

*This information is believed to be correct, but is subject to change and is not warranted.*  
*This information is for environmental review purposes only.*

Image Source: Xcel Energy

- Transmission Structure without Distribution Underbuild
  - Transmission Line
  - ▨ Route
- Route Width = 80 feet  
 ROW Width = 50 feet

**Substations**

- |  |  |
|--|--|
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #FFD700; border: 1px solid black;"></span> Mt-28N | <span style="display: inline-block; width: 10px; height: 10px; background-color: #388E3C; border: 1px solid black;"></span> Mt-28S                     |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #FFC000; border: 1px solid black;"></span> G-5    | <span style="display: inline-block; width: 10px; height: 10px; background-color: #FF69B4; border: 1px solid black;"></span> Midtown North              |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #4169E1; border: 1px solid black;"></span> G-4    | <span style="display: inline-block; width: 10px; height: 10px; background-color: #FF69B4; border: 1px solid black;"></span> Midtown South              |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #4169E1; border: 1px solid black;"></span> G-3    | <span style="display: inline-block; width: 10px; height: 10px; background-color: #800080; border: 1px solid black;"></span> Hiawatha West              |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #32CD32; border: 1px solid black;"></span> G-2    | <span style="display: inline-block; width: 10px; height: 10px; background-color: #FFD700; border: 1px solid black;"></span> Hiawatha East              |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #800000; border: 1px solid black;"></span> G-1    | <span style="display: inline-block; width: 10px; height: 10px; background-color: #3CB371; border: 1px solid black;"></span> Hiawatha Planned Expansion |



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**Appendix B.4.1**  
**Route B**  
 Hiawatha Transmission Line  
 Xcel Energy  
 Minneapolis, Minnesota  
 January 2010

