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RECEIVED

NOV 28 2022

November 18, 2022

NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Mr. Victor Schock
North Dakota Public Service Commission
600 E Boulevard Ave Dept. 408
Bismarck, ND 58505

VIA: United Postal Service

**RE: Hess Corporation Hawkeye Pipeline Tree and Shrub
2022 Survival Rate Final Report**

Dear Mr. Schock:

Attached for your review is the Hawkeye Pipeline Tree and Shrub 2022 Survival Rate Report. This report describes the 2022 survival rate for the plantings that took place in the Fall of 2018 and the 2019 tree and shrub plantings that occurred the week of May 20, 2019. This completes the replanting 2:1 mitigation ratio requirement established by the Public Service Commission and completion of no further obligations via Case Nos. PU-15-31 and PU-15-32.

If you should have any questions or comments concerning this report, please contact the undersigned at (281) 386-0407.

Sincerely,

Donald G. Bull

cc: Ms. Vicky Sund, Hess Corporation
Mr. Shane Larson, Hess Corporation
Mr. Brian Epperson, Hess Corporation

2022 HAWKEYE PIPELINE TREE AND SHRUB SURVIVAL RATE REPORT

Field Verification: May 31 and July 27, 2022

Report Issuance: September 30, 2022

Issued By: D. Bull (Advisor EHS-Environmental & Regulatory)

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2022 HAWKEYE PIPELINE TREE AND SHRUB SURVIVAL RATE REPORT

1.0 INTRODUCTION

Hess North Dakota Pipelines LLC (Hess) has completed construction of an approximately 26-mile- long pipeline system connecting Bakken production fields south of Lake Sakakawea to existing processing facilities north of the lake. The Hawkeye Pipeline System Project (Project) transports crude oil from the Hawkeye Oil Facility near Keene, North Dakota, and natural gas and natural gas liquids (NGL) from the existing Hawkeye Compressor Station near Charlson, North Dakota, to the existing Ramberg Truck Facility (crude oil) and the existing Silurian Compressor Station (natural gas and NGL) near Tioga, North Dakota.

Per the North Dakota Public Service Commission (PSC) Tree and Shrub Mitigation Specifications requirements identified in the PSC's Findings of Facts, Conclusions of Law and Order for the Project (Case Nos. PU-15-31 and PU-15-32), trees and shrubs shall be inventoried for replacement, replaced at a 2:1 ratio, and monitored for 3 years to determine if a 75 percent survival rate has occurred. Hess will submit annual reports to the PSC following each year's monitoring efforts. Hess understands the PSC may order additional plantings if the survival rate, after 3 years, is less than 75 percent.

2.0 REPLACEMENT PROCESS AND SURVIVAL RATE

On October 16, 2018, the trees and shrubs were replaced by LOWE'S Garden Center of Minot, North Dakota using the same or similar species on a 2:1 basis pursuant to the PSC Tree and Shrub Mitigation Specifications. The required tree and shrub replacements that were not to be planted on Hess Hawkeye Pipeline affected properties, from which they were removed, were planted on a separate property owned by Hess. Trees were replaced using 2-year-old saplings and shrubs with stem cuttings. Based on the 2:1 mitigation ratio, planting of at least 10,992 trees and shrubs was required. The nursery provided a surplus of 158 chokecherry trees; therefore, increasing the total tree and shrub planting amount to 11,150. Most of the trees/shrubs were installed in two distinct areas at the Hess Tioga Rail Terminal (TRT); the original area outside the fence, northwest of the TRT, and an area within the fence, in the northeast section of the TRT property. The change was necessary to increase the survival rate by lengthening the plant spacing and to utilize the flora for wind and snow breaks. The trees and shrubs were planted utilizing a John Deere 5100e tractor accompanied with a Mechanical Transplanter CT-5 tree planter. The three private property plantings (Dilland, Halverson, and Moe) were completed on October 16 and 17, 2018 and were installed by hand.

