

**BASIN ELECTRIC
POWER COOPERATIVE**

1717 EAST INTERSTATE AVENUE
BISMARCK, NORTH DAKOTA 58503-0564
PHONE: 701-223-0441
FAX: 701-557-5336



July 22, 2015

Mr. Darrell Nitschke
Executive Secretary, Director of Administration
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480



Re: Basin Electric Power Cooperative
AVS –Neset 345-kV Project
PU-11-696 Application Amendment

Dear Mr. Nitschke:

Basin Electric Power Cooperative (Basin Electric) is proposing an amendment to the Application for a Consolidated Certificate of Corridor Compatibility (Corridor Certificate) and Route Permit for the AVS-Neset 345-kV Transmission Project (PU-11-696). The following sections describe the route alignment change, as well as any differences this creates from the original Application and subsequent amendments.

INTRODUCTION

On April 23, 2014, the North Dakota Public Service Commission (Commission) adopted the Findings of Fact, Conclusions of Law and Order granting a waiver of procedures and time schedules in issuing Corridor Certificate No. 152 and Route Permit No. 164 to Basin Electric. This Corridor Certificate and Route Permit authorize the construction of approximately 200 miles of 345-kilovolt (kV) between the Antelope Valley Station and the Neset Substation (Project) by Basin Electric. The majority of the Project would be built as a single-circuit transmission line. The Project is anticipated to be in-service in 2018.

OVERVIEW OF ALIGNMENT CHANGE

Following submittal of the March 2013 Application for the Project, and during the course of normal transmission line design, Basin Electric identified adjustments to the project alignment. Amendments to the March 2013 Application were submitted, the most recent Amendment submitted in December 2014. Since the December 2014 Amendment, Basin Electric has identified an additional alignment revision. This revision to the previous alignment results from the relocation of a structure, for constructability reasons, approximately 75 feet east of the previous location and generally perpendicular to the right-of-way. This structure adjustment was determined necessary due to the topography of the area and constructability concerns with the steep relief present at the structure location. The structure was adjusted so that the area of high

relief would no longer be a concern in the construction process. This 75-foot required relocation (See Attached Structure Location Drawing) resulted in slight adjustments to the location of four additional structures. Overall, the revised alignment increased less than 10 feet in overall line length (Figure 1 in the attachments).

The route revision extends through portions of Sections: Section 21 and 28 in T153N R101W. If approved by the Commission, the total length of the Project would be less than 10 feet longer than the previous alignment. This Corridor/Route revision does not alter the information presented in the original Application or previous Amendments. The Corridor/Route revision is minor and typical of the progression of a linear project. Only siting criteria information that has changed because of the Corridor/Route revision is presented in this amendment. All other portions of the original Application and all subsequent Amendments remain in effect. Map sheet 20 of the Exclusion and Avoidance and Selection Criteria map sheets provided in the Application have been updated to reflect the new alignment and attached to replace the corresponding sheet 20 of the Exclusion and Avoidance and Selection Criteria maps in the Application. As the adjustment is so minor, it is not visibly discernable on the other figures contained in the Application and subsequent amendment. Therefore, no other revised figures are necessary.

TRANSMISSION FACILITY CORRIDOR AND ROUTE CRITERIA

Per North Dakota Administrative Code (NDAC) Section 69-06-08-02(1), the geographical areas listed in Table 1 shall be excluded in the consideration of a Corridor/Route for a transmission facility and shall include a buffer zone of reasonable width to protect the integrity of the area. Maps of the exclusion areas for the Project Corridor/Route are in the original Application and Amendments. Sheet 20 of the Exclusion and Avoidance Criteria for the AVS- Neset Project has been updated to reflect the adjusted alignment. However, no changes to exclusion areas would occur due to the revised Corridor/Route.

Table 1: Exclusion Areas

Geographic Area	Present within Corridor/Route Revisions	Proposed Buffer	Section Addressed in Application
Designated or registered national: parks; memorial parks; historic sites and landmarks; natural landmarks; monuments; and wilderness areas	Not present within the Re-route Corridor/Route	No impacts are anticipated and no buffer is proposed	5.2, 5.8, 5.9
Designated or registered state: parks; historic sites; monuments; historical markers; archaeological sites; and nature preserves	Not present within the Re-route Corridor/Route	No impacts are anticipated and no buffer is proposed	5.2, 5.8, 5.9

