



Control Number: 38290



Item Number: 94

Addendum StartPage: 0

SOAH DOCKET NO. 473-10-4790
PUC DOCKET NO. 38290

APPLICATION OF SHARYLAND § BEFORE THE STATE OFFICE
UTILITIES, L.P. TO AMEND ITS §
CERTIFICATE OF CONVENIENCE §
AND NECESSITY FOR THE §
PROPOSED HEREFORD TO WHITE § OF
DEER 345 KV CREZ TRANSMISSION §
LINE IN ARMSTRONG, CARSON, §
DEAF SMITH, OLDHAM, POTTER, §
AND RANDALL COUNTIES, TEXAS § ADMINISTRATIVE HEARINGS

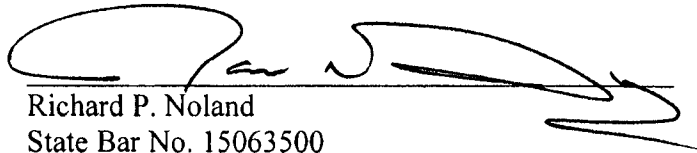
FILED
JUL 21 3:24
2010

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS' FIRST REQUEST FOR INFORMATION**

Sharyland Utilities, L.P. ("Sharyland") files this response to Currie Family Interests' ("CFI") First Request for Information ("RFI") to Sharyland. Sharyland received CFI's First RFIs on Friday, July 9, 2010. Pursuant to Order No. 1, the RFIs are due on July 19, 2010. This response is therefore timely filed. All parties may treat these answers as if they were filed under oath.

Sharyland reserves the right to object at the time of the hearing to the admissibility of information produced herein.

Respectfully submitted,



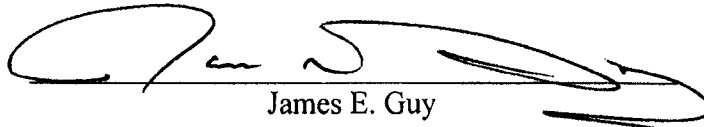
Richard P. Noland
State Bar No. 15063500
James M. Bushee
State Bar No. 24015071
James E. Guy
State Bar No. 24027061
SUTHERLAND ASBILL & BRENNAN LLP
701 Brazos Street, Suite 970
Austin, Texas 78701-2559
(512) 721-2700 –Telephone
(512) 721-2656 – Facsimile

Attorneys for Sharyland Utilities, L.P.

July 19, 2010

CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing document was served on all parties of record on this 19th day of July 2010.



James E. Guy

*PUC Docket No. 38290
Sharyland Utilities, L.P.'s Response to Currie Family Interests
First Request for Information
Page 2*

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-1

Sharyland states in the Application that it intends to use a "2-wire bundled 1939 Aluminum Conductor Steel Reinforced/Trapezoidal Wire" conductor (Question 4, Application page 6) and such conductor will be installed on "double-circuit steel lattice towers" (Question 5, Application page 7).

- a. What is the minimum above-ground clearance that must be maintained when such conductor is used? Please provide a reference to the code or standard that determines or dictates the minimum clearance.
- b. In order to maintain the minimum clearance referenced above,
 - (i) what is the optimal distance between tower structures?
 - (ii) what is the maximum distance between tower structures?
- c. In situations where the minimum above-ground clearance cannot be maintained because of an inability to construct towers within the maximum distance of each other, what options are available to Sharyland? Please explain your answer in detail.
- d. If above-ground clearance for the conductor is to be achieved by using taller towers, what is the maximum height of the steel lattice towers that Sharyland anticipates using for this project?

RESPONSE:

- a. The minimum clearance that must be maintained is 26 feet above the natural grade. This clearance was determined using the current version of the National Electric Safety Code 2007 ("NESC07") Rule 232B and 232C.
- b.
 - (i) The optimal distance between tower structures, for the lattice structures illustrated in the Environmental Assessