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| To: Tina Bartunek Iberdrola Renewables 1125 NW Couch Street, Suite 700 Portland OR 97209 | |
| From: Joyce Pickle | Project: Rugby Wind Project |
| Date: July 16, 2012 | Job No: 170841 |

RE: Tree Replacement Memo for Rugby Wind Project, Pierce County, North Dakota – Third Year of Three Years of Monitoring

This memorandum documents the results of the third year of three years of monitoring the tree replacement at the Iberdrola Renewables (IR) Rugby Wind Project, a 150 MW wind farm and associated 230 kV transmission line in Pierce County, North Dakota. HDR Engineering, Inc. (HDR) completed a preconstruction tree survey of the project in the summer and fall of 2008 and spring of 2009. The tree survey was requested by the North Dakota Public Services Commission (PSC) to determine the number of trees required for replacement under the PSC Order #16, which states:

Trees or other woody vegetation must be replaced with saplings that are two or more years old at a rate of two for every one removed. Landowners shall be given the option of having replacement trees or shrubs planted on the landowner's property or waiving that requirement in writing and allowing IR to plant the replacement trees or shrubs elsewhere. IR shall inspect tree replacements once a year for three years and send a report on or before October 1 of each year to the Commission documenting work completion and condition of woodlands planting. The Commission may order additional plantings if survival rates are less than 75%.

Land use at the Project site is primarily tilled agricultural land and pasture. Data collection points and the wooded area boundaries were mapped with a Trimble ProXH Global Positioning System (GPS), providing a permanent record of tree locations in the Project area. Final cleared tree numbers were provided by field staff after construction had been completed.

Tree removal was necessary at twelve locations within the Project area (Figure 1). Out of the twelve locations, nine of the sites were planted tree rows between tilled fields. The remaining three locations were naturally occurring aspen (*Populus tremuloides*) or green ash (*Fraxinus pennsylvanica*) woodlands. Tree removal was necessary to construct overhead transmission lines, underground collector lines and access roads for the Project. Overall, 289 trees were removed due to construction of the Project.

Table 1 describes the landowner, location, and number of trees removed at each of the removal sites. The table also identifies the number of replacement trees planted for each landowner.

The replacement species recommendations are based on communications with Randy Myers, District Technician at the Pierce County NRCS office. Green ash and American elm (*Ulmus americana*) trees are not currently recommended for plantings in Pierce County, ND. Hackberry (*Celtis occidentalis*) or bur oak (*Quercus macrocarpa*) are recommended as alternatives. The affected landowners were also consulted and requested plantings of different species within their property. The species planted are shown in Table 1.