County parks and recreational areas; municipal parks; and parks owned or administered by other governmental subdivisions	Not present within the Re-route Corridor/Route	No impacts are anticipated and no buffer is proposed	5.2, 5.9
Areas critical to the life stages of threatened or endangered animal or plant species	Not present within the Re-route Corridor/Route	No impacts are anticipated and no buffer is proposed.	5.13
Areas where animal or plant species that are unique or rare to this state will be irreversibly damaged	Not present within the Re-route Corridor/Route	No impacts are anticipated and no buffer is proposed.	5.13

Per NDAC Section 69-06-08-02(2), the geographical areas listed in Table 2 shall not be considered in the routing of a transmission facility unless the applicant shows that under the circumstances there is no reasonable alternative. In determining whether an avoidance area should be designated for a facility, the Commission may consider, among other things, the proposed management of adverse impacts; the orderly siting of facilities; system reliability and integrity; the efficient use of resources; and alternative routes. Maps of the avoidance areas for the Project Corridor/Route are in the original Application and Amendments. Sheet 20 of the Exclusion and Avoidance Criteria for the AVS- Neset Project has been updated to reflect the adjusted alignment.

Table 2: Avoidance Areas

Avoidance Area	Present within Project Corridor/Route	Change due to Corridor/Route Revisions	Proposed Buffer	Section Addressed in Application
Designated or registered national: historic districts; wildlife areas; wild, scenic or recreational rivers; wildlife refuges; and grasslands	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.2, 5.8, 5.9

Avoidance Area	Present within Project Corridor/Route	Change due to Corridor/Route Revisions	Proposed Buffer	Section Addressed in Application
Designated or registered state: wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forests; forest management lands; and grasslands	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.2, 5.9
Historical resources which are not specifically designated as exclusion or avoidance areas	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.8
Areas which are geologically unstable	A total of 5,509 feet of landslide area crossed and 19.0 acres of landslide area within the right-of-way for Corridor/Route.	Reduction in landslide area crossed by approximately 117 feet, and 0.4 acres less landslide area within the right-of-way.	No changes from Corridor/Route revisions.	5.11
Within 500 feet of a residence, school, or place of business	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.1
Reservoirs and municipal water supplies	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.12
Water sources for organized rural water districts	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.12
Irrigated land	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.2, 5.10

Avoidance Area	Present within Project Corridor/Route	Change due to Corridor/Route Revisions	Proposed Buffer	Section Addressed in Application
Areas of recreational significance which are not designated as exclusion areas	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.2, 5.7, 5.9

Per NDAC Section 69-06-08-02(3), a corridor or route shall be designated only when it is demonstrated to the Commission by the applicant that any significant adverse effects resulting from the location, construction, and maintenance of the facility as they relate to the following, will be at an acceptable minimum, or that those effects will be managed and maintained at an acceptable minimum (Table 3). Maps of the selection criteria for the Project Corridor/Route are in the original Application and Amendments. Sheet 20 of the Selection Criteria for the AVS-Neset Project has been updated to reflect the adjusted alignment. There are no changes to selection criteria within the Corridor/Route as a result of the revision. No updates to the selection criteria maps are necessary.

Table 3: Selection Criteria

Selection Criteria	Potential Adverse Effects	Change due to Corridor/Route Revisions	Section Addressed
Agricultural production	A total of 1,405.6 acres and 154.8 acres, respectively, of cultivated cropland and pasture/hay land within the Corridor/Route. Current agricultural production will be maintained for most of the Corridor/Route. The only land unavailable for agriculture will be the area occupied by structures for a total of 1.1 acre (0.0009-acre per structure). There will be a total of 1,181 structures for the Corridor/Route.	0.26 additional acres of grassland 0.12 less acres of pasture/hay land.	5.2, 5.10
Family farms and ranches	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.2, 5.10

Selection Criteria	Potential Adverse Effects	Change due to Corridor/Route Revisions	Section Addressed
Land which the owner can demonstrate has soil, topography, drainage, and an available water supply that cause the land to be economically suitable for irrigation	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.2, 5.10
Surface drainage patterns and ground water flow patterns	No changes from Corridor/Route revisions.	No change.	5.12
Noise-sensitive land uses	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.6
The visual effect on the adjacent area	No changes from Corridor/Route revisions.	No changes from Corridor/Route revisions.	5.7
Extractive and storage resources	No oil and gas wells identified within Corridor/Route revisions.	No change.	5.11
Wetlands, woodlands, and wooded areas	No change as a result of Corridor/Route revisions.	No change.	5.13
Radio and television reception, and other communication or electronic control facilities	No change as a result of Corridor/Route revisions.	No change.	5.4 and 5.3
Human health and safety	No changes as a result of Corridor/Route revisions.	No change.	5.4
Plant life	Approximately one acre of area for vegetation permanently removed within Corridor/Route at structure locations. Approximately 5.57 acres of woodland within Corridor/Route revision.	<0.1 additional acre of woodland removal in revised Corridor/Route right-of-way.	5.13

FACTORS CONSIDERED

North Dakota Century Code (NDCC) Section 49-22-09 of the North Dakota Energy Conversion and Transmission Facility Siting Act lists 11 factors to guide the Commission in evaluation of sites, corridors, and routes. The following sections address these factors, and where applicable,

any changes from the original Application and subsequent Amendments due to the Project Corridor/Route revision included in this Amendment.