During the week of May 20, 2019, the remaining balance of trees and shrubs were replaced by LOWE'S Garden Center of Minot, North Dakota using the same or similar species on a 2:1 basis pursuant to the PSC Tree and Shrub Mitigation Specifications. Trees were replaced using 2-year-old saplings and shrubs with stem cuttings. The nursery provided a surplus of 3 Green Ash, 23 Skunk bush Sumac, 1 Downy Hawthorn and 39 American Elm; therefore, increasing the total tree and shrub planting amount to 11,216. Unfortunately, it was a difficult growing season for the American Elm. The nursery was only able to attain 128 American Elm and therefore had to substitute 311 Boxelders for the American Elms. Most of the trees/shrubs were installed in two distinct areas at the TRT; the original area outside the fence, northwest of the TRT, and an area within the fence, in the northeast section of the TRT property. The trees and shrubs were planted utilizing a John Deere 5100e tractor accompanied with a Mechanical Transplanter CT-5 tree planter. The remaining 1,200 Green Ash trees were planted by hand on the United States Forestry Service (USFS) property (Chicken Creek) on May 14, 2019. This completes the PSC 2:1 mitigation ratio requirement for planting 10,992 trees and shrubs (Actual plantings 11,216).

During the weeks of May 30 and July 25, 2022, an inventory of trees and shrubs was conducted to determine the health of the Fall 2018 (inventory completed with submittal of 9/30/21 Survival Rate Report) and Spring 2019 replacement process and to ensure a greater than 75% survival rate (inspection of buds present on plants). It was determined that there was a 99% survival rate. Table 2-1 lists the species, the number of each species, the properties on which they were planted and survival rate. Appendix A presents the TRT planting configuration. Appendix B presents the USFS Green Ash planting configuration located within the Chicken Creek Watershed area and pictures. Appendix C presents the planting locations for Dilland, Halverson and Moe properties.

Table 2-1 Fall 2018 and Spring 2019 Replacement Trees/Shrubs Installed and Survival Rate

Landowner/Replacement Location	Tree/Shrub Type	Required Replacement	Actual Installed	Mortality
USFS	Green Ash 1	1,200	1,200	-
Dilland	Chokecherry	50	50	-
Halverson	Chokecherry	12	12	-
Moe	Chokecherry	68	68	-
	Silver Buffaloberry	56	56	-
Hess Tioga Rail Terminal Northeast Area (Inside Fence)	Green Ash 1	746	798	-
	Chokecherry	4,839	4,997	15
	American Elm 1	200	65	-
	Nannyberry 1	100	40	-
	Downy Hawthorn 1	7	8	-
	Common Juniper	22	22	-
	Redosier Dogwood 1	80	80	-
	Rocky Mountain Juniper	2	2	-
Hess Tioga Rail Terminal Northwest Area (Outside Fence)	Green Ash 1	690	641	-
	Chokecherry	2,197	2,197	20
	American Elm 1	200	63	-
	Boxelder 1	0	311	-
	Downy Hawthorn 1	1	1	-
	Nannyberry 1	100	160	-
	Silver Buffaloberry	160	160	-
	Juneberry	160	160	-
Skunk bush Sumac 1	102	125	-	
Total		10,992	11,216	35

Mortality Rate: <1%

Survival Rate: 99%

Notes:

1 = Plantings completed Spring 2019

158 Oversupply of Chokecherry trees from nursery

3 Oversupply of Green Ash (1436 proposed, 1439 actual)

23 Oversupply of Skunkbush Sumac (102 proposed, 125 actual)

1 Oversupply of Downy Hawthorn (8 proposed, 9 actual)

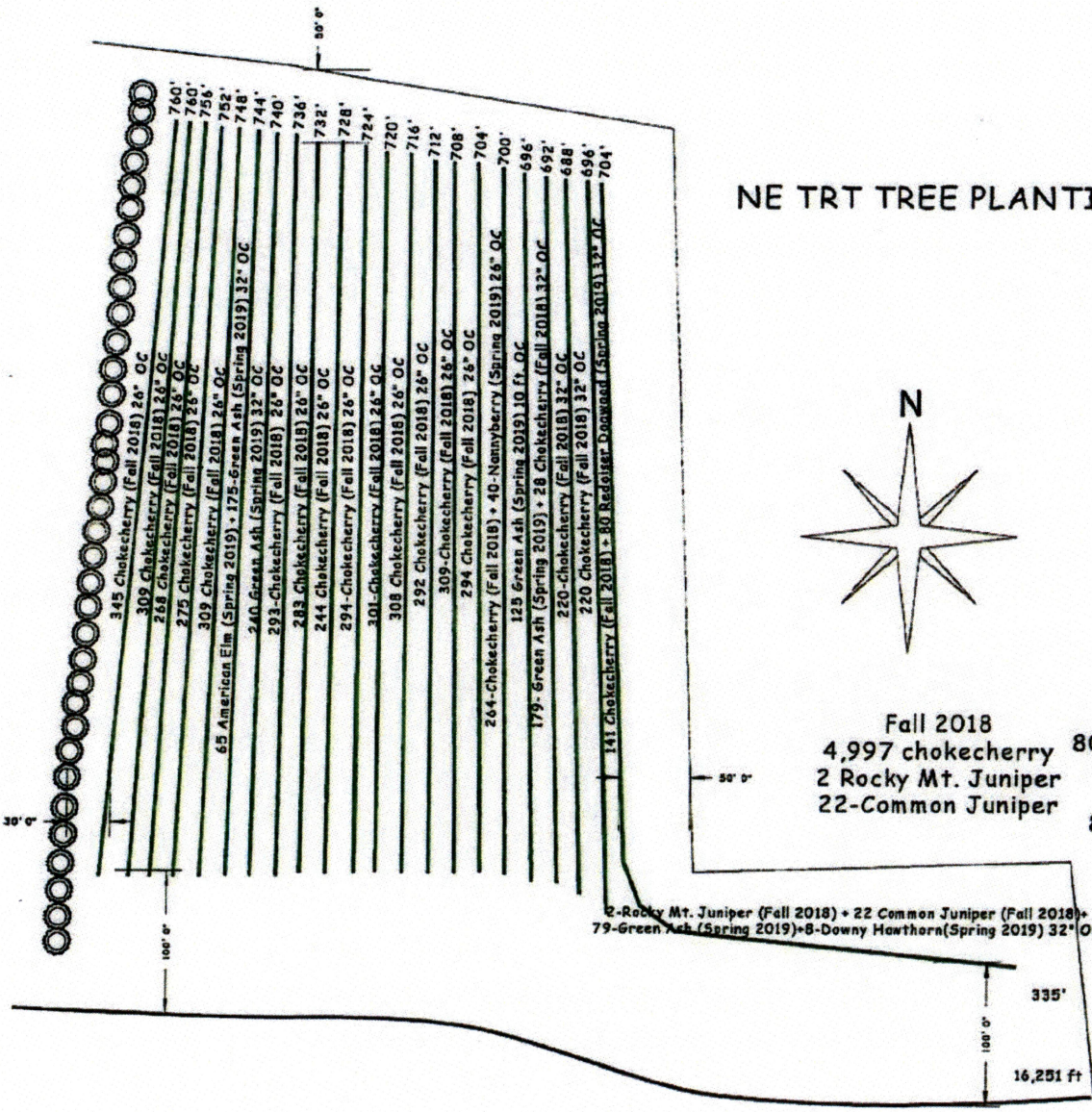
39 Oversupply. 128 American Elm available (Bad year for species), 400 American Elm proposed, 439 actual (128 American Elm, 311 Boxelder replaced the shortage of American Elm).

3.0 REPLACEMENT MONITORING

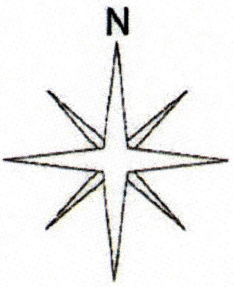
Hess completed year 3 of a 3-year survival rate inventory process for the trees and shrubs installed in 2018 (inventory completed with submittal of 9/30/21 Survival Rate Report) and 2019. During the weeks of May 30 and July 25, 2022, an inventory of trees and shrubs was conducted to determine the health of the Spring 2019 replacement process and to ensure a greater than 75% survival rate. It was determined that there was a 99% survival rate.

Hess has completed the third and final survival rate inventory (3 of 3) of trees and shrubs installed in 2018 and 2019. This is the third and final survival rate inventory report and completion of all obligations via PSC Case Nos. PU-15-31 and PU-15-32.