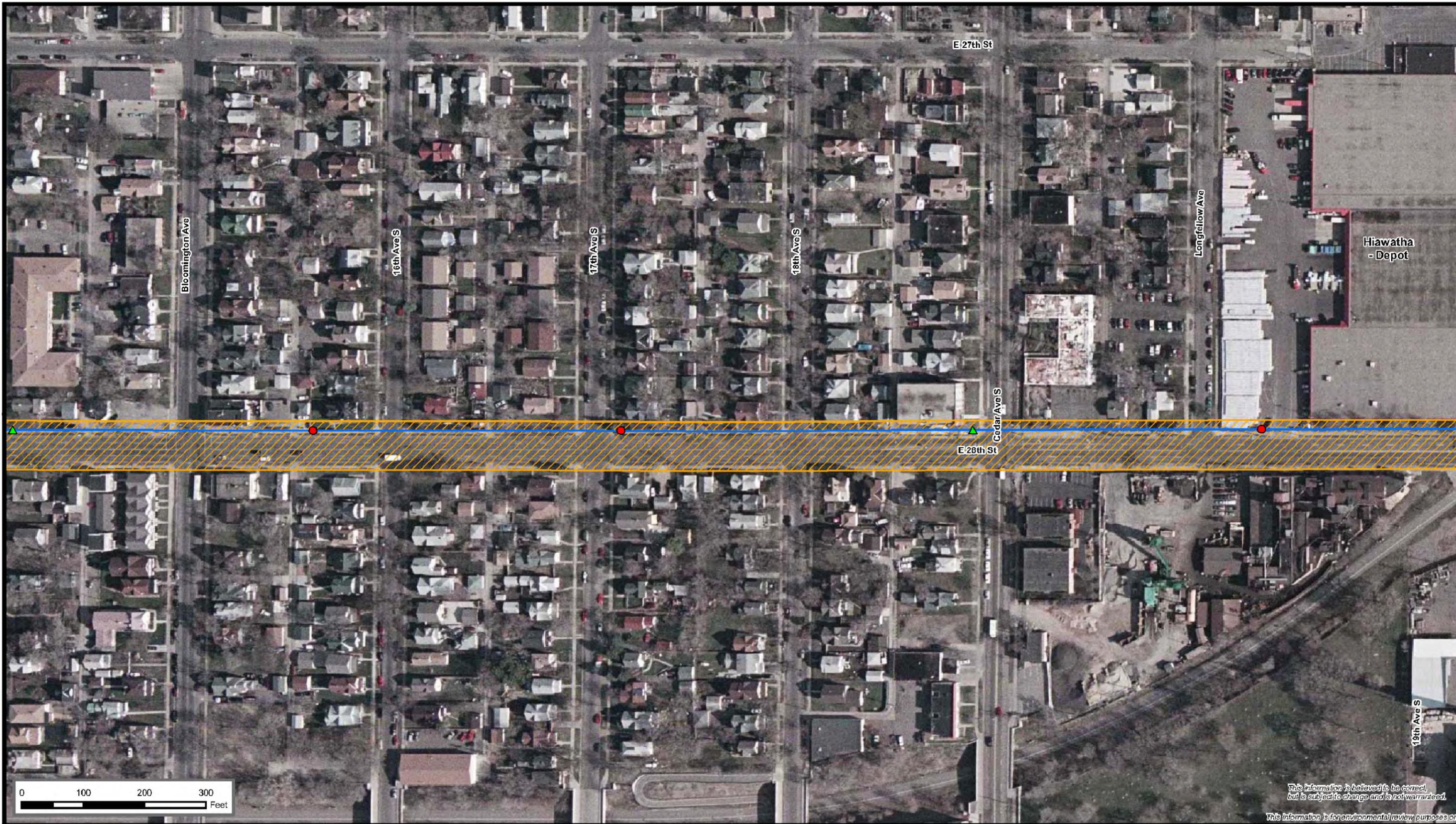


Image Source: Xcel Energy

- Transmission Structure without Distribution Underbuild
- Transmission Line
- Route

Route Width = 80 feet  
ROW Width = 50 feet

**Substations**

- |   |  |
|---|--|
| <span style="background-color: orange; width: 10px; height: 10px; display: inline-block;"></span> Mt-28N  | <span style="background-color: green; width: 10px; height: 10px; display: inline-block;"></span> Mt-28S                    |
| <span style="background-color: yellow; width: 10px; height: 10px; display: inline-block;"></span> G-5     | <span style="background-color: orange; width: 10px; height: 10px; display: inline-block;"></span> Midtown North            |
| <span style="background-color: blue; width: 10px; height: 10px; display: inline-block;"></span> G-4       | <span style="background-color: red; width: 10px; height: 10px; display: inline-block;"></span> Midtown South               |
| <span style="background-color: purple; width: 10px; height: 10px; display: inline-block;"></span> G-3     | <span style="background-color: pink; width: 10px; height: 10px; display: inline-block;"></span> Hiawatha West              |
| <span style="background-color: lightgreen; width: 10px; height: 10px; display: inline-block;"></span> G-2 | <span style="background-color: lightyellow; width: 10px; height: 10px; display: inline-block;"></span> Hiawatha East       |
| <span style="background-color: brown; width: 10px; height: 10px; display: inline-block;"></span> G-1      | <span style="background-color: cyan; width: 10px; height: 10px; display: inline-block;"></span> Hiawatha Planned Expansion |



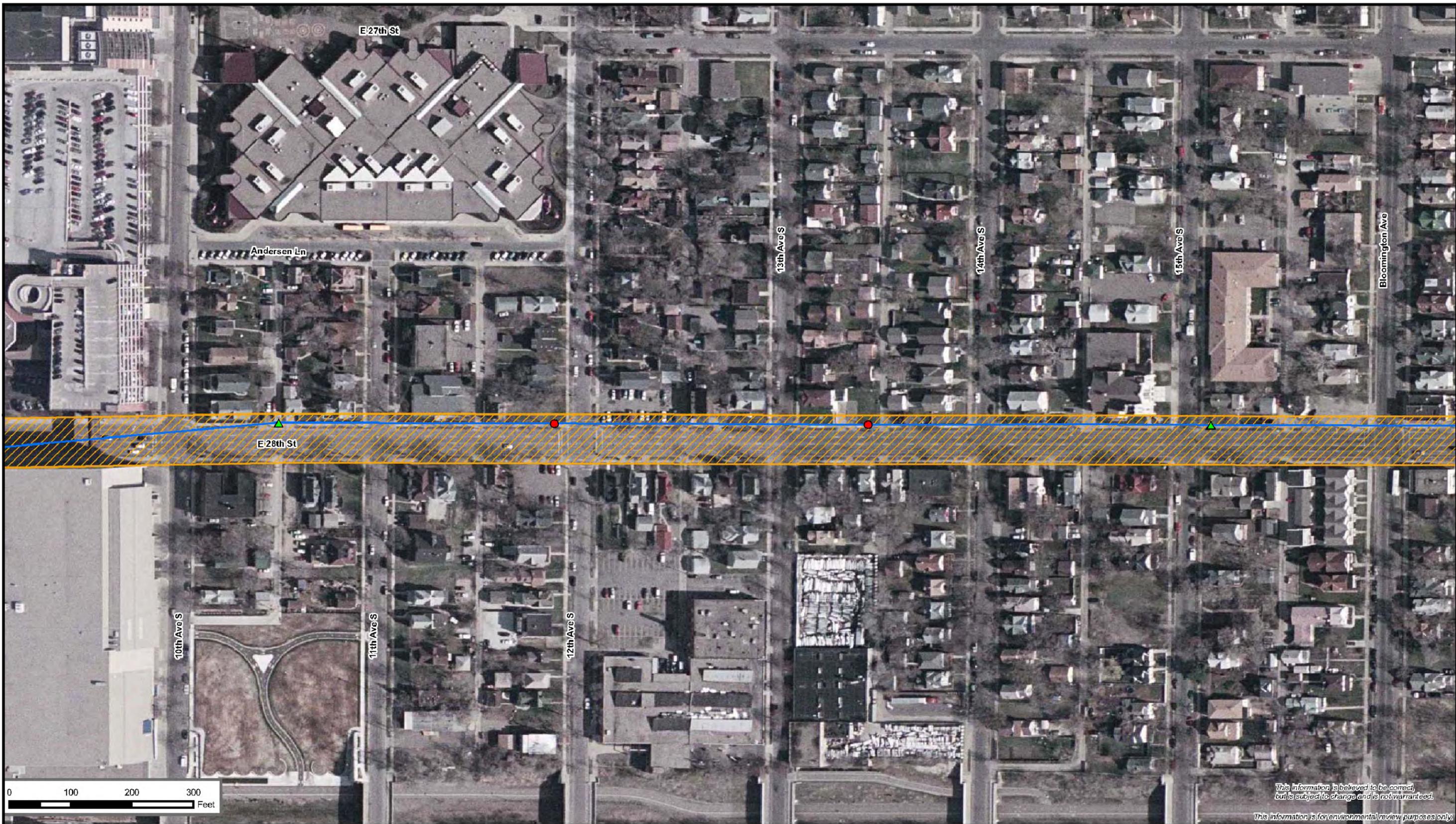
**Appendix B.4.2  
Route B**

**Hiawatha Transmission Line  
Xcel Energy  
Minneapolis, Minnesota**

January 2010

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Image Source: Xcel Energy

- Transmission Structure without Distribution Underbuild
  - Transmission Line
  - Route
- Route Width = 80 feet  
 ROW Width = 50 feet

**Substations**

- |   |  |
|---|--|
| <span style="background-color: orange; width: 15px; height: 10px; display: inline-block;"></span> Mt-28N  | <span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span> Mt-28S                    |
| <span style="background-color: yellow; width: 15px; height: 10px; display: inline-block;"></span> G-5     | <span style="background-color: orange; width: 15px; height: 10px; display: inline-block;"></span> Midtown North            |
| <span style="background-color: blue; width: 15px; height: 10px; display: inline-block;"></span> G-4       | <span style="background-color: red; width: 15px; height: 10px; display: inline-block;"></span> Midtown South               |
| <span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span> G-3     | <span style="background-color: pink; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha West              |
| <span style="background-color: lightgreen; width: 15px; height: 10px; display: inline-block;"></span> G-2 | <span style="background-color: lightyellow; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha East       |
| <span style="background-color: brown; width: 15px; height: 10px; display: inline-block;"></span> G-1      | <span style="background-color: cyan; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha Planned Expansion |

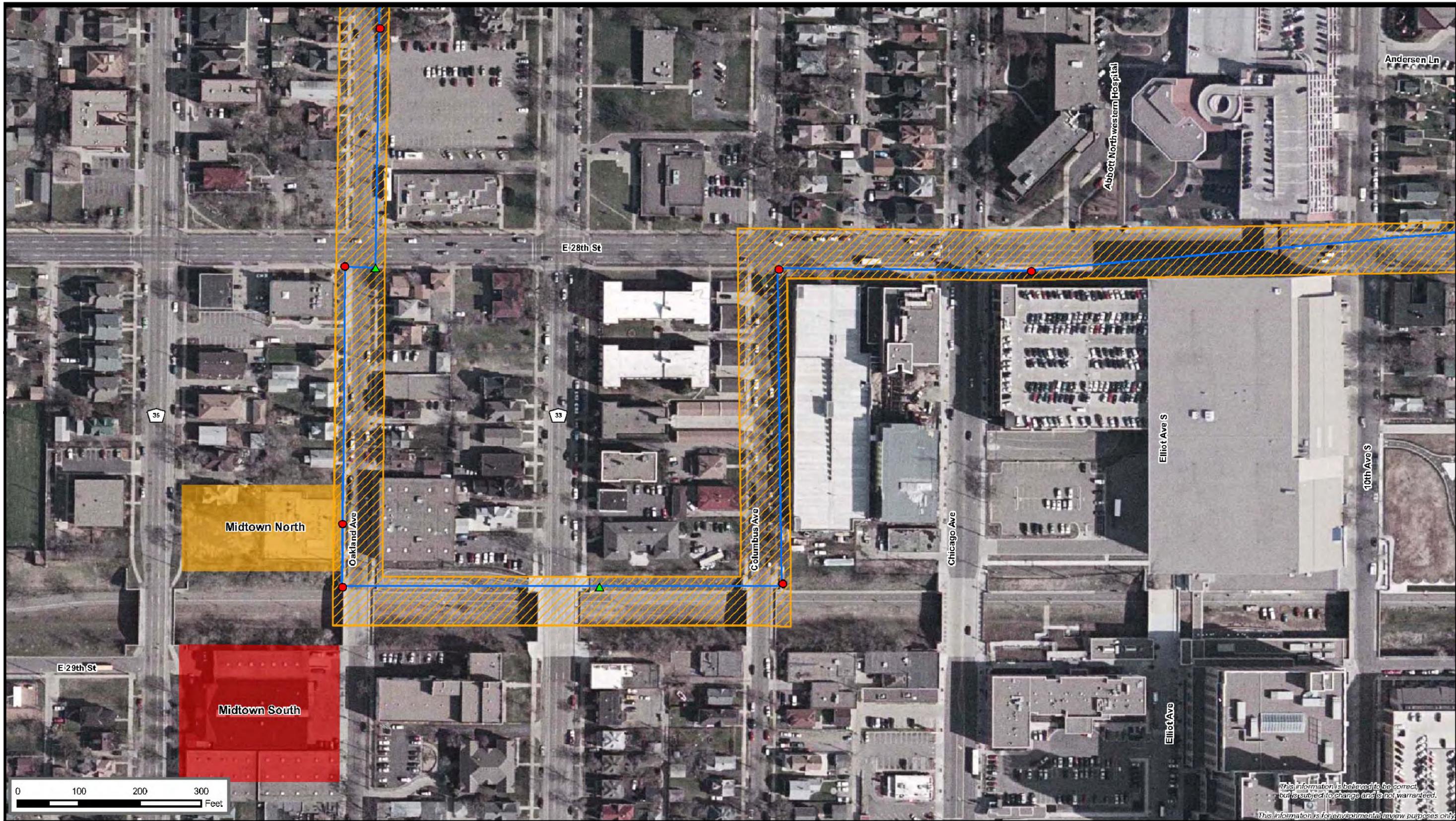


**Appendix B.4.3  
 Route B**

**Hiawatha Transmission Line  
 Xcel Energy  
 Minneapolis, Minnesota**

January 2010

**DRAFT**



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Image Source: Xcel Energy

- Transmission Structure without Distribution Underbuild
  - Transmission Line
  - Route
- Route Width = 80 feet  
ROW Width = 50 feet

Substations	
<span style="background-color: yellow; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Mt-28N	<span style="background-color: green; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Mt-28S
<span style="background-color: orange; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-5	<span style="background-color: red; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Midtown North
<span style="background-color: blue; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-4	<span style="background-color: purple; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Midtown South
<span style="background-color: purple; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-3	<span style="background-color: lightgreen; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha West
<span style="background-color: green; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-2	<span style="background-color: lightblue; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha East
<span style="background-color: red; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-1	<span style="background-color: cyan; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha Planned Expansion