- i. Available research and investigations relating to the effects of the location, construction, and operation of the proposed facility on public health and welfare, natural resources, and the environment
 - No changes from Corridor/Route revision.
- ii. The effects of the new energy conversion and transmission technologies and system designed to minimize adverse environmental effects
 - No changes from Corridor/Route revision.
- iii. The potential for beneficial uses of waste energy from a proposed energy conversion facility
 - No changes from Corridor/Route revision.
- iv. Adverse direct and indirect environmental effects which cannot be avoided should the proposed site or route be designated
 - No changes from Corridor/Route revision.
- v. Alternatives to the proposed site, corridor, or route which are developed during the hearing process and which minimize adverse effects
 - No changes from Corridor/Route revision.
- vi. Irreversible and irretrievable commitments of natural resources should the proposed site, corridor, or route be designated
 - No changes from Corridor/Route revision.
- vii. The direct and indirect economic impacts of the proposed facility
 - No changes from Corridor/Route revision.
- viii. Existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site, corridor, or route
 - No changes from Corridor/Route revision.
- ix. The effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites
 - No changes from Corridor/Route revision. Class III Pedestrian Survey of the area outside of the Corridor had been previously performed to support access road to the right-of-way. A No Affect determination was made. (see attached)
- x. The effect of the proposed site or route on areas which are unique because of biological wealth or because they are habitats for rare and endangered species
 - No changes from Corridor/Route revision.
- xi. Problems raised by federal agencies, other state agencies, and local entities
 - No changes from Corridor/Route revision or structure change.

CONCLUSION

As previously stated, the Corridor/Route revision presented in the Route Change Figure (attached) does not alter the information presented in the original March 2013 Application based on a review of exclusion areas, avoidance criteria, selection criteria, and the factors to be considered in NDCC Section 49-22-09 of the North Dakota Energy Conversion and Transmission Facility Siting Act. The Corridor/Route revisions are minor and typical of the progression of a linear project.

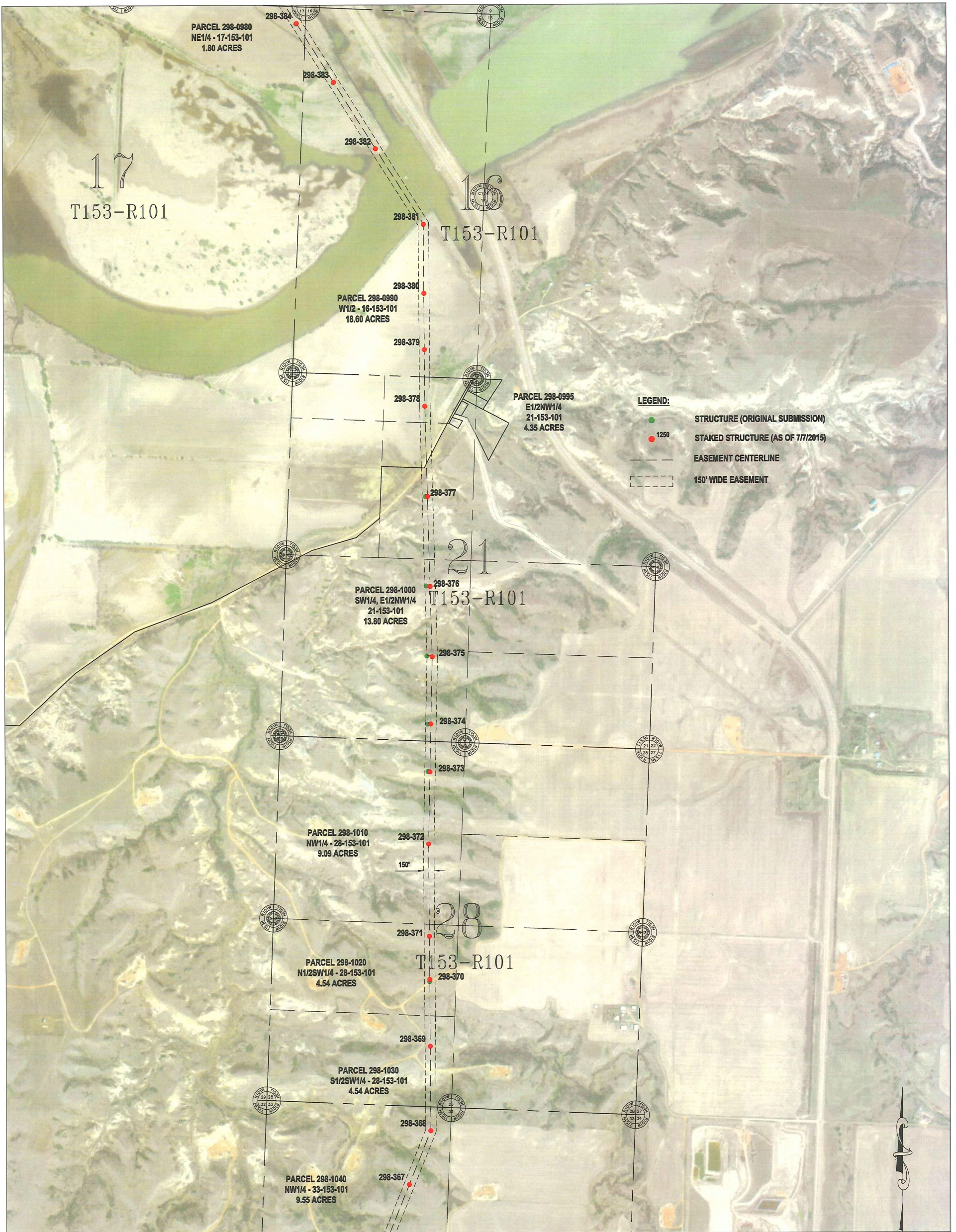
I appreciate the opportunity to provide the Commission with a review of the revisions to this Corridor/Route. If there are any additional questions or concerns regarding this revision, please contact me at 701-557-5635.

Sincerely,

A handwritten signature in black ink that reads "Cris Miller". The signature is written in a cursive, flowing style.

Cris Miller
Senior Environmental Project Specialist
Attachments

- (1) Structure Location Drawing
- (2) Route Change Map
- (3) Exclusion and Avoidance Criteria – Map Sheet 20
- (4) Selection Criteria – Map Sheet 20
- (5) Metcalf Correspondence
- (6) ND SHPO Concurrence Letter



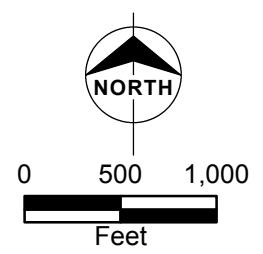
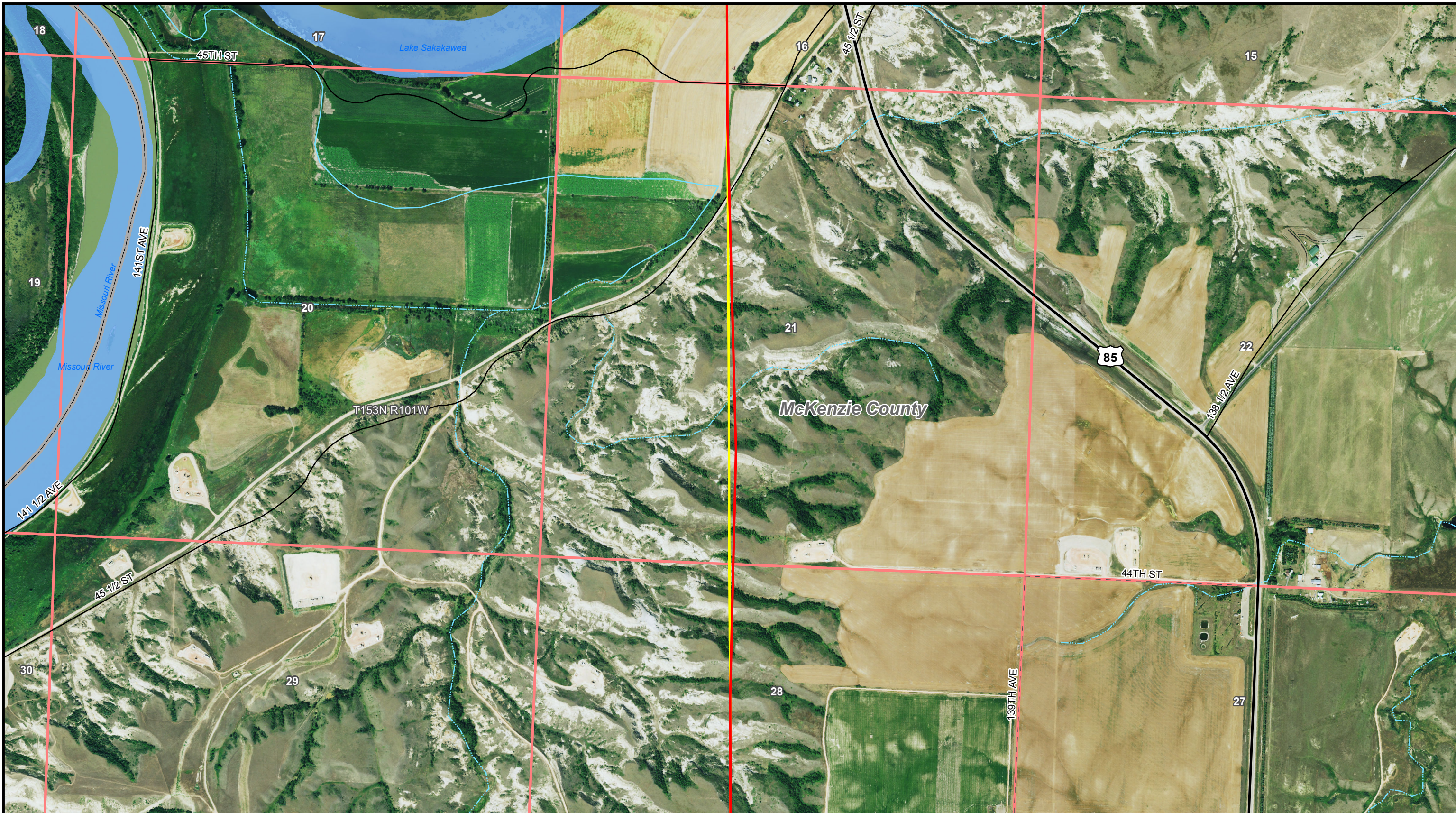
Basis of Bearing is NAD83 ND State Plane North Zone - International Feet. All distances are Ground Distance. Combined scale factor = 0.999893141