APPENDIX A: TIOGA RAIL TERMINAL PROPERTY



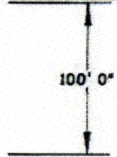
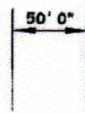
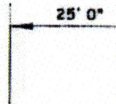
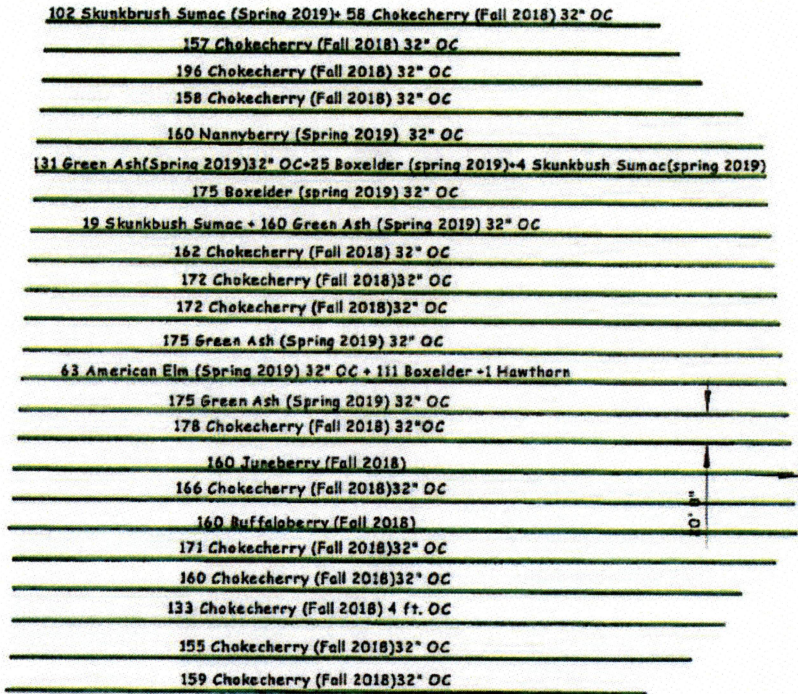
NE TRT TREE PLANTING



Fall 2018
 4,997 chokecherry
 2 Rocky Mt. Juniper
 22 Common Juniper

Spring 2019
 40 Nannyberry
 80 Redoiser Dogwood
 65 American Elm
 798 Green Ash
 8 Downy Hawthorn

NW TRT Tree Planting



FALL 2018	SPRING 2019
2,197 Chokecherry	125 Skunkbush Sumac
160 Buffaloberry	160 Nannyberry
160 Juneberry	641 Green Ash
	63 American Elm
	311 Boxelder
	1 Hawthorn





APPENDIX B: USFS CHICKEN CREEK WATERSHED PROPERTY

**Pasture 4-1
Chicken Creek Tree Planting**

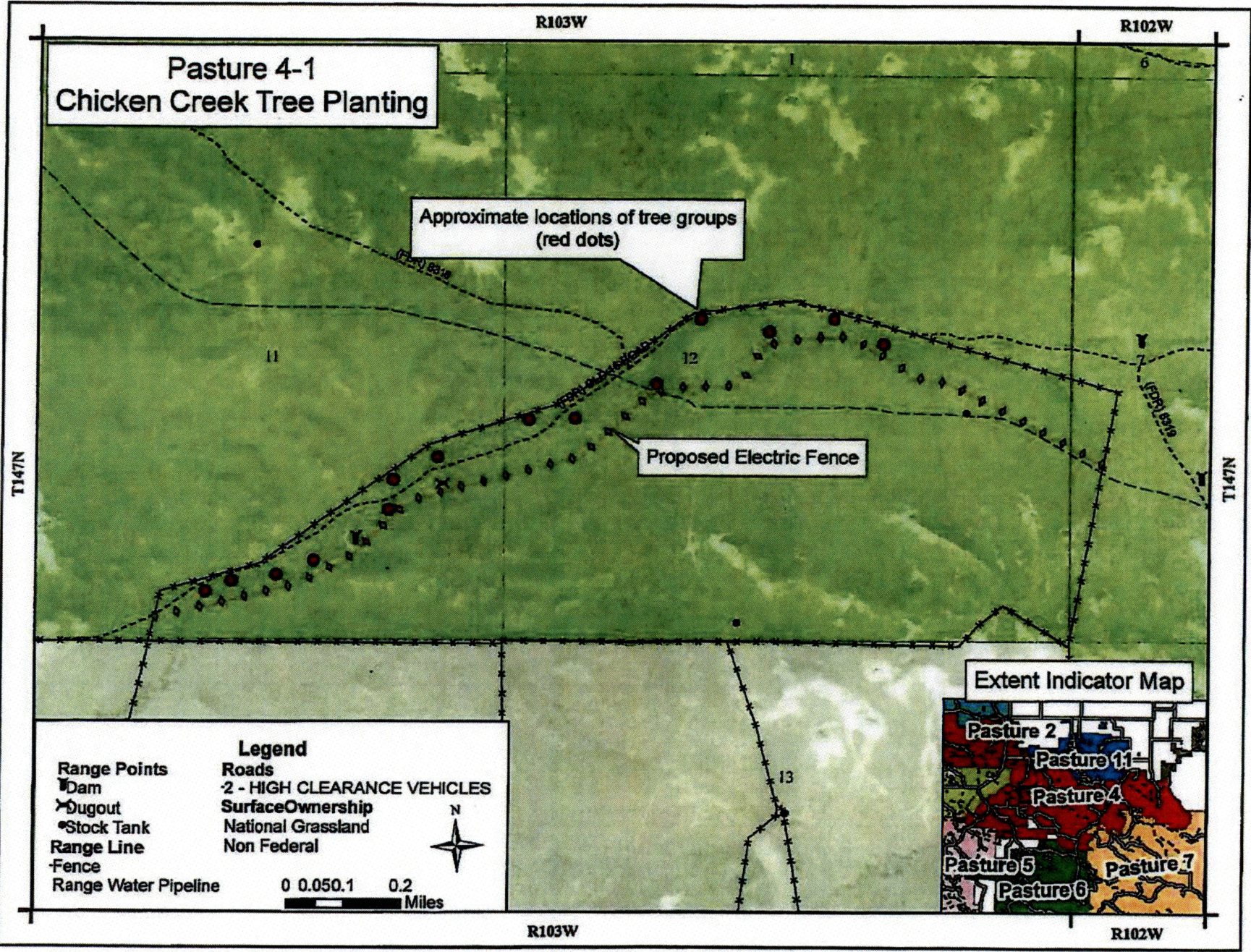
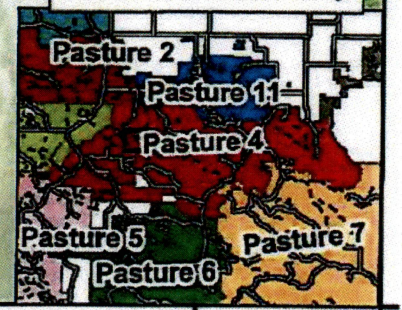
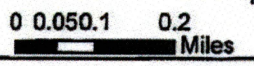
Approximate locations of tree groups
(red dots)

Proposed Electric Fence

Extent Indicator Map

- Range Points
- Dam
- Dugout
- Stock Tank
- Range Line
- Fence
- Range Water Pipeline

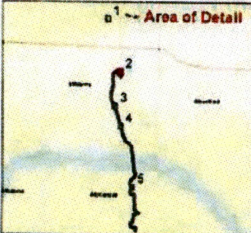
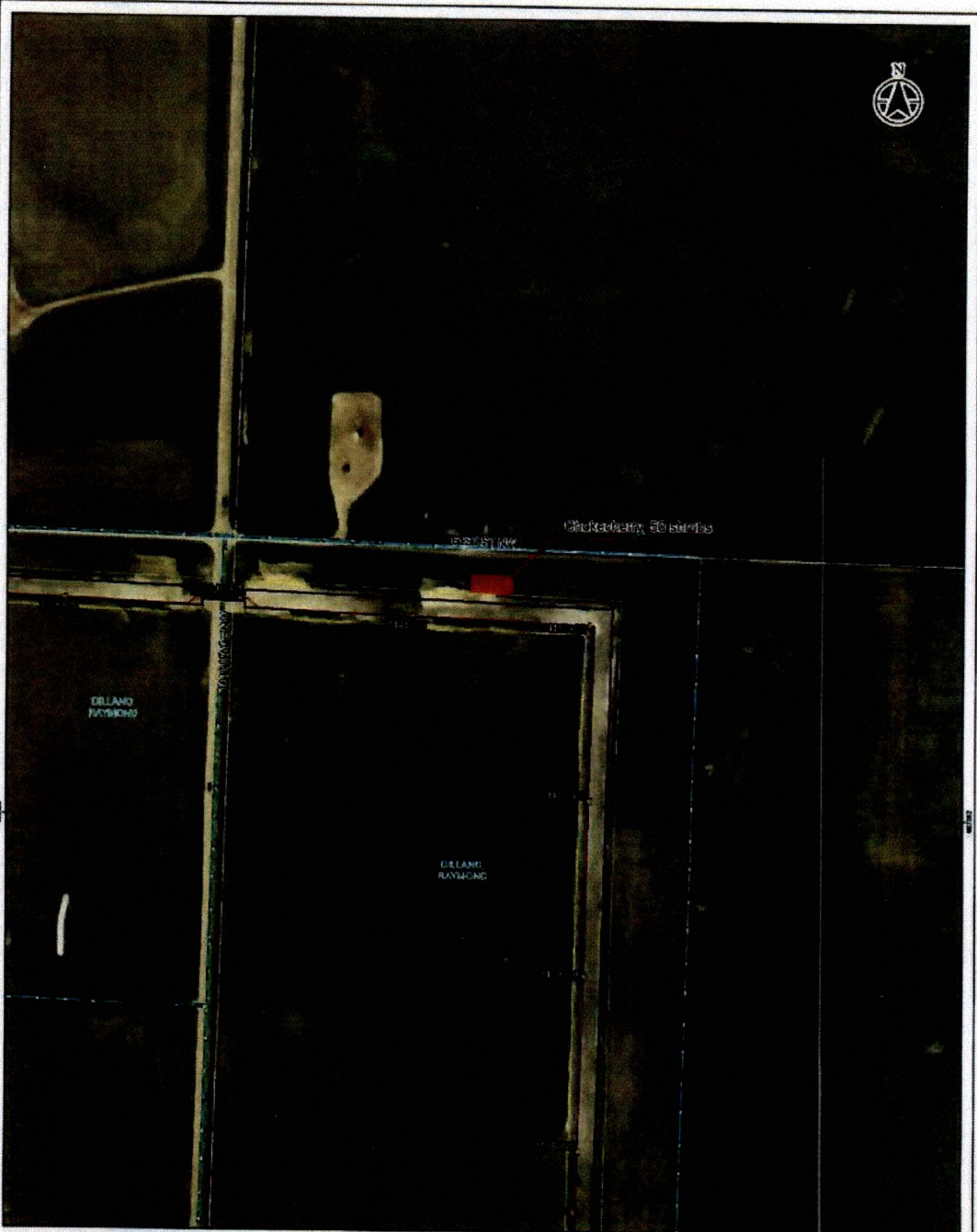
- Legend**
- Roads
 - 2 - HIGH CLEARANCE VEHICLES
 - Surface Ownership
 - National Grassland
 - Non Federal



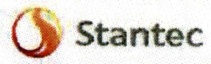
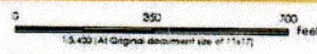




APPENDIX C: DILLAND, HALVERSON AND MOE PROPERTIES



- Proposed Tree/Shrub Replanting Locations**
- Chickadeery
- Project Components**
- Stationing
 - Bore
 - Trench Installation
 - Additional TWS
 - Permanent Easement
 - Temporary Easement



Project Location: 2018020-228246-01-00
 Williams County and
 Mineral County, ND
 Prepared by: 05-04-2014 11:54
 Technical Review: 05-04-2014 11:16
 Independent Review: 05-04-2014 11:16

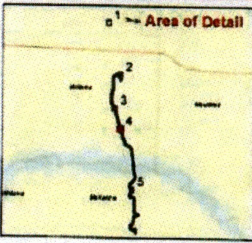
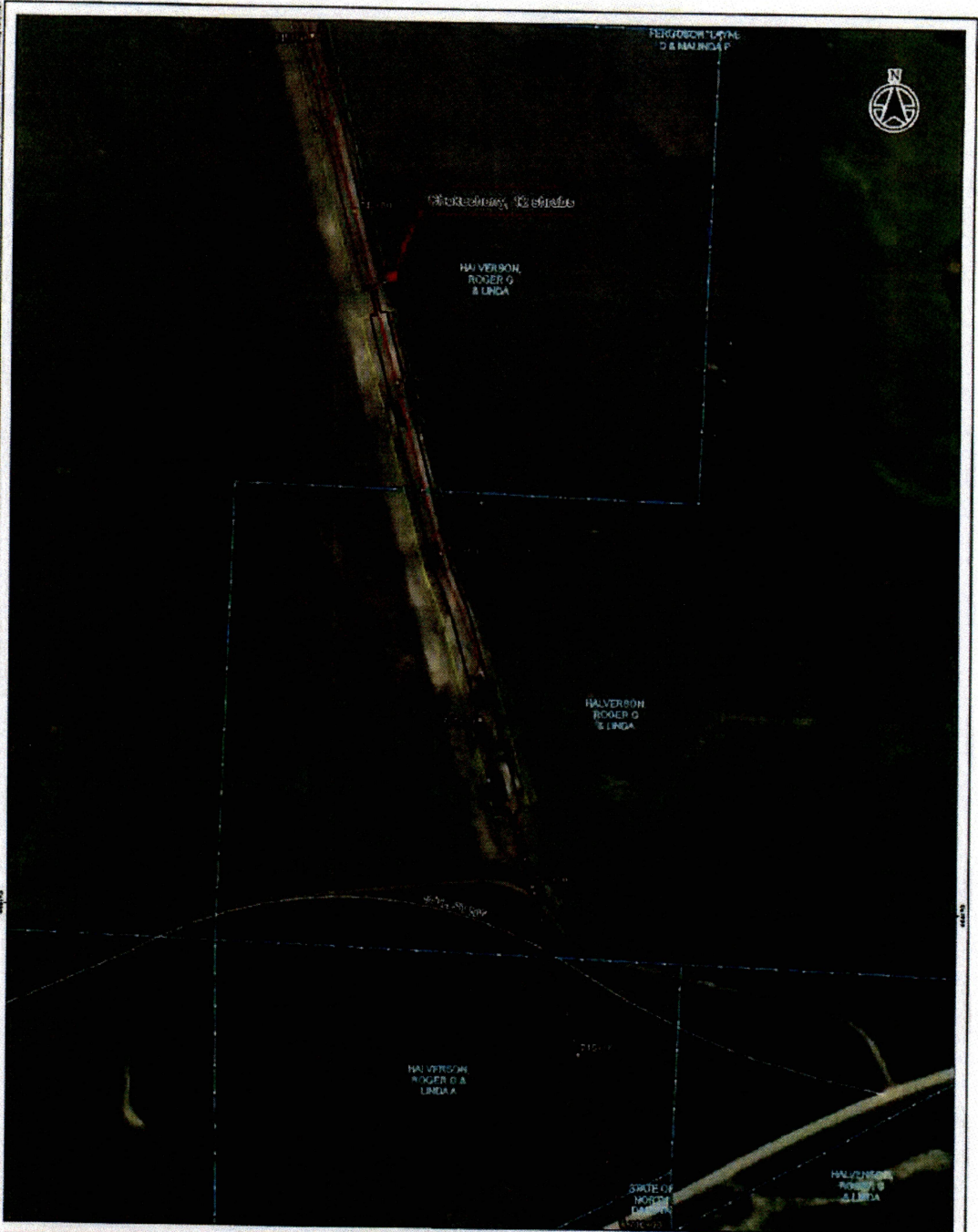
Client/Project:
 Hess Hawkeye
 Pipeline System Project

Figure No:
C-2

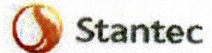
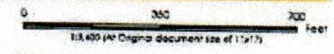
Title:
**Proposed Tree/Shrub
 Replanting Locations -
 Dillard Property Location**

Notes:
 1. Coordinate System: NAD 1983 StatePlane North Dakota North
 FIPS 5001 Feet

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- Proposed Tree/Shrub Replanting Locations**
- Choichechy
- Project Components**
- Stationing
 - HDD
 - Trench Installation
 - Additional TWS
 - Permanent Easement
 - Temporary Easement



Project location: 212264010 2nd 3rd 8th St
 Willamette County, OR
 Prepared by: SP on 02/16/17 09
 Technical Review by: BR on 02/16/17 09
 Inspection Review by: CH on 02/16/17 09