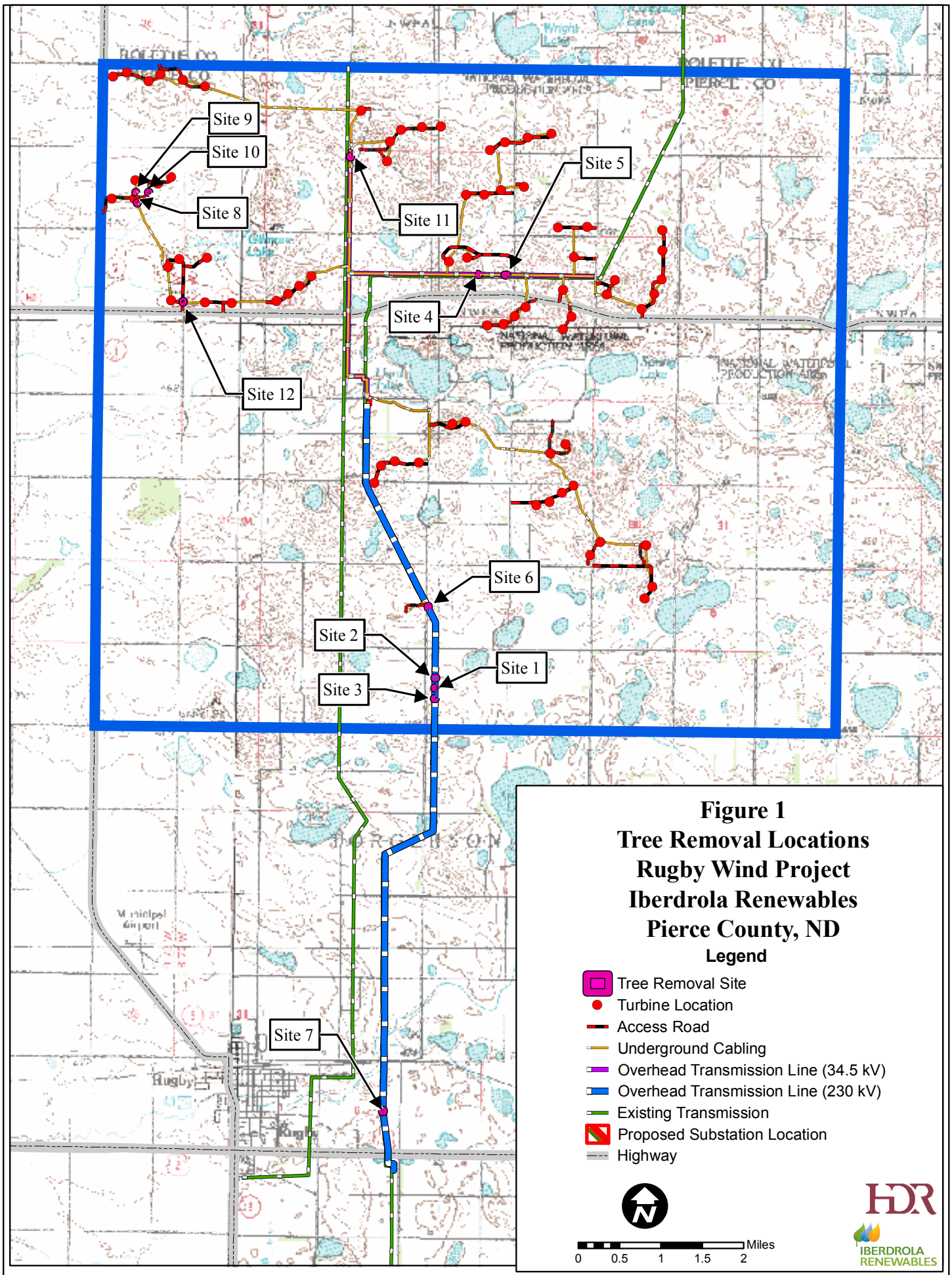
As documented in HDR's November 30, 2010 report (summarizing the first year of the monitoring period), by November 30, 2010, 563 replacement trees were planted, 559 of which were living at the time of the field surveys. As the September 28, 2011 report showed (documenting the second year of the monitoring period), by the end of September 2011, a total of 541 trees were living at the site, including 20 additional trees that were planted in early September 2011.

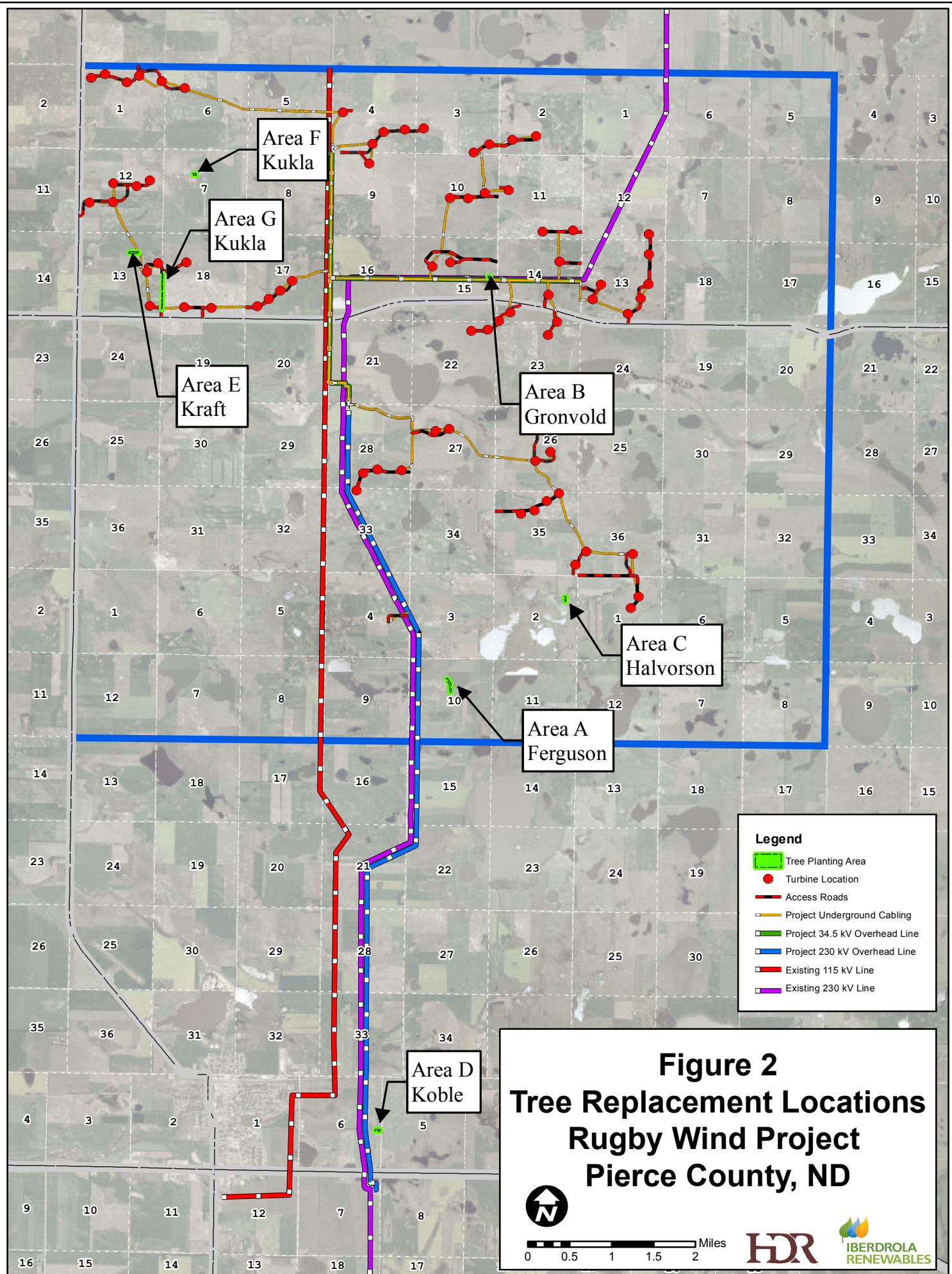
No additional trees were planted in 2012. On June 28, 2012, IR operations and maintenance staff conducted a survey of the replacement trees to document any trees that had died since the 2011 survey. Table 1 summarizes the number and status (live vs. dead) of all the replacement trees for the third year of monitoring. The detailed aerial maps show the locations of live and dead trees at each replacement location. The locations of all the replacement trees are shown on Figure 2 and detailed on aerial maps shown at the end of this memorandum. At a replacement ratio of 2:1, 86.5% replacement survival has been achieved three years after construction at the Rugby Wind Project.

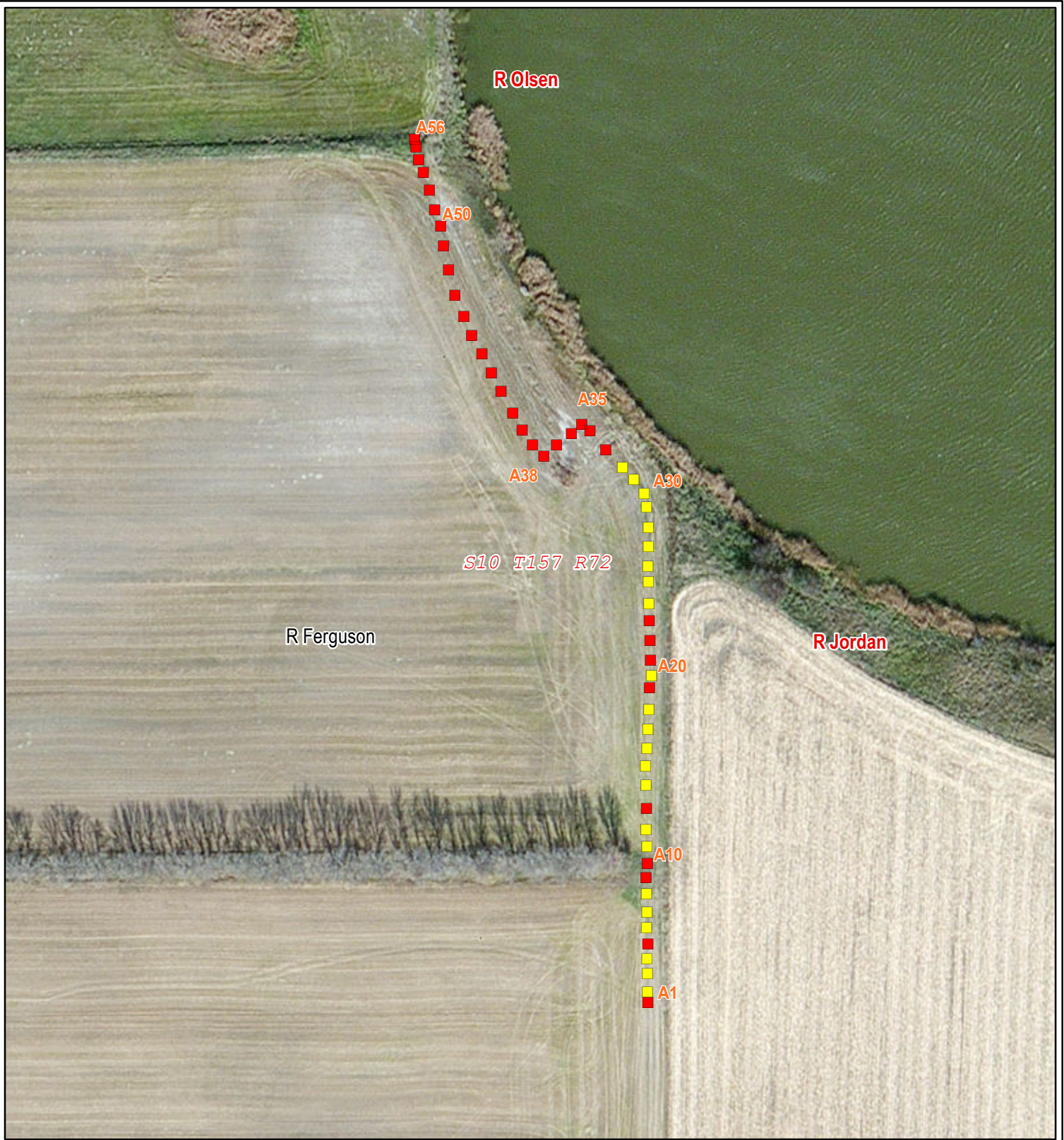
500 (live replacement trees)

578 (289 trees removed x 2) = 86.5%.