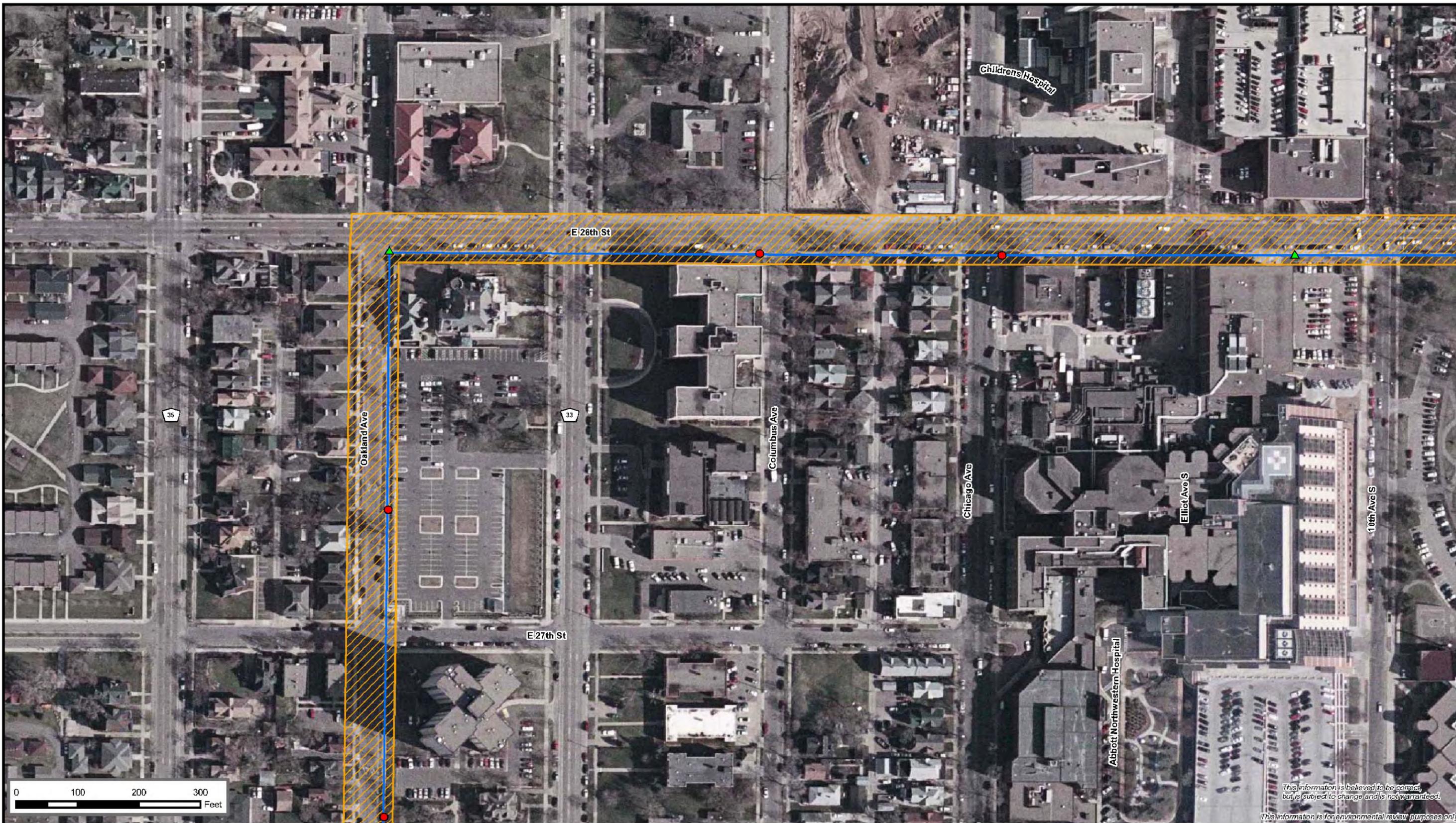
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**Appendix B.4.4**  
**Route B**

Hiawatha Transmission Line  
Xcel Energy  
Minneapolis, Minnesota

January 2010



*This information is believed to be correct, but is subject to change and is not warranted. This information is for environmental review purposes only.*

Image Source: Xcel Energy

- Transmission Structure without Distribution Underbuild
- Transmission Line
- Route

