UTILITIES

NO UTILITIES WILL BE AFFECTED BY THIS PROJECT

THE FOLLOWING UTILITY OWNERS HAVE FACILITIES WITHIN THE PROJECT LIMITS BUT WILL NOT BE AFFECTED:

Arvil Communications Systems
Century Link
City of Inver Grove Heights
City of South Saint Paul
City of West Saint Paul
Comcast Cable Communications, Incorporated
Dakota County IT Department
Minnesota Dept. of Transportation
Integra Telecom of Minnesota, Incorporated
MCI Communication Services, Incorporated
Metropolitan Council, Transit
Metropolitan Airports Comm,
Sprint Communications Company, LP
Board of Water Commissioners of the City of Saint Paul
TTW Operating Corp.
Windstream Communications
XcelEnergy

NOTE:
THE SUBSURFACE UTILITY INFORMATION IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA.
ALL WORK IS WITHIN Mn/DOT RIGHT OF WAY

THE FOLLOWING STANDARD PLATES APPROVED BY THE MINNESOTA DEPT. OF TRANSPORTATION AND THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

<table>
<thead>
<tr>
<th>PLATE NO.</th>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>81060</td>
<td>EQUIPMENT PAD B</td>
</tr>
<tr>
<td>80001</td>
<td>STANDARD BARRICADES</td>
</tr>
<tr>
<td>8127C</td>
<td>LIGHT FOUNDATION DESIGN E</td>
</tr>
<tr>
<td>81280</td>
<td>LIGHT FOUNDATION DESIGN H</td>
</tr>
<tr>
<td>8125A</td>
<td>SHIM AND WASHER</td>
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</table>

STATEMENT OF ESTIMATED QUANTITIES

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM</th>
<th>UNIT</th>
<th>ESTIMATED QUANTITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014.601</td>
<td>HN1 SALVAGED MATERIAL ($)</td>
<td>LUMP SUM</td>
<td></td>
</tr>
<tr>
<td>2545.201</td>
<td>ELECTRIC LIGHT SYSTEM</td>
<td>LUMP SUM</td>
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</tr>
</tbody>
</table>

(1) 100% STATE FUNDS
© BOX FEDERAL/20% STATE FUNDS
LIGHTING DETAILS

LIGHTING UNIT TYPE 9-49
(BREAKAWAY)

INSTALL ROAM ENABLED NODE

49" MOUNTING HEIGHT LED LUMINAIRE WITH WIRE HOLDER

JOINT PERMITTED

LIGHT FOUNDATION DESIGN H
STANDARD PLATE 8128

STAINLESS STEEL HIGH BASE
ALUMINUM TRANSFORMER BASE

LUMINAIRES
240-480 VOLT

RADIUS CHART (ENGLISH)

<table>
<thead>
<tr>
<th>MAST ARM LENGTH</th>
<th>RADIUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>12</td>
<td>10</td>
</tr>
</tbody>
</table>

USE THE MAXIMUM DISTANCE WHENEVER POSSIBLE,
IF THE MINIMUM DISTANCE CANNOT BE OBTAINED
CONTACT THE DISTRICT/DIVISION TRAFFIC ENGINEER
LIGHT FOUNDATIONS SHALL BE PLACED IN ACCORDANCE
WITH 2565.3F2.
DISTANCES SHALL BE MEASURED FROM THE
EDGE OF DRIVING LANE OR TURN LANE.

LIGHTING UNIT TYPE 9-40
(BREAKAWAY)

FILL AROUND FOUNDATION TOP WITH EXCAVATED DIRT, GRADE DIRT LEVEL
WITH BOTTOM OF CONCRETE CHAMFER

28'6" PWP
SHOULDER
ROADWAY

PLACE LIGHTING UNIT TYPE 9-49

PLACE LIGHTING UNIT TYPE 9-40

LIGHT FOUNDATION DESIGN E
STANDARD PLATE 8127

LUMINAIRES
240-480 VOLT

RADIUS CHART (ENGLISH)

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STATE PROJ.NO.1928-60 (T.H.52)
SHEET NO. 3 OF 31 SHEETS
**Lighting Unit Type Special #2**

(BREAKAWAY)

**Lighting Unit Type Special #1**

(BREAKAWAY)

**Lighting Details**

*State Proj. No. 1928-60 (T.H. 52)  Sheet No. 4 of 31 Sheets*

**Certified By:** Michael P. Lohrborg  Lic. No. 15863  Date: 3/18/2014

- **Lighting Foundation:**
  - Edge of driving lane or turn lane.
  - Distances shall be measured from the contact the district/division traffic engineer if the minimum distance cannot be obtained. Use the maximum distance whenever possible.

- **Light Foundation:**
  - Shall be placed in accordance with 2565.3F2.

- **Air Obstruction Hub and Fixture:**
  - Install roam enabled node.

- **Radius Chart (English):**

<table>
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<tr>
<th>Mast Arm Length</th>
<th>Radius</th>
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</tr>
<tr>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>12</td>
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</tbody>
</table>

**Luminaires:**

- 240-480 Volt

- **Transformer Base:**
  - Aluminum high base
  - Stainless steel high base

- **Standard Plate:**
  - 8127

- **Design E:**
  - (Breakaway)

- **Lighting Unit Type:**
  - Special #1
  - Special #2

- **Placement:**
  - Lighting unit type special #1 and special #2

- **Fill Around Foundation Top:**
  - With excavated dirt, grade dirt level with bottom of concrete chamfer.

- ** Mast Arm Length:**
  - 27''

- **Radius Chart:**
  - 6
  - 9
  - 12

- **Luminaire with Wire Holder:**
  - 40' mounting height LED
SALVAGE AND REMOVAL PLAN

FEED POINT J7V, J7W

MATCHLINE "A"

NOTE: REMOVE INPLACE ARMORED CABLE.

CUT OFF ANCHOR BOLTS IN BARRIER FLUSH WITH TOP OF BARRIER.

REMOVE LUMINAIRE

REMOVE LIGHT FOUNDATION

REMOVE CABINET FOUNDATION

REMOVE LIGHTING UNIT

REMOVE CABINET

SALVAGE LIGHTING UNIT

SALVAGE SERVICE CABINET

REMOVE HANDHOLE

REMOVE CABLES IN BARRIER.

CUT OFF ANCHOR BOLTS IN BARRIER FLUSH WITH TOP OF BARRIER.

NOTE: REMOVE INPLACE ARMORED CABLE.

MATCHLINE "A"

NOTE: REMOVE INPLACE ARMORED CABLE.

CUT OFF ANCHOR BOLTS IN BARRIER FLUSH WITH TOP OF BARRIER.

REMOVE LUMINAIRE

REMOVE LIGHT FOUNDATION

REMOVE CABINET FOUNDATION

REMOVE LIGHTING UNIT

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SALVAGE LIGHTING UNIT

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REMOVE CABINET FOUNDATION

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REMOVE CABINET

SALVAGE LIGHTING UNIT

SALVAGE SERVICE CABINET

REMOVE HANDHOLE

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CUT OFF ANCHOR BOLTS IN BARRIER FLUSH WITH TOP OF BARRIER.

NOTE: REMOVE INPLACE ARMORED CABLE.

MATCHLINE "A"

NOTE: REMOVE INPLACE ARMORED CABLE.

CUT OFF ANCHOR BOLTS IN BARRIER FLUSH WITH TOP OF BARRIER.

REMOVE LUMINAIRE

REMOVE LIGHT FOUNDATION

REMOVE CABINET FOUNDATION

REMOVE LIGHTING UNIT

REMOVE CABINET

SALVAGE LIGHTING UNIT

SALVAGE SERVICE CABINET

REMOVE HANDHOLE

REMOVE CABLES IN BARRIER.

CUT OFF ANCHOR BOLTS IN BARRIER FLUSH WITH TOP OF BARRIER.

REMOVE LUMINAIRE

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REMOVE LUMINAIRE

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SALVAGE SERVICE CABINET

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CUT OFF ANCHOR BOLTS IN BARRIER FLUSH WITH TOP OF BARRIER.

NOTE: REMOVE INPLACE ARMORED CABLE.

MATCHLINE "A"

NOTE: REMOVE INPLACE ARMORED CABLE.

CUT OFF ANCHOR BOLTS IN BARRIER FLUSH WITH TOP OF BARRIER.
SEE LEGEND SHEET 5
SEE LEGEND SHEET 5

FEED POINT J7L

TH 52 SB
TH 52 NB

MATCHLINE "B"

STATE PROJ.NO.1928-60(T.H. 52)  SHEET NO. 10 OF 31 SHEETS
SEE LEGEND SHEET 5

SALVAGE AND REMOVAL PLAN

STATE PROJ.NO.1928-60(T.H. 52) SHEET NO. 11 OF 31 SHEETS

FEED POINT J7H, J7J

BY DATE REVISIONS

CERTIFIED BY Michael P. Scrudder LIC. NO. 19863 DATE 9/16/2014

DONE BY DATE CSS BY DATE
SEE LEGEND SHEET 5

FEED POINT J7C

MATCHLINE "D"

MATCHLINE "E"

SALVAGE AND REMOVAL PLAN

STATE Proj.NO.1928-60(T.H. 52) SHEET NO. 13 OF 31 SHEETS
SEE LEGEND SHEET 5

FEED POINT J&F

MATCHLINE 'Y'

TH 52 SB

TH 52 NB

WEST FRONTAGE ROAD

EAST FRONTAGE ROAD

MATCHLINE 'Y'

STATE PROJ.NO. 1928-60 (T.H. 52) SHEET NO. 15 OF 31 SHEETS