| Table1. Summary of Tree Removal Locations and Replacement Numbers as of June 28, 2012 | | | | | | |
|---|-----------------------------|-----------------------|--|---|---|---|
| Landowner | Trees Removed | | | Trees Replaced | | |
| | Location (Site on Figure 1) | Construction Activity | Number of Trees Removed | | Location (Replacement Area on Figure 2) | Number and Type of Trees Replaced |
| Ferguson | S10 T157N R72W (Site 1) | Overhead Transmission | 6 Green Ash | 27 total | S10 T157N R72W (Area A) | 56 Hackberry – 22 live, 34 dead |
| | S10 T157N R72W (Site 2) | Overhead Transmission | 12 Green Ash | | | |
| | S10 T157N R72W (Site 3) | Overhead Transmission | 9 Green Ash | | | |
| Gronvold | S15 T158N R72W (Site 4) | Overhead Transmission | 26 Aspen | 115 total | S15 T158N R72W (Area B) | 236 Aspen – 205 live, 31 dead |
| | S15 T158N R72W (Site 5) | Overhead Transmission | 89 Aspen | | | |
| Halvorson | S3 T157N R72W (Site 6) | Overhead Transmission | 5 American Elm, 36 Green Ash | 41 total | S2 T157N R72W (Area C) | 82 Hackberry – 78 live, 4 dead |
| Koble | S6 T156N R72W (Site 7) | Overhead Transmission | 4 American Elm, 42 Green Ash | 46 total | S6 T156N R72W (Area D) | 92 Hackberry – 89 live, 3 dead |
| Kraft | S12 T158N R73W (Site 8) | Underground Cabling | 4 Green Ash | 35 total | S13 T158N R73W (Area E) | 71 Blue Spruce – 58 live, 13 dead |
| | S12 T158N R73W (Site 9) | Underground Cabling | 10 Green Ash | | | |
| | S12 T158N R73W (Site 10) | Access Road | 21 Green Ash | | | |
| Kukla | S18 T158N R72W (Site 11) | Overhead Transmission | 10 Green Ash | 25 total | S13 T158N R73W (Area F) | 30 Lilacs – 29 live, 1 dead |
| | S18 T158N R73W (Site 12) | Access Road | 5 Evergreens, 5 Choke Cherry, 5 Willow | | S18 T158N R72W (Area G) | 15 Ponderosa Pine – all live; 5 Willow – 4 live, 1 dead |
| Total | 289 Trees Removed | | | Replacement Trees: 500 Live, 87 Dead | | |







