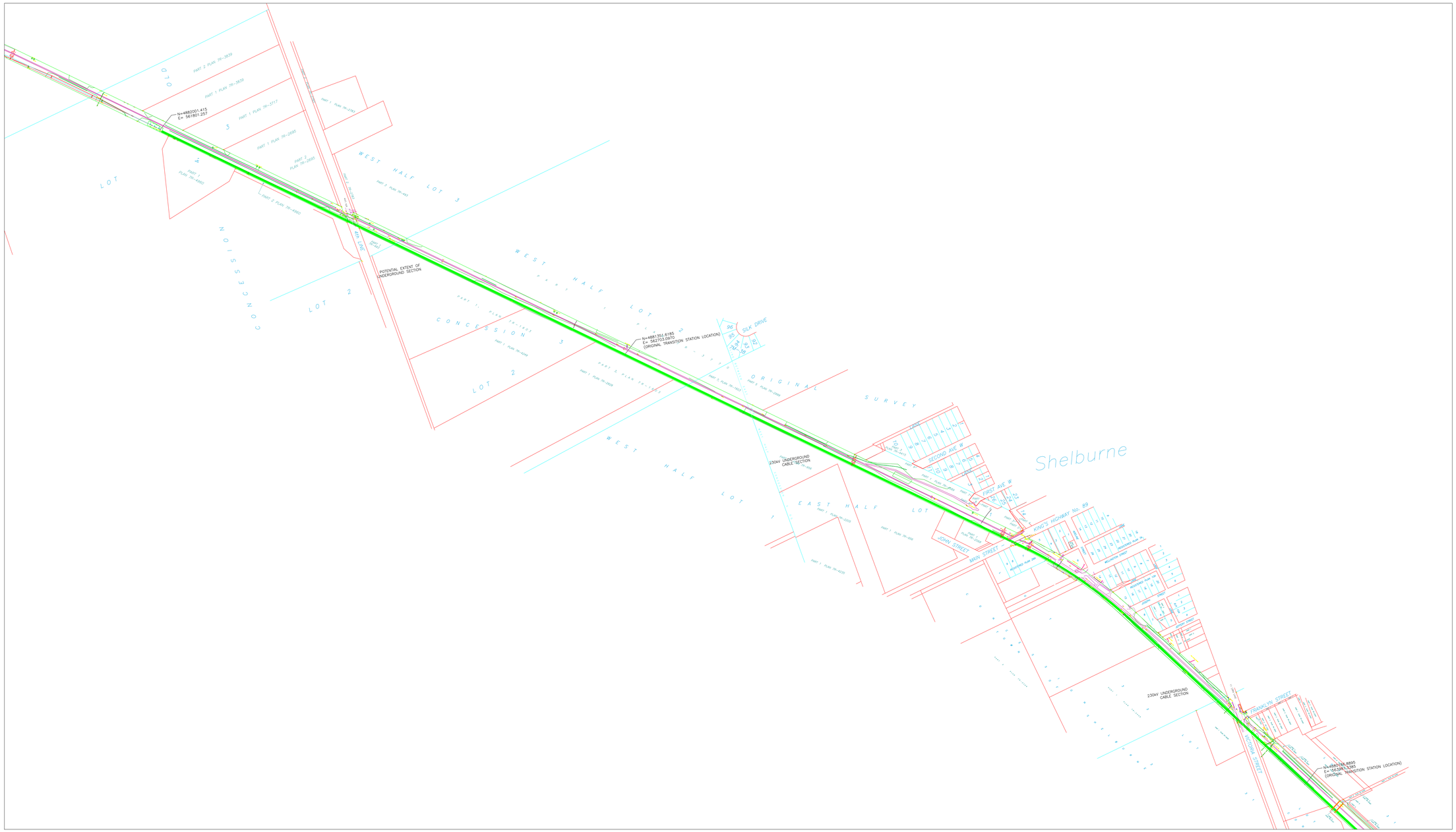
Chimax Inc.
Engineering Company
3950 Fourteenth Ave. East, Suite 506
Markham, On., L3R 0A9
Email: chimax@chimax.ca

CLIENT DWG. NO.

DRAWING NO. 1248-P001-S01

REV. F

CAD FILE: 1248-P001-F



K-LINE MAINTENANCE & CONSTRUCTION LIMITED
TORONTO, ONTARIO

REV	DDMMYY	REVISION	DR	CHK	APP	APP	APP	APP
F	28/03/13	REVISED SUBSTATION LOCATION	E.K.					
E	26/02/13	GENERAL REVISION	E.K.					
D1	03/01/13	INCORPORATE GDF PLATEAU INFORMATION	E.K.					
D	14/12/12	REVISED ALIGNMENT & U/G SECTIONS	E.K.					
C	03/12/12	GENERAL REVISION	E.K.					
B	16/11/12	REVISED PROPERTY INFORMATION	D.M.	E.K.				
A	06/09/12	PRELIMINARY DESIGN	M.H.	E.K.				

ISS	DDMMYY	APP	ISSUED FOR
F	28/03/13		ISSUED FOR PERMIT UPDATE
E	26/02/13		ISSUED FOR REVIEW
D1	03/01/13		ISSUED FOR GDF & DWF DISCUSSION
D	14/12/12		ISSUED FOR COST COMPARISON
C	03/12/12		ISSUED FOR REVISED
B	16/11/12		ISSUED FOR LEAVE TO CONSTRUCT UPDATE
A	06/09/12		ISSUED FOR LEAVE TO CONSTRUCT APPLICATION

REF	NUMBER	TITLE

REFERENCES

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PROJECT PHASE

PROJECT NO. | ACTIVITY NO.

SCALE: N.T.S.

PACKAGE CODE

	BY	DDMMYY
DSN	E.KWONG	05/09/12
DRN	M.HUANG	05/09/12
CHK		
APP		

AREA: DUFFERIN WIND POWER PROJECT 230 kV TRANSMISSION LINE

SUBJECT: OVERALL PLAN RAILROAD CORRIDOR SECTION SHEET 8

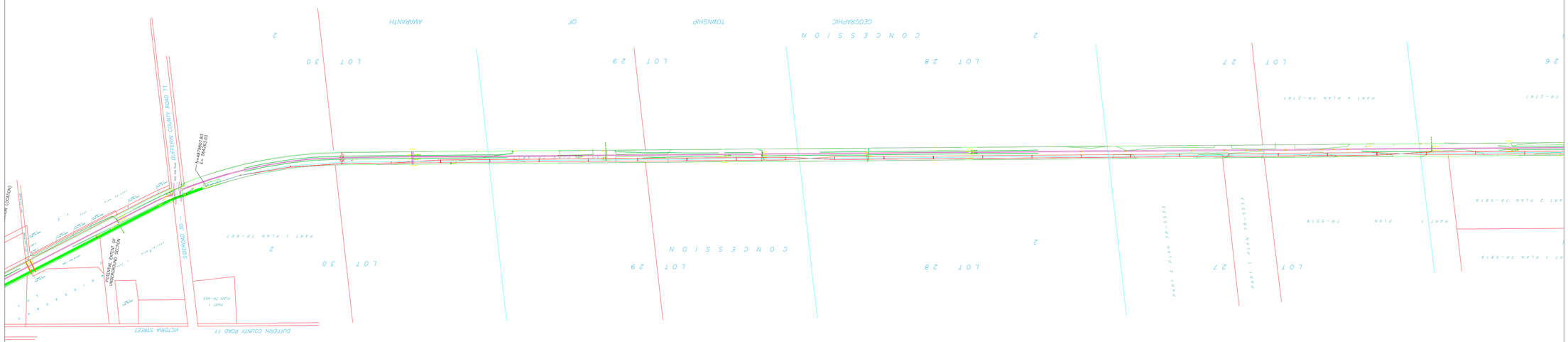
Chimax Inc.
Engineering Company
3950 Fourteenth Ave. East, Suite 506
Markham, On., L3R 0A9
Email: chimax@chimax.ca

CLIENT DWG. NO.

DRAWING NO. 1248-P001-S08

REV. F

CAD FILE: 1248-P001-F



K-LINE MAINTENANCE
& CONSTRUCTION LIMITED
TORONTO, ONTARIO

REV	DDMMYY	REVISION	DR	CHK	APP	APP	APP	APP
F	28/03/13	REVISED SUBSTATION LOCATION	E.K.					
E	26/02/13	GENERAL REVISION	E.K.					
D1	03/01/13	INCORPORATE GDF PLATEAU INFORMATION	E.K.					
D	14/12/12	REVISED ALIGNMENT & U/G SECTIONS	E.K.					
C	03/12/12	GENERAL REVISION	E.K.					
B	16/11/12	REVISED PROPERTY INFORMATION	D.M.	E.K.				
A	06/09/12	PRELIMINARY DESIGN	M.H.	E.K.				

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D	14/12/12		ISSUED FOR COST COMPARISON
C	03/12/12		ISSUED FOR REVISED
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PROJECT PHASE

PROJECT NO. | ACTIVITY NO. | PACKAGE CODE

SCALE: N.T.S.

	BY	DDMMYY
DSN	E.KWONG	05/09/12
DRN	M.HUANG	05/09/12
CHK		
APP		

AREA: DUFFERIN WIND POWER PROJECT
230 kV TRANSMISSION LINE

SUBJECT: OVERALL PLAN
RAILROAD CORRIDOR SECTION
SHEET 9

Chimax Inc.
Engineering Company
3950 Fourteenth Ave. East, Suite 506
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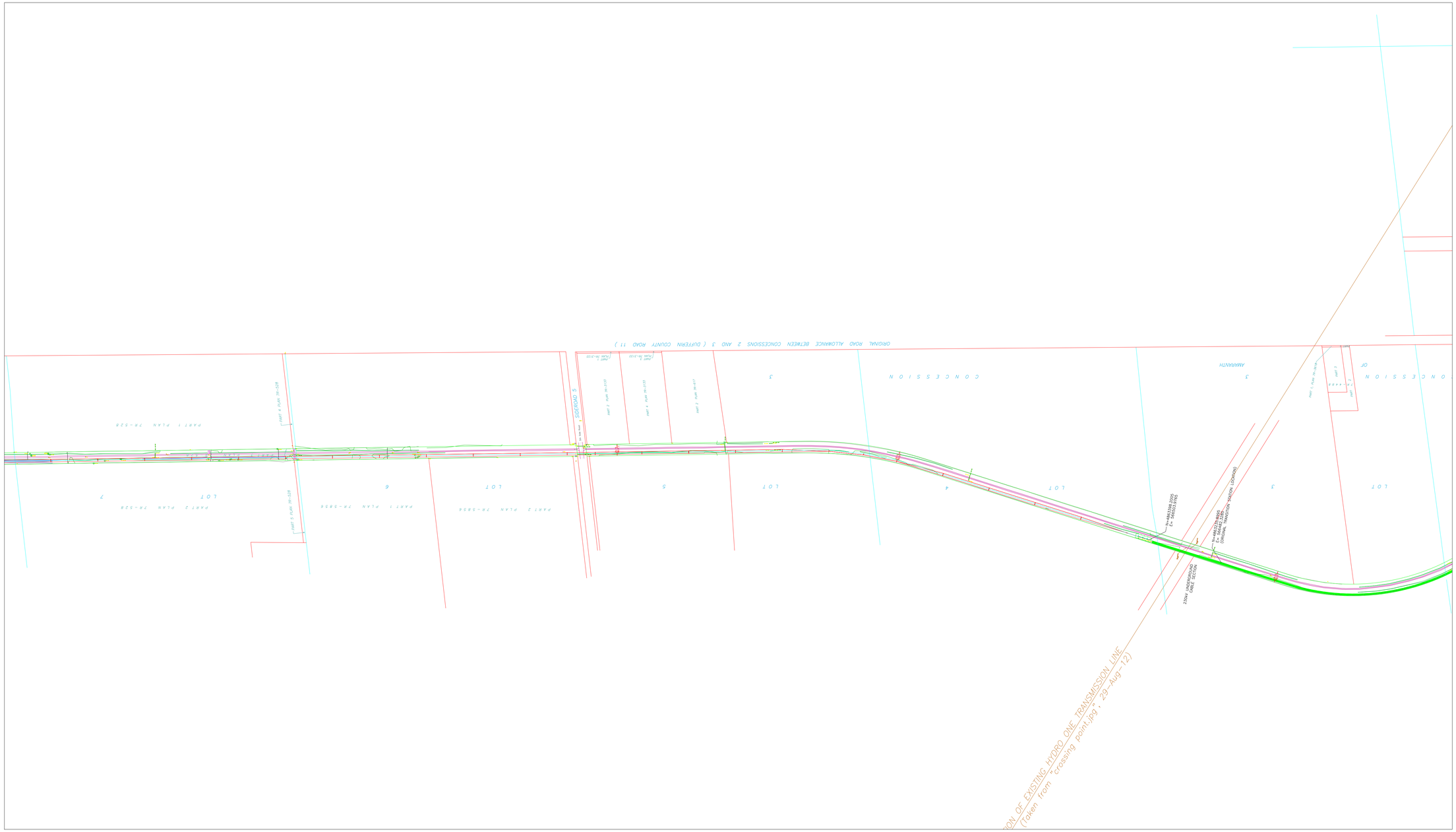
Email: chimax@chimax.ca

CLIENT DWG. NO.

DRAWING NO. 1248-P001-S09

REV. F

CAD FILE: 1248-P001-F



K-LINE MAINTENANCE
& CONSTRUCTION LIMITED
TORONTO, ONTARIO

Chimax Inc.
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REV	DDMMYY	REVISION	DR	CHK	APP	APP	APP	APP
F	28/03/13	REVISED SUBSTATION LOCATION	E.K.					
E	26/02/13	GENERAL REVISION	E.K.					
D1	03/01/13	INCORPORATE GDF PLATEAU INFORMATION	E.K.					
D	14/12/12	REVISED ALIGNMENT & U/G SECTIONS	E.K.					
C	03/12/12	GENERAL REVISION	E.K.					
B	16/11/12	REVISED PROPERTY INFORMATION	D.M.	E.K.				
A	06/09/12	PRELIMINARY DESIGN	M.H.	E.K.				

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PROJECT PHASE

PROJECT NO. | ACTIVITY NO.

SCALE: N.T.S.

PACKAGE CODE

	BY	DDMMYY
DSN	E.KWONG	05/09/12
DRN	M.HUANG	05/09/12
CHK		
APP		

AREA: DUFFERIN WIND POWER PROJECT 230 kV TRANSMISSION LINE

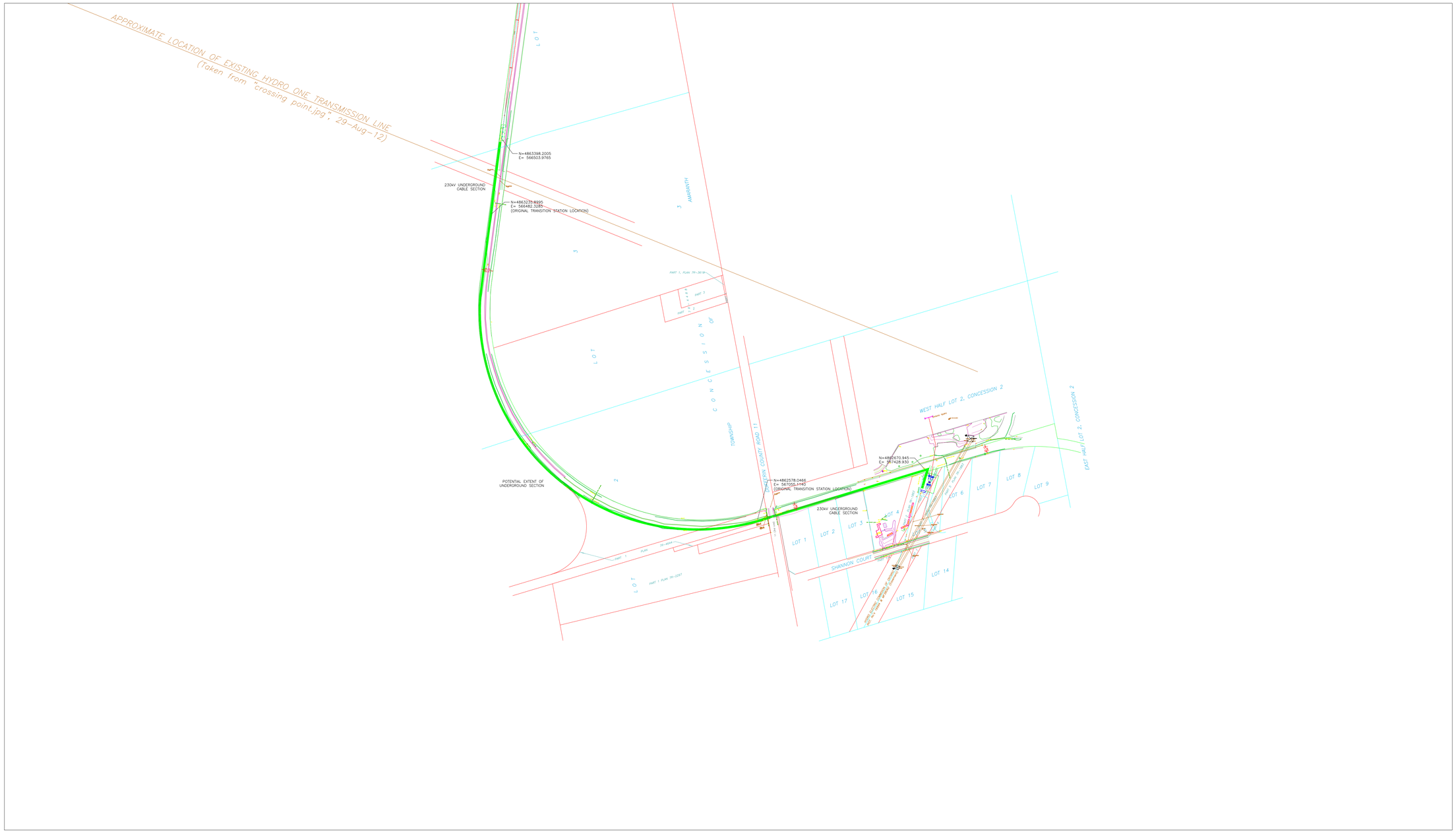
SUBJECT: OVERALL PLAN RAILROAD CORRIDOR SECTION SHEET 14

CLIENT DWG. NO.

DRAWING NO.: 1248-P001-S14

REV.: F

CAD FILE: 1248-P001-F



K-LINE MAINTENANCE & CONSTRUCTION LIMITED
TORONTO, ONTARIO

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Markham, On., L3R 0A9
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REV	DDMMYY	REVISION	DR	CHK	APP	APP	APP	APP
F	28/03/13	REVISED SUBSTATION LOCATION	E.K.					
E	26/02/13	GENERAL REVISION	E.K.					
D1	03/01/13	INCORPORATE GDF PLATEAU INFORMATION	E.K.					
D	14/12/12	REVISED ALIGNMENT & U/G SECTIONS	E.K.					
C	03/12/12	GENERAL REVISION	E.K.					
B	16/11/12	REVISED PROPERTY INFORMATION	D.M.	E.K.				
A	06/09/12	PRELIMINARY DESIGN	M.H.	E.K.				

ISS	DDMMYY	APP	ISSUED FOR
F	28/03/13		ISSUED FOR PERMIT UPDATE
E	26/02/13		ISSUED FOR REVIEW
D1	03/01/13		ISSUED FOR GDF & DWF DISCUSSION
D	14/12/12		ISSUED FOR COST COMPARISON
C	03/12/12		ISSUED FOR REVISED
B	16/11/12		ISSUED FOR LEAVE TO CONSTRUCT UPDATE
A	06/09/12		ISSUED FOR LEAVE TO CONSTRUCT APPLICATION

REF	NUMBER	TITLE

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PROJECT PHASE

PROJECT NO. | ACTIVITY NO.

SCALE: N.T.S.

PACKAGE CODE

	BY	DDMMYY
DSN	E.KWONG	05/09/12
DRN	M.HUANG	05/09/12
CHK		
APP		

AREA: DUFFERIN WIND POWER PROJECT
230 kV TRANSMISSION LINE

SUBJECT: OVERALL PLAN
RAILROAD CORRIDOR SECTION
SHEET 15

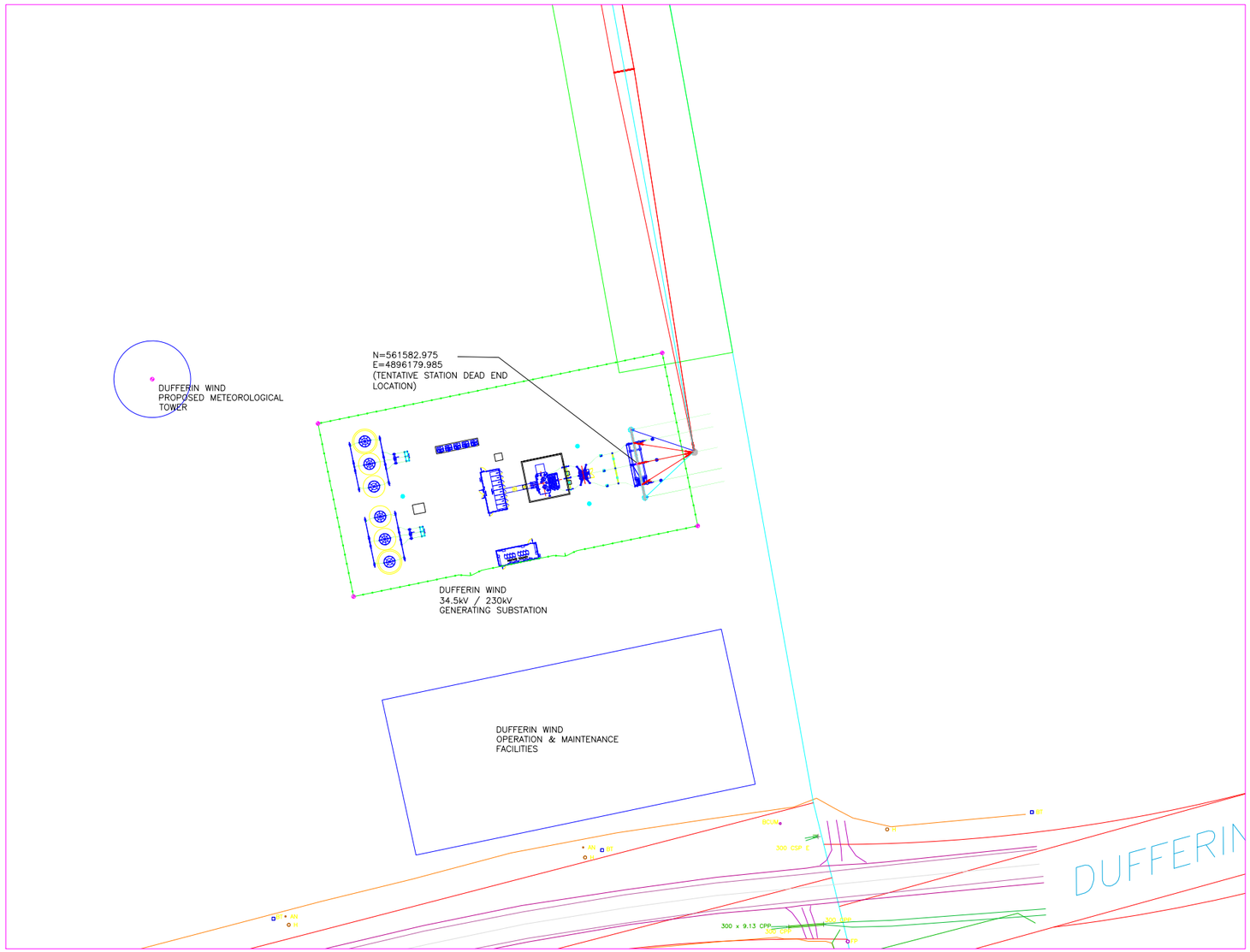
CLIENT DWG. NO.

DRAWING NO. 1248-P001-S15

REV. F

CAD FILE: 1248-P001-F

NOTES:
1. SUBSTATION LAYOUT PLAN, SEE DWG. # 1248-E102.
2. ALL DIMENSIONS ARE METER U.N.O.



34.5kV / 230kV GENERATING SUBSTATION
STATION SITE PLAN

REV	D/M/Y	REVISION	DR	CHK	APP	APP	APP	APP
B	28/03/13	SUBSTATION ORIENTATION CHANGE	E.K.	W.L.				
A	06/09/12	ISSUED FOR PERMIT	E.K.	W.L.				

ISS	D/M/Y	APP	ISSUED FOR
B	28/03/13		ISSUED FOR PERMIT UPDATE
A	29/08/12		ISSUED FOR LEAVE TO CONSTRUCT APPLICATION

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N.T.S. (11"x17")

	E.KWONG	04/09/12
	E.KWONG	05/09/12

DUFFERIN WIND POWER PROJECT
230 kV INTERCONNECT SWITCHING STATION

34.5 / 230kV GENERATING SUBSTATION
MAIN SUBSTATION
SITE PLAN

K-LINE MAINTENANCE
& CONSTRUCTION LIMITED
TORONTO, ONTARIO

Chimax Inc.
Engineering Company
3950 Fourteenth Ave. East, Suite 506
Markham, On., L3R 0A9
Email: chimax@chimax.ca

1248-E101 B

1248-P001-F

described below (the "**69 kV Alternative**"). During the course of these consultations, the Applicant found the level of community support for the 69 kV Alternative to be relatively weak. Members of the community instead suggested the Applicant should consider the viability of using the former Rail Corridor (described below) for transmission purposes. For the reasons set out below, the Applicant ultimately determined that the former Rail Corridor could support a transmission connection that offers a number of important advantages over the 69 kV Alternative.

2. Rationale for Selecting the Proposed Transmission Project

The proposed Transmission Project is a single circuit three phase 230 kV transmission line that runs approximately 47 km from the Project Substation in the Township of Melancthon to the Switching Station adjacent to Hydro One's Orangeville TS in the Township of Amaranth. As described in Exhibit B, Tab 2, Schedule 3, a 15.6 km portion of the proposed route would run primarily along private lands between the Project Substation and the Rail Corridor, and a 31.2 km portion of the proposed route would run along a former Rail Corridor that is currently owned by the County of Dufferin. Based on consultations with members of the local community, as well as technical and environmental reviews undertaken, the Applicant has determined that the proposed Transmission Project is in the circumstances the optimal means for connecting the Wind Farm to the IESO-controlled grid. Key benefits and characteristics of the proposed Transmission Project that led to this determination include the following:

(a) Community Support. The proposed Transmission Project has greater support from residents and local officials in the affected communities, relative to the 69 kV Alternative. This understanding is based on consultations that the Applicant has had directly with residents and officials in the potentially affected communities, as further described in Exhibit G, Tab 1, Schedule 1;

(b) Lower Visual Impact. For the reasons that follow, relative to the 69 kV Alternative, the proposed Transmission Project will have a low visual impact.

will be used, a concrete oil containment system will be incorporated into the Project Substation design to protect against the risk of any oil leaks that may occur. Exhibit B, Tab 2, Schedule 5 includes a single line drawing in Figure 1, as well as a site plan and station layout for the Project Substation in Figures 2(a) and (b).

(b) **Transmission Line**

From the Project Substation, a three phase single circuit 230 kV transmission line, approximately 47 km in length, will run to the Switching Station (described below), which in turn will be interconnected with the IESO-controlled grid at Hydro One's Orangeville TS. A 15.6 km portion of the proposed Transmission Line, running southwest from the Project Substation, will be situated primarily along private lands pursuant to transmission easements or leases obtained or to be obtained by the Applicant. An approximately 110 m segment along this portion of the Transmission Line route will run along a municipal road right-of-way. The remaining 31.2 km portion of the proposed Transmission Line, which runs south from near the intersection of County Road 21 and Highway 10 in the Township of Melancthon and through the west side of the Town of Shelburne to the Switching Station, will be situated along a former Rail Corridor that is now owned by the County of Dufferin. The Applicant is continuing to work with the County of Dufferin with a view to finalizing the necessary transmission easement for use of the former Rail Corridor. The proposed route is described in Exhibit B, Tab 2, Schedule 3 and shown in Figures 3 and 4(a)-(d) of Exhibit B, Tab 2, Schedule 4. Section by section maps of the route and the specific parcels of land that are affected are provided in Exhibit B, Tab 2, Schedule 4 at Figures 5(a)-(o).

The Transmission Line will run overhead to the extent permitted by environmental laws, unless the Applicant has agreed otherwise with a particular landowner to bury a discrete segment of the line. As such, for the vast majority of the Transmission Line, the Applicant will be installing, owning and maintaining new poles. Along the portion of the Transmission Line that is on private lands, the poles will generally be 80-85 ft. tall (including the portion that will be embedded in the ground) wood poles that will be spaced approximately 150 meters apart. Along

approximately 30 m for overhead portions and, to the extent that underground segments will be required, a width of 3-4 m will be needed. Descriptions of the land area and land rights required to support the Transmission Line are set out in Exhibit F, Tab 1, Schedule 1 and Exhibit F, Tab 2, Schedule 2. Right-of-Way dimensions are shown in Figures 4(a)-(c) of Exhibit B, Tab, 2, Schedule 5.

There are two unique factors that have affected the Applicant's proposed Transmission Line design. These factors, which reflect the Applicant's responses to particular concerns raised by the local community during the course of consultations, are discussed below.

(i) Underground Segments

In response to concerns identified through consultations with the local community, the Applicant is planning to install two or three discrete segments of the Transmission Line underground. The first segment consists of a portion of the route that runs through the Town of Shelburne, in close proximity to existing buildings. This underground segment is expected to range from approximately 1.7 km up to 3.2 km in length. The second and third segments may be combined into a single, longer segment. Individually, the second segment would be approximately 165 m in length and is required to cross Hydro One's existing 230 kV line near the south end of the Transmission Line, just before it hooks to the east towards Orangeville TS. Individually, the third segment, which will be approximately 220 m in length, consists of the portion of the Transmission Line that runs from just west of County Road 11 into the Switching Station. If combined, this underground segment would run from just before the Hydro One line all the way into the Switching Station for a total length of approximately 1.6 km. Collectively, these segments (the "**Underground Segments**") will result in a total of approximately 2.1 to 4.8 km of the Transmission Line along the proposed route being constructed underground, either by means of trenching or horizontal directional drilling. Illustrations of cross-sections for typical Underground Segments along with illustrations of overhead to underground transition structures are provided in Figures 5(a) – (c) of Exhibit B, Tab 2, Schedule 5. In addition, the locations of the Underground Segments are shown in Figures 4(a)-(d) of Exhibit B, Tab 2, Schedule 4.

LAND MATTERS

The land area required for the Transmission Project consists of (a) the lands required for the Project Substation, (b) the lands required for the Transmission Line, and (c) the lands required for the Switching Station, including any lands required either on a temporary basis for construction purposes and any lands required on an ongoing basis for structures or access to and operation of such structures. These requirements are described in the following sections.

1. Land Area Required and Land Rights Acquired/to be Acquired

As described in Exhibit B, Tab 2, Schedule 3, the Project Substation will be situated on private lands on the southeast corner of the West ½ of Lot 26, Concession 2 in the Township of Melancthon (just north of County Road 21, between 3rd Line and County Road 124), as shown in Figure 4a at Exhibit B, Tab 2, Schedule 4. The Project Substation will have a footprint of approximately 0.56 ha. These lands are privately owned. The Applicant has secured a lease with the owner of the property for purposes of a wind turbine that will be located on the property. In addition, the Applicant intends to enter into an additional lease, substantially in the form of the lease provided in Exhibit F, Tab 2, Schedule 1, Appendix 1 for purposes of the Project Substation, Operations and Maintenance Building and the Transmission Line.

Also as described in Exhibit B, Tab 2, Schedule 3, the Switching Station will be situated adjacent to Hydro One's existing Orangeville TS at Lot 5, Plan 131 in the Township of Amaranth, as shown in Figure 4d at Exhibit B, Tab 2, Schedule 4. The Switching Station will have a footprint of approximately 0.2 ha. These lands are privately owned and the Applicant has secured an option to purchase the property based on an option agreement substantially in the form provided in Exhibit F, Tab 2, Schedule 1, Appendix 2.

As indicated in Exhibit B, Tab 2, Schedule 3, the Transmission Line will generally run southwest from the Project Substation for 15.6 km primarily along private lands (and road crossings) in the Township of Melancthon to a former railway corridor that is now owned by the County of Dufferin (the "**Rail Corridor**"). An approximately 110 m segment along this portion of the

Transmission Line will run along a municipal road right-of-way. From a point along the Rail Corridor that is immediately to the west of Highway 10 and south of Sideroad 260, the Transmission Line will run southeast along the Rail Corridor towards the Town of Shelburne (generally alongside Highway 10) and, after passing through the west side of the Town of Shelburne, will enter into the Township of Amaranth and run in a southward direction (generally alongside County Road 11) before turning briefly to the east and terminating at the Switching Station. The portion of the Transmission Line that runs along the Rail Corridor is approximately 31.2 km in length. The total length of the Transmission Line is therefore approximately 47 km. The proposed route for the Transmission Line is shown in its entirety in Figure 3 of Exhibit B, Tab 2, Schedule 4, with portions of the proposed route being shown in greater detail in Figures 4(a)-(d).

The 15.6 km portion of the Transmission Line that runs generally along private lands is comprised of approximately 30 separate parcels of land. Of these, 10 parcels are municipally owned roads or public highways that will be crossed by the Transmission Line. In one location, the Transmission Line will run along the road right-of-way for approximately 110 m. For these crossings and this 110 m segment, the Applicant does not need to acquire any land rights beyond those which are provided by legislation under Section 41 of the *Electricity Act*. Although pursuant to Subsection 41(10) the Board does not have the authority to determine the specific location of structures, equipment or facilities in public streets and highways where the facilities are also subject to the need for leave to construct pursuant to Section 92 of the *Ontario Energy Board Act*, it is the Applicant's understanding that the Board has such authority either in connection with its powers under Section 92 or pursuant to Section 101 of the *Ontario Energy Board Act*, under which the Board may grant authority to construct works upon, under or over a highway, utility line or ditch. Accordingly, as noted in Exhibit B, Tab 1, Schedule 1, the Applicant hereby requests such authorization to construct the Transmission Line upon, under or over the municipally owned roads and public highways, as well as any utility line or ditch which may need to be crossed to construct the Transmission Line in accordance with this Application.

ONTARIO ENERGY BOARD (BOARD STAFF) - INTERROGATORY #5

Interrogatory

References

a. Exh. D/ Tab 1/ Sch. 1/ §2/ Proposed Transmission Project
b. Exh. E/ Tab 2/ Sch. 1/ §1/ Codes and Standards
c. Exh. B/ Tab 2/ Sch. 5/ Drawings and Illustrations/ Fig. 4(a) to 4(n)/ Design Notes
d. Exh. D/ Tab 1/ Sch. 1/p.5-6/ Accommodating Potential Railway Redevelopment

Preamble

At reference (a), the proposed Transmission Project elements and their design are described.

With respect to technical and safety specifications and standards, reference (b) generally notes that the proposed transmission facilities would meet the requirements of the Canadian Standard Association for all four elements of the Transmission Project.

In addition the various maps at reference (c) display some specific design specifications, but do not indicate the general standard and/or applicable code retained. (ie. *TSC, the Ontario Electric Safety Code (2009), the IESO Market Rules, etc...).*

With respect to the rail infrastructure co-location, reference (d) indicates in part that:

Recognizing this interest in developing a potential future rail line in the Rail Corridor, the Applicant has designed the Transmission Project so as to facilitate the potential future co-location of a rail line within the Rail Corridor. As noted, the design of the Transmission Line includes reduced pole spacing along the Rail Corridor to ensure appropriate clearances so as to accommodate potential co-location with a future railway line. Also notable is that the Transmission Line would run along one side of the Rail Corridor so as to leave room within the Rail Corridor for a potential future rail line, while at the same time ensuring that the setbacks from the Transmission Line to the edge of the Rail Corridor and to the potential location of the rails would meet all applicable safety standards.

Questions / Requests

i. Please indicate whether the transmission line will share any right-of-way with distribution or other transmission lines.
ii. Please indicate the nature (e.g. underground cable, water pipes, railway lines, etc...) of any other existing facilities in the right-of-way which might affect construction.

iii. If applicable, please identify proposed approaches to mitigate possible disruption to such facilities.

iv. Please indicate the design and construction standards and procedures, relating to proximity and effects such as induction, which will protect pre-existing facilities and personnel from direct and induced currents and voltages. Include in your discussion corrosion protection, cable location identification, and grounding for safety and "tingle" or "stray" voltage.

v. Please provide a consolidated summary of the various design specifications embedded in the maps at reference (c) and please indicate the relevant applicable standards.

vi. Considering the recent developments regarding the Mega-quarry project, please discuss whether elements of design noted at reference (d) are still valid and indicate whether the mentioned added safety and/or reliability designs are retained.

Response

i. The proposed transmission line route is located in part along private right of way easements and in part along the former rail corridor. A short segment of approximately 110 m will be located within a municipal road right-of-way. Along this portion of the municipal road right-of-way, there is an existing Hydro One distribution line along the opposite side of the road from where the transmission line will run and the transmission line will need to cross over such Hydro One distribution line in accordance with applicable clearance requirements. Otherwise, with the exception of utility crossings, there will be no sharing of right of ways with any other transmission or distribution circuits.

ii. A map depicting existing facilities along the proposed transmission line route is provided in Appendix C.

iii. Existing plant locations will be contemplated in the final design. Prior to actual construction, the Applicant's contractor will perform locate activities in the areas of any exaction or underground works as a final check at the actual dig site to avoid existing plant during construction.

iv. During final design of the proposed transmission line, induction studies will be conducted to verify impacts on existing utility services (i.e. pipelines, underground cables, etc.) and conformance to CSA C22.3 No.3 "Electrical Coordination" and CSA C22.3 No.6 "Principles and Practices of Electrical Coordination Between Pipelines and Electric Supply Lines". Grounding design during final design of the proposed transmission line will also address the electro-chemical corrosion of underground metallic structure as per CSA C22.3 No.4 "Control of Electrochemical Corrosion of Underground Metallic

CORE - INTERROGATORY #11

Interrogatory

References

EXHIBIT E,
TAB 2,
SCHEDULE 1,
[PAGE 3 OF 8]

Preamble

In this section of the Application certain regulations made pursuant to the *Environmental Protection Act* and the *Electricity Act* are discussed as are proposed amendments to one of those regulations; namely, O.Reg.359/09.

Questions / Requests

a. In light of the changes which have been made to the Transmission Project please provide detailed measurements which establish that the Transmission Line is less than 50 km in length?
b. In light of the proposed amendments to O.Reg.359/09 how can it be determined at this time how much of the Transmission Line will be above ground and how much of it will be underground and, in fact, exactly where it will all be located?

Response

a. The proposed DWPI 230kV transmission line length is measured to be 47.29 km. This is comprised of the following segments, commencing from the project substation, assuming that the maximum length of underground segments being contemplated are implemented:

   i. Transmission line will run north then turn westward along a private easement right of way (ROW) until 4th Line for a distance of 2.68 km,
   ii. Transmission line will turn south for a single span along municipal road allowance for a distance of 0.11 km,
   iii. Transmission line will cross over 4th Line and then continues in a south-west direction within private ROW for a distance of 1.16 km,
   iv. Turns west at Dufferin County Road 21 and runs west within private ROW along the north side of Dufferin County Road 21 for a distance of 0.72 km,

v. Crosses over Dufferin County Road 21 and turns south within private ROW continuing for a distance of 0.44 km,
vi. Turns west and runs south-west within private ROW for a distance of 2.73 km,
vii. Crosses over 6th Line and continues south-west within private ROW along west side of 250 Sideroad for a distance of 1.04 km,
viii. Crosses over 250 Sideroad and continues south within private ROW for a distance of 3.70 km,
ix. Crosses over Dufferin County Road 21 and continues south within private ROW along east side of Dufferin County Road 21 for a distance of 0.51 km,
x. Turns east, then turns south and continues south within private ROW for a distance of 2.25 km,
xi. Crosses over Highway 10 and continues south within private ROW for a distance of 0.55 km,
xii. Crosses over existing rail corridor and turns east within rail corridor along the south and west side of corridor for a distance of 9.58 km,
xiii. Transitions from O/H to U/G and continues south-east within rail corridor along the south and west side of corridor for a distance of 3.34 km,
xiv. Transitions from U/G to O/H and continues south-east within rail corridor along the south and west side of corridor for a distance of 16.79 km,
xv. Transitions from O/H to U/G and crosses under existing Hydro One Transmission Line then continues south-east within rail corridor along the south and west side of corridor to terminate at the DWPI switching station for a distance of 1.69 km.

b. See response to CORE IR #3. All crossings of provincially significant wetlands will be accomplished though overhead line crossings.