SEC. 16,21,22,27,28 - T145N - R98W
MCKENZIE COUNTY, NORTH DAKOTA

AVS-NESET 345kV TRANSMISSION LINE
CASE #PU-11-696



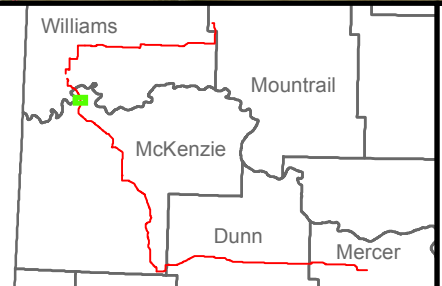
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LEGEND

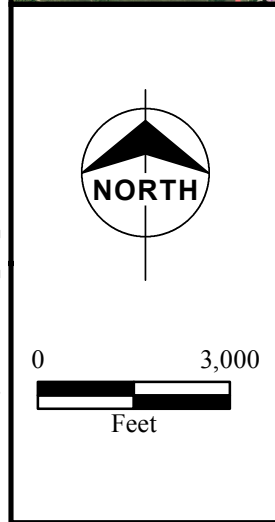
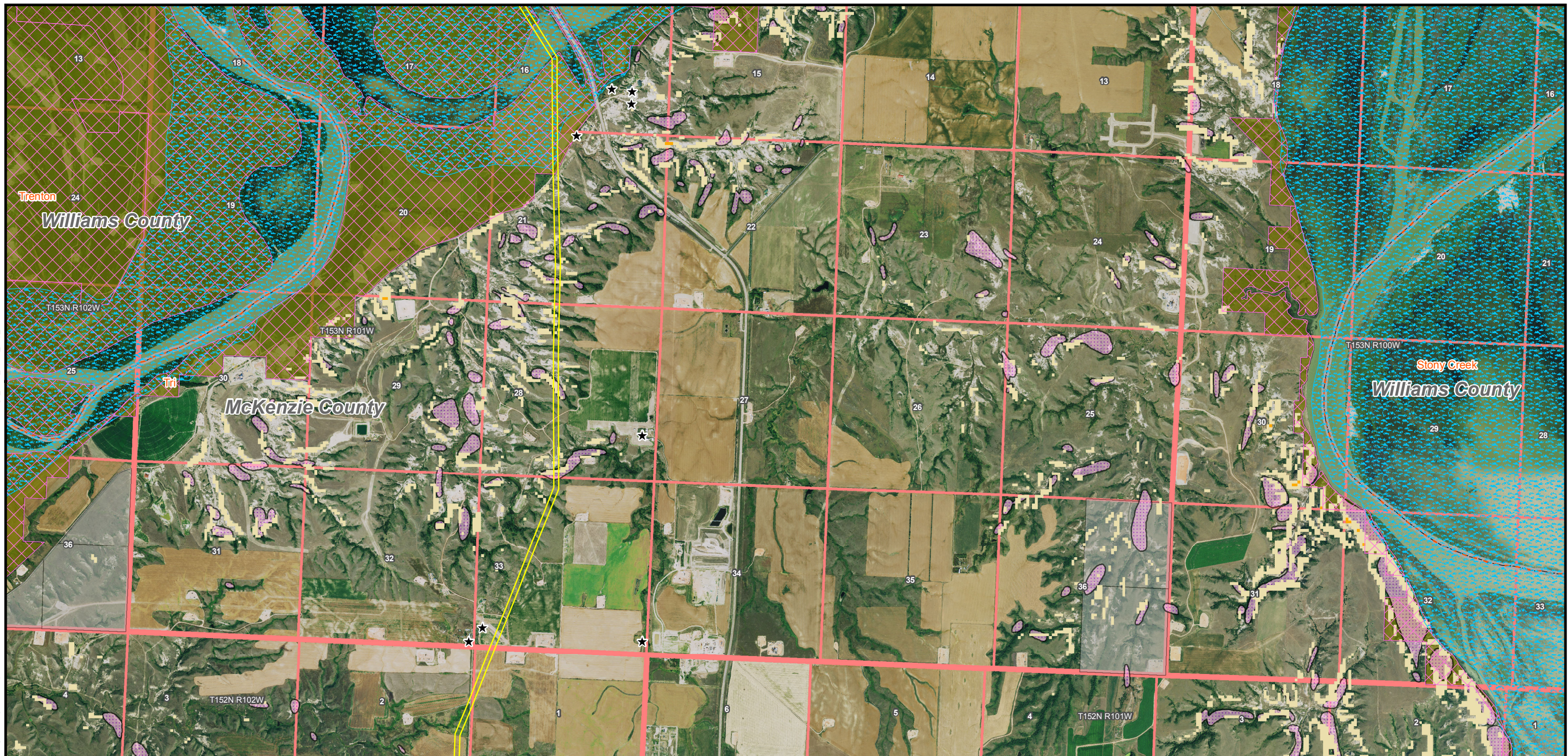
- ▲ Existing Substation
- ▲ Proposed Substation
- Revised Route - July 2015
- Previous Route - July 2014
- County Boundary
- Public Land Survey System Sections

Updated for replacement mapbook from July 2014



Basin Electric Power Cooperative
Antelope Valley Station to Neset
345-kV Transmission Project
Route Change Map

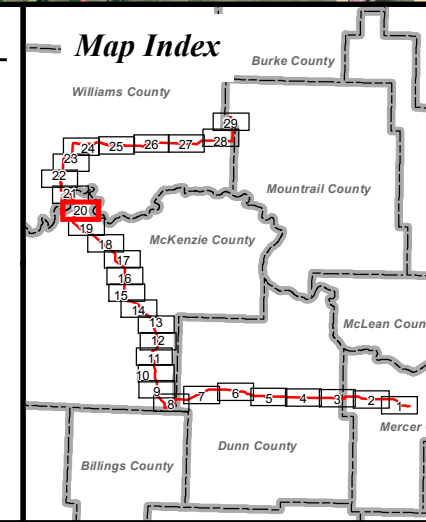
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- Corridor/Route 150'
- Corridor/Route 100'
- Tande Substation Outline
- Judson Substation Outline
- Patent Gate Substation Outline
- Roundup Substation Outline
- Mobile Home
- Man Camp
- Residence
- Residence within 500 Feet
- New Oil/Gas Pad Site
- County Boundary
- Municipal Boundary

- Civil Townships
 - Public Land Survey Sections
 - Killdeer Mountain Battlefield State Historic Site
 - Killdeer Mountain Battlefield Study Area
- Exclusion Areas**
- State Sensitive Species Habitat/Occurrence
 - NRHP Structure
 - Piping Plover Critical Habitat
 - State Park
 - National Park

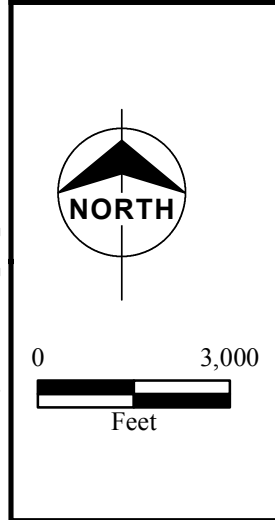
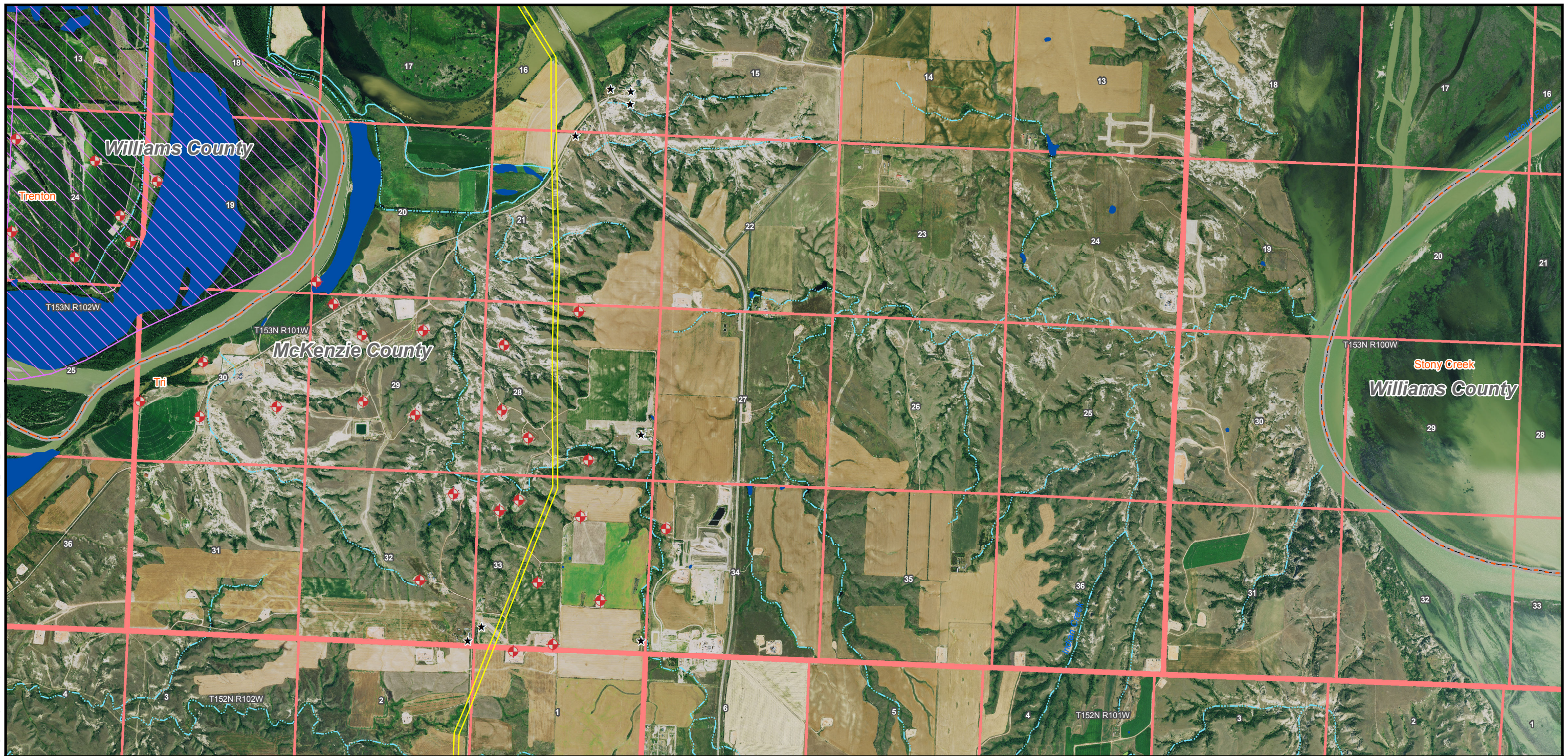
- Avoidance Areas**
- Center Pivot Irrigation
 - State Historical Site
 - Scenic River
 - Scenic River
 - Landslide Deposit
 - Waterbody
 - National Grassland
 - USACE Land
 - State-Owned School Lands
 - State Wildlife Management Area
 - National Wildlife Refuge
- Slope Greater than 10%**
- 10% - 20%
 - 20% - 30%
 - 30% - 44.5%



Exclusion and Avoidance Criteria

Updated for replacement mapbook sheet 20 from July 2014

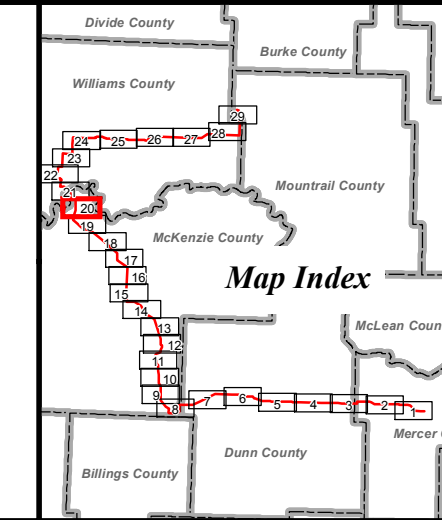
Basin Electric Power Cooperative
Antelope Valley Station to Neset
345-kV Transmission Project
Detailed Project Route Maps
Sheet 20 of 29



- Corridor/Route 150'
- Corridor/Route 100'
- Tande Substation Outline
- Judson Substation Outline
- Patent Gate Substation Outline
- Roundup Substation Outline
- New Oil/Gas Pad Site
- County Boundary
- Municipal Boundary

- Public Land Survey Sections
- Civil Townships
- Killdeer Mountain Battlefield State Historic Site
- Killdeer Mountain Battlefield Study Area

- ### Selection Criteria
- Residence within 500 Feet
 - Mobile Home
 - Man Camp
 - Residence
 - Oil Well
 - AM/FM Radio Tower
 - Scenic Byway
 - Perennial Stream
 - Intermittent Stream
 - National Grassland
 - National Park
 - NWI Wetlands
 - FEMA Floodplains



Selection Criteria

Updated for replacement mapbook
sheet 20 from July 2014

Basin Electric Power Cooperative
Antelope Valley Station to Neset
345-kV Transmission Project
Detailed Project Route Maps
Sheet 20 of 29

Metcalf Archaeological Consultants, Inc.



July 17, 2015

Mr. Paul Picha
State Archaeologist
State Historical Society of North Dakota
North Dakota Heritage Center
612 East Boulevard Avenue
Bismarck, North Dakota 58505-0830

RE: AVS to Neset Structure Location Change

Mr. Picha,

Construction along the Basin Electric AVS to Neset Transmission Line is underway, following the established guidelines of the Programmatic Agreement and approved Public Service Commission siting document. Following commencement of construction, Basin identified a need to shift five structure slightly east along the 298 line, just south of the Missouri River in McKenzie County. Structures 298-373, 298-374, 298-375, 298-376, and 298-377, as identified in Figures 1 through 4, will be constructed between 25 and 75 feet east of their initial sited location. The structures are located in Sections 21 and 28, T. 153 N., R. 101 W. Metcalf has reviewed the construction plans and compared the changed locations with previous inventories, recorded cultural resources, and current ground disturbance. All new structure locations are within the inventoried corridor for the AVS to Neset Transmission Line.

Because no cultural resources are recorded within the proposed alignment change, and because the alignment remains within the inventoried corridor, Metcalf recommends a finding of *No Historic Properties Affected* for the proposed re-route as identified in the attachment to this letter. If you have any additional comments or questions regarding this route change, please feel free to contact me at jharty@metcalfarchaeology.com or at 701.258.1215.

Thank you for your help with this project.

Sincerely,

Jennifer L. Harty
Project Manager

cc: Cris Miller, Basin Electric



**STATE
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July 17, 2015

Mr. David W. Kluth
Regional Preservation Officer
Western Area Power Administration
Upper Great Plains Region
200 4th Street SW
Huron, South Dakota 57350-2474

**NDSHPO REF.: 12-1016m WAPA/PSC Basin Electric Power Cooperative's
Antelope Valley Station to Neseet 345kV Transmission Line: Structure Location
Change**

Dear Dave:

We have reviewed project correspondence for 12-1016m WAPA/PSC Basin
Electric Power Cooperative's Antelope Valley Station to Neseet 345kV
Transmission Line: Structure Location Change and find it acceptable.

We concur with "No Historic Properties Affected" determination provided the
project is of the nature stated and it takes place in the mapped and plotted
locations depicted in the documentation.

Thank you for the opportunity to review the project. If you have questions
please contact either Paul Picha ppicha@nd.gov at (701) 328-3574 or Susan
Quinnell squinnell@nd.gov at (701) 328-3576.

Sincerely,

 Claudia J. Berg
State Historic Preservation Officer (North Dakota)
and
Director, State Historical Society of North Dakota

c: Jennifer Harty, Metcalf Archaeological Consultants, Inc.
c: Cris Miller, Basin Electric Power Cooperative