Route Width = 80 feet  
ROW Width = 50 feet

**Substations**

- |   |  |
|---|--|
| <span style="background-color: orange; width: 15px; height: 10px; display: inline-block;"></span> Mt-28N  | <span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span> Mt-28S                    |
| <span style="background-color: yellow; width: 15px; height: 10px; display: inline-block;"></span> G-5     | <span style="background-color: orange; width: 15px; height: 10px; display: inline-block;"></span> Midtown North            |
| <span style="background-color: blue; width: 15px; height: 10px; display: inline-block;"></span> G-4       | <span style="background-color: red; width: 15px; height: 10px; display: inline-block;"></span> Midtown South               |
| <span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span> G-3     | <span style="background-color: pink; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha West              |
| <span style="background-color: lightgreen; width: 15px; height: 10px; display: inline-block;"></span> G-2 | <span style="background-color: lightyellow; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha East       |
| <span style="background-color: brown; width: 15px; height: 10px; display: inline-block;"></span> G-1      | <span style="background-color: cyan; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha Planned Expansion |



**Appendix B.4.5  
Route B**

**Hiawatha Transmission Line  
Xcel Energy  
Minneapolis, Minnesota**

January 2010

**DRAFT**



*This information is believed to be correct, but is subject to change and is not warranted.*  
*This information is for environmental review purposes only.*

Image Source: Xcel Energy

- Transmission Structure without Distribution Underbuild
  - Transmission Line
  - Route
- Route Width = 80 feet  
 ROW Width = 50 feet

**Substations**

- |   |  |
|---|--|
| <span style="background-color: orange; width: 15px; height: 10px; display: inline-block;"></span> Mt-28N  | <span style="background-color: green; width: 15px; height: 10px; display: inline-block;"></span> Mt-28S                    |
| <span style="background-color: yellow; width: 15px; height: 10px; display: inline-block;"></span> G-5     | <span style="background-color: orange; width: 15px; height: 10px; display: inline-block;"></span> Midtown North            |
| <span style="background-color: blue; width: 15px; height: 10px; display: inline-block;"></span> G-4       | <span style="background-color: red; width: 15px; height: 10px; display: inline-block;"></span> Midtown South               |
| <span style="background-color: purple; width: 15px; height: 10px; display: inline-block;"></span> G-3     | <span style="background-color: pink; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha West              |
| <span style="background-color: lightgreen; width: 15px; height: 10px; display: inline-block;"></span> G-2 | <span style="background-color: lightyellow; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha East       |
| <span style="background-color: brown; width: 15px; height: 10px; display: inline-block;"></span> G-1      | <span style="background-color: cyan; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha Planned Expansion |