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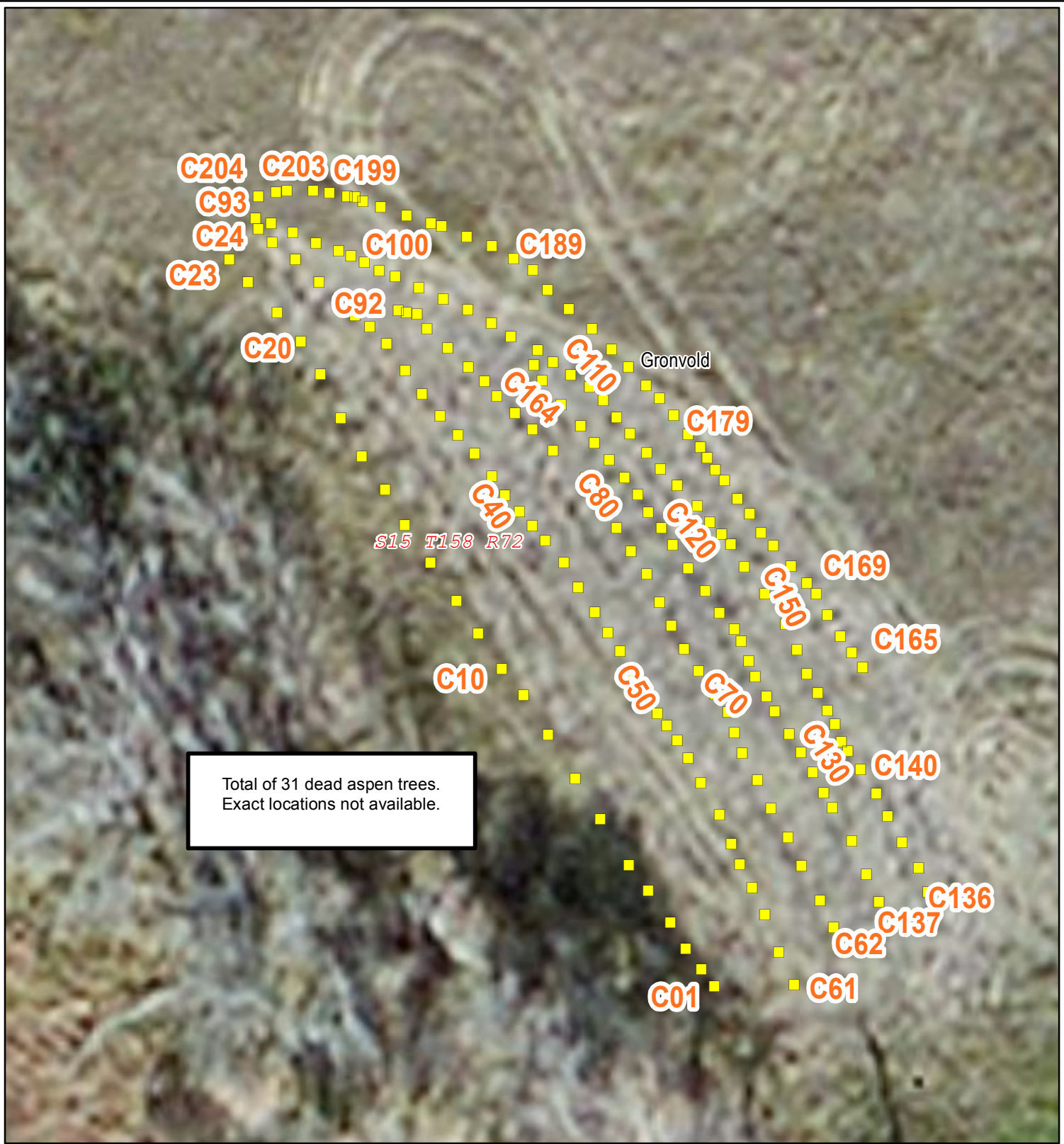
| Legend | |
|----------------------|-------------------------|
| | PLSS Sections |
| Tree Location | |
| | Dead (Summer 2012) |
| | Live Tree (Summer 2012) |

7/12/2012



**Ferguson
Property
Area: A**

**Tree Replacement Locations
Rugby Wind Farm**



Total of 31 dead aspen trees.
Exact locations not available.

Legend

- PLS Sections
- Tree Location**
- Dead (Summer 2012)
- Live Tree (Summer 2012)

**Gronvold
Property
Area: B**

7/12/2012

**Tree Replacement Locations
Rugby Wind Farm**



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7/12/2012



| Legend | |
|---------------|-------------------------|
| | PLSS Sections |
| Tree Location | |
| | Dead (Summer 2012) |
| | Live Tree (Summer 2012) |