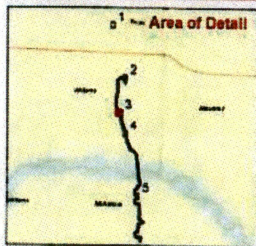
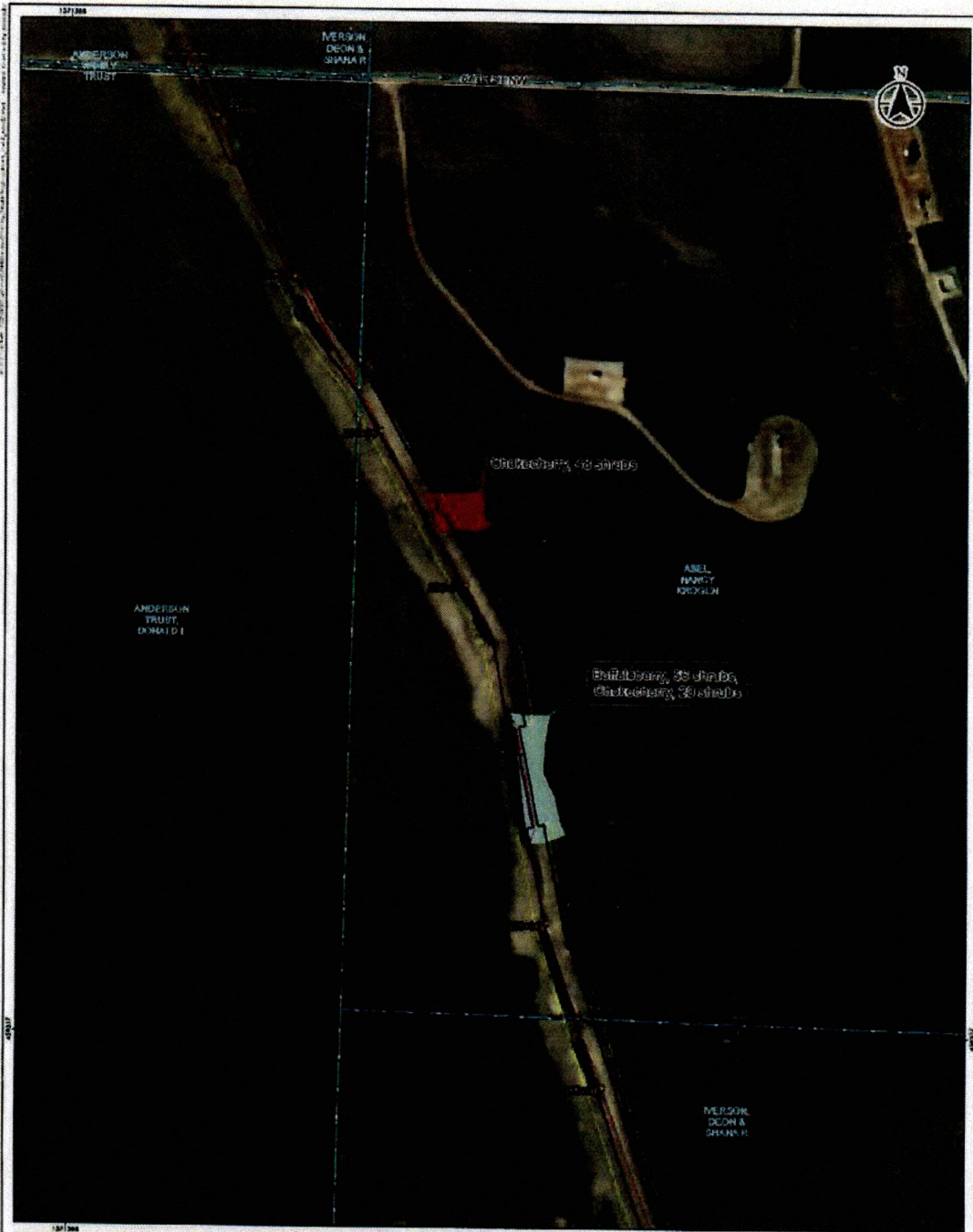
Client/Project:
 HSS Howsbye
 Pipeline System Project

Figure No.:
C-4

**Proposed Tree/Shrub
 Replanting Locations -
 Halverson Property Location**

Notes
 1. Coordinate System: NAD 1983 StatePlane North Dakota North
 Feet 3201 Feet

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Proposed Tree/Shrub Replanting Locations

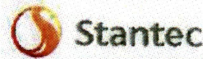
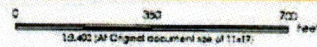
- Chokecherry
- Buffaloberry, Chokecherry

Project Components

- Stationing
- Trench Installation
- Additional TWS
- Permanent Easement
- Temporary Easement

Notes
 1. Coordinate System: NAD 1983 StatePlane North Dakota North, 833 300 Feet

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Project Location: **William County and Municipal County, ND**
 Project No: **2103000-000-000-000**
 Revision: **REV 01**
 Date: **08/11/18**
 Independent Review by: **08/11/18**

Client/Project: **Hess Hawkeye Pipeline System Project**

Figure No: **C-3**

Proposed Tree/Shrub Replanting Locations - Moe Property Location