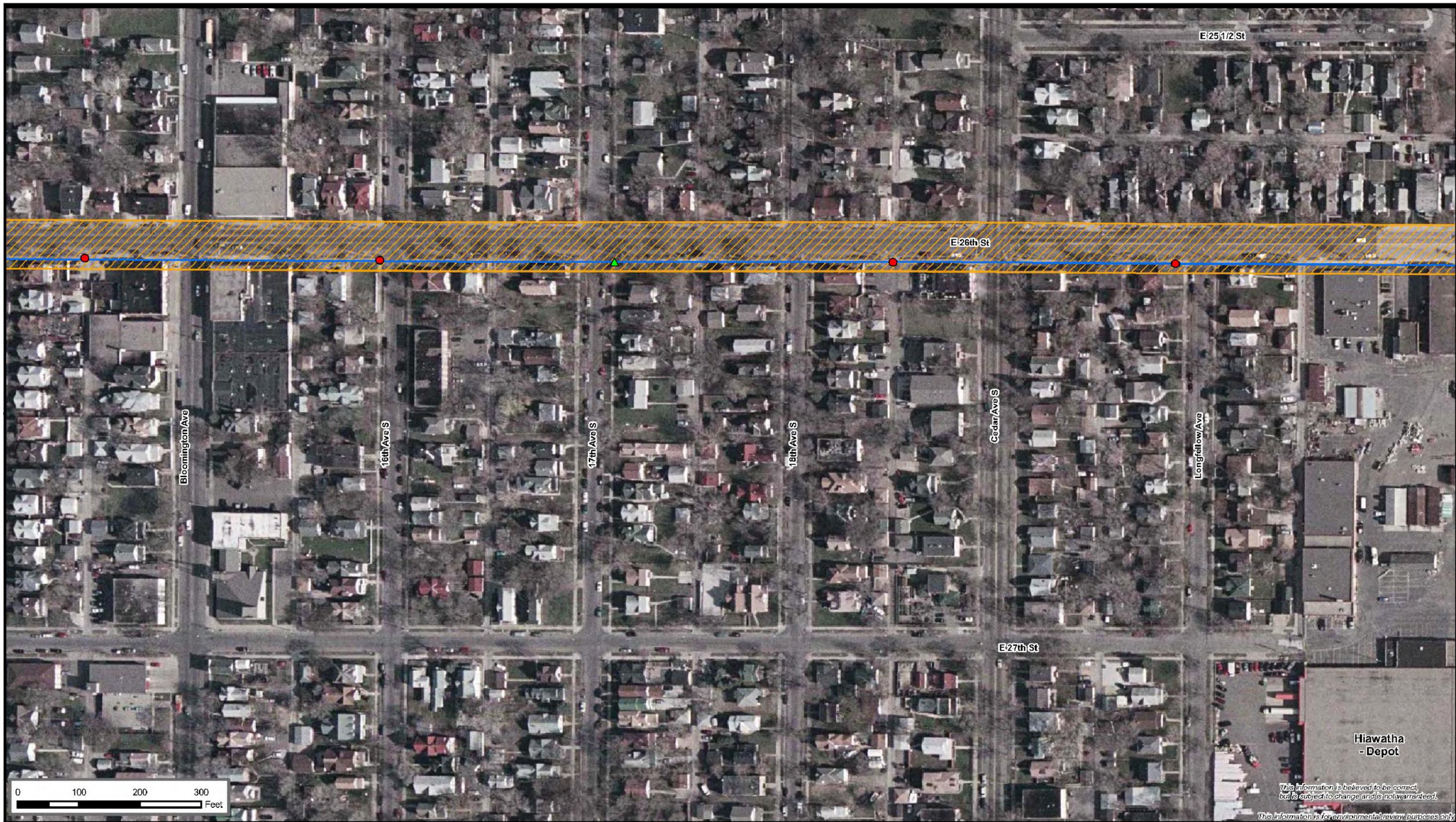


**Appendix B.4.6  
Route B**

**Hiawatha Transmission Line  
Xcel Energy  
Minneapolis, Minnesota**

January 2010

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Image Source: Xcel Energy

- Transmission Structure without Distribution Underbuild
  - Transmission Line
  - Route
- Route Width = 80 feet  
 ROW Width = 50 feet

Substations	
<span style="background-color: orange; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Mt-28N	<span style="background-color: green; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Mt-28S
<span style="background-color: yellow; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-5	<span style="background-color: orange; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Midtown North
<span style="background-color: blue; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-4	<span style="background-color: red; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Midtown South
<span style="background-color: purple; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-3	<span style="background-color: pink; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha West
<span style="background-color: lightgreen; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-2	<span style="background-color: lightyellow; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha East
<span style="background-color: brown; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> G-1	<span style="background-color: cyan; border: 1px solid black; width: 15px; height: 10px; display: inline-block;"></span> Hiawatha Planned Expansion