**Halvorson
Property
Area: C**

**Tree Replacement Locations
Rugby Wind Farm**



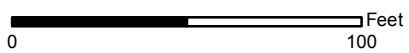
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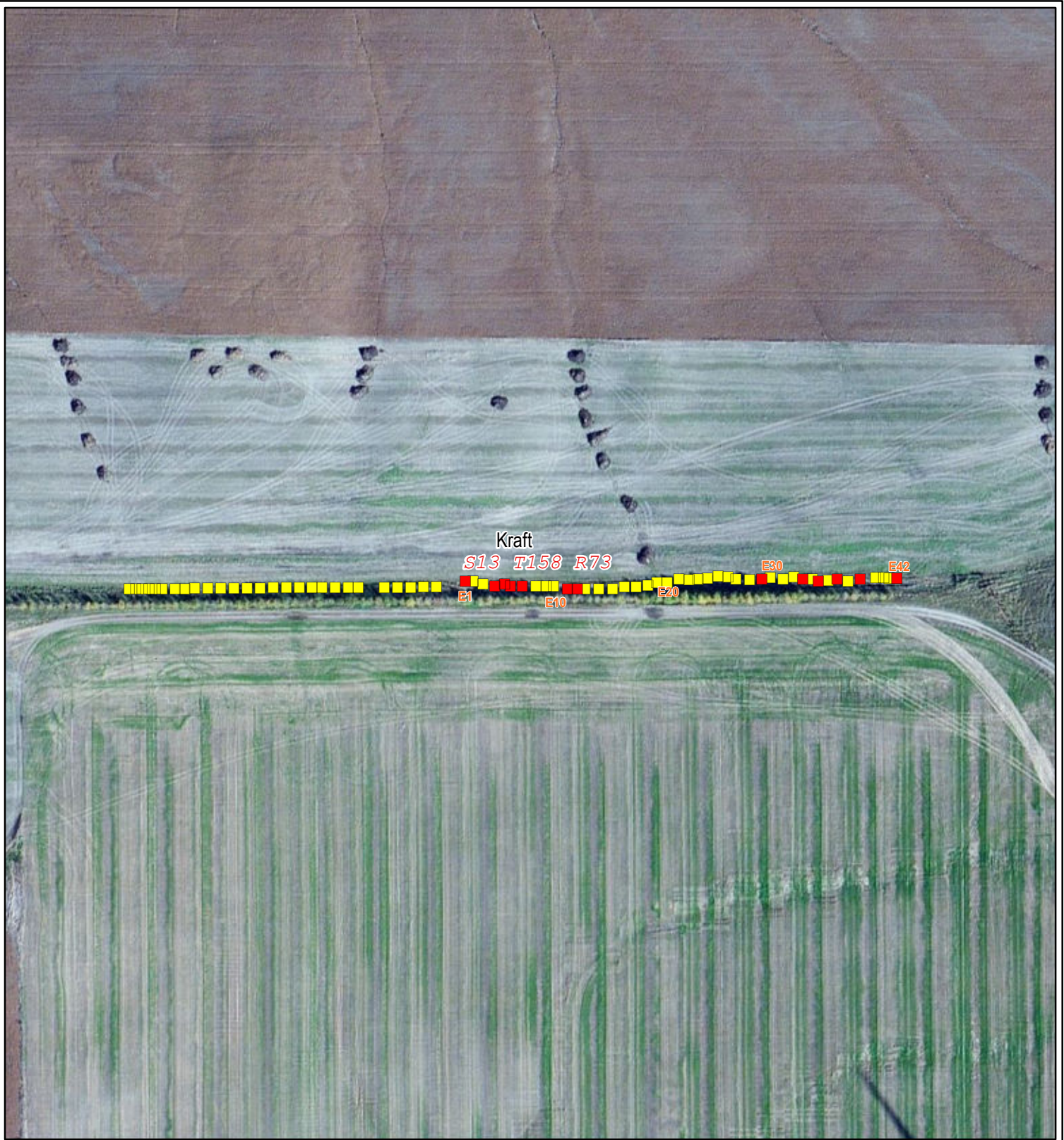
- PLS Sections
- Tree Location**
- Dead (Summer 2012)
- Live Tree (Summer 2012)

7/12/2012



Koble Property Area: D

Tree Replacement Locations Rugby Wind Farm



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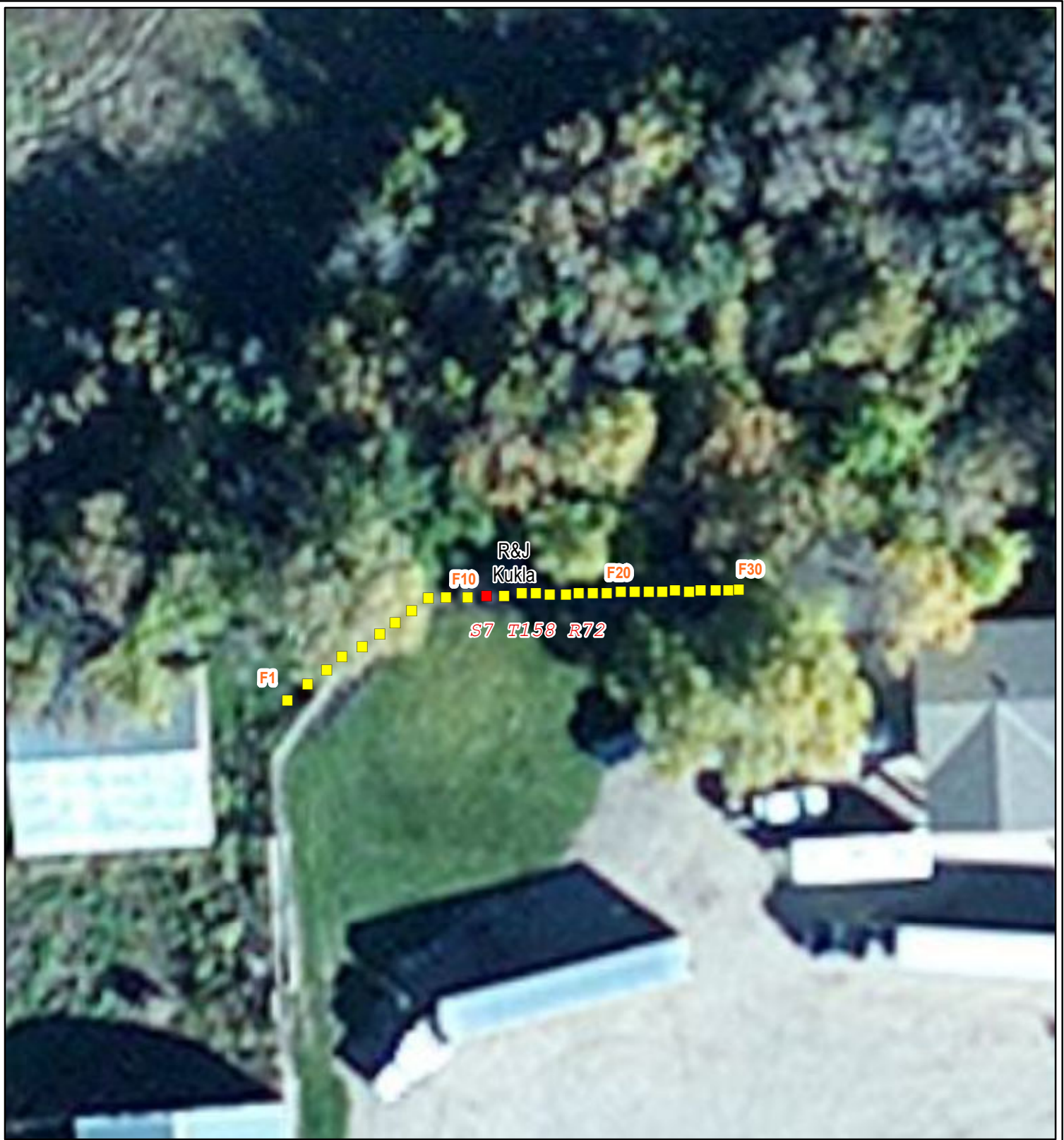
- PLSS Sections
- Tree Location**
- Dead (Summer 2012)
- Live Tree (Summer 2012)

7/12/2012



**Kraft
Property
Area: E**

**Tree Replacement Locations
Rugby Wind Farm**



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| Legend | |
|---------------|-------------------------|
| | PLSS Sections |
| Tree Location | |
| | Dead (Summer 2012) |
| | Live Tree (Summer 2012) |

7/12/2012

**Kukla
Property
Area: F**

Tree Replacement Locations
Rugby Wind Farm





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Legend

- PLSS Sections

Tree Location

- Dead (Summer 2012)
- Live Tree (Summer 2012)

7/12/2012

0 100 Feet

**Kukla
Property
Area: G**

**Tree Replacement Locations
Rugby Wind Farm**