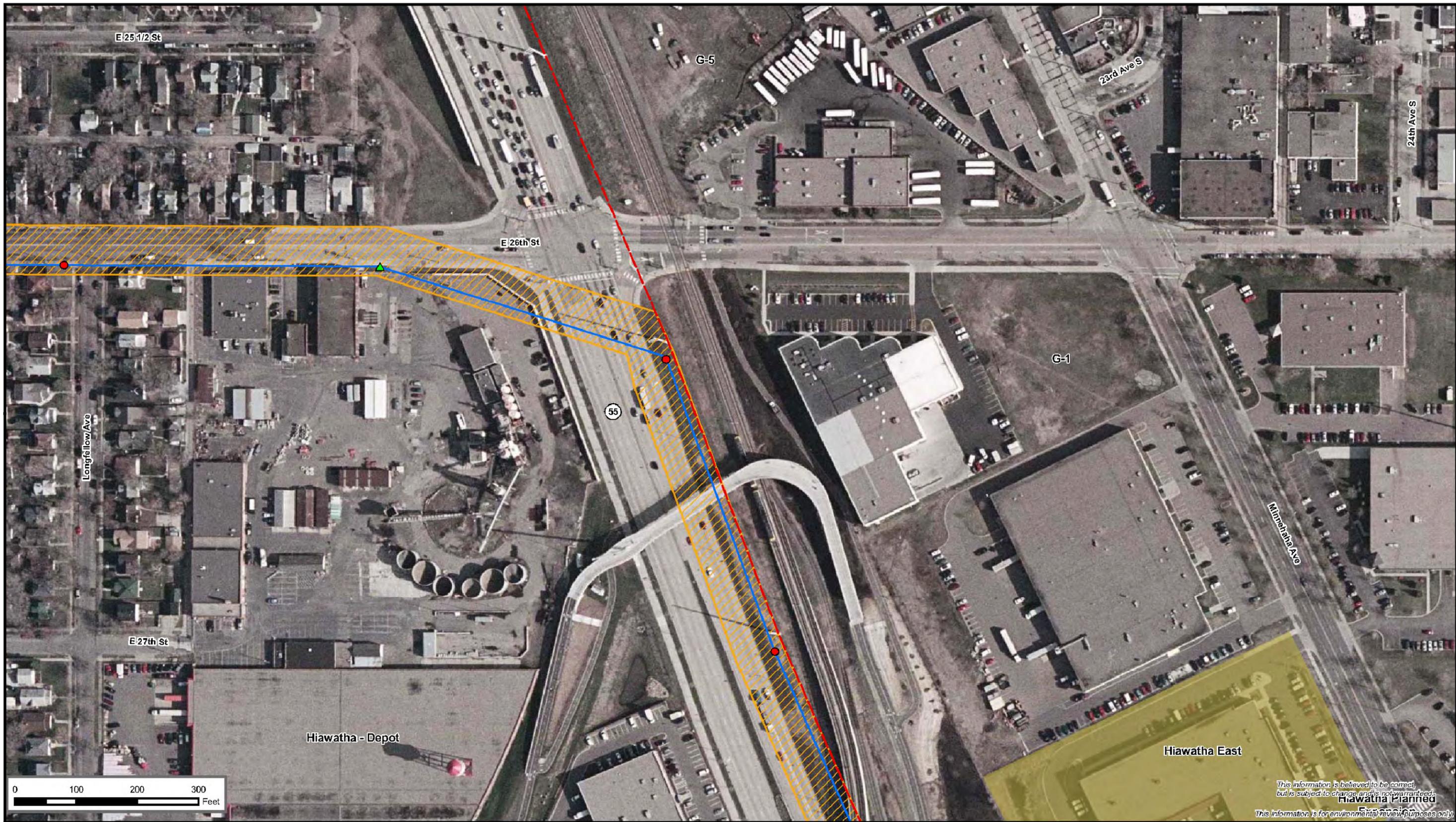
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**Appendix B.4.7**  
**Route B**

**Hiawatha Transmission Line**  
 Xcel Energy  
 Minneapolis, Minnesota

January 2010



*This information is believed to be correct, but is subject to change and is not warranted.*  
 Hiawatha Planned Expansion  
 This information is for environmental review purposes only.

Image Source: Xcel Energy

- Transmission Structure without Distribution Underbuild
  - Transmission Line
  - ▨ Route
- Route Width = 80 feet  
 ROW Width = 50 feet

Substations	
<span style="display: inline-block; width: 10px; height: 10px; background-color: #FFD700; border: 1px solid black;"></span> Mt-28N	<span style="display: inline-block; width: 10px; height: 10px; background-color: #008000; border: 1px solid black;"></span> Mt-28S
<span style="display: inline-block; width: 10px; height: 10px; background-color: #FFA500; border: 1px solid black;"></span> G-5	<span style="display: inline-block; width: 10px; height: 10px; background-color: #FF69B4; border: 1px solid black;"></span> Midtown North
<span style="display: inline-block; width: 10px; height: 10px; background-color: #66CDAA; border: 1px solid black;"></span> G-4	<span style="display: inline-block; width: 10px; height: 10px; background-color: #FF6347; border: 1px solid black;"></span> Midtown South
<span style="display: inline-block; width: 10px; height: 10px; background-color: #4169E1; border: 1px solid black;"></span> G-3	<span style="display: inline-block; width: 10px; height: 10px; background-color: #FF00FF; border: 1px solid black;"></span> Hiawatha West
<span style="display: inline-block; width: 10px; height: 10px; background-color: #32CD32; border: 1px solid black;"></span> G-2	<span style="display: inline-block; width: 10px; height: 10px; background-color: #90EE90; border: 1px solid black;"></span> Hiawatha East
<span style="display: inline-block; width: 10px; height: 10px; background-color: #8B0000; border: 1px solid black;"></span> G-1	<span style="display: inline-block; width: 10px; height: 10px; background-color: #7FFFD4; border: 1px solid black;"></span> Hiawatha Planned Expansion

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**Appendix B.4.8**  
**Route B**  
 Hiawatha Transmission Line  
 Xcel Energy  
 Minneapolis, Minnesota  
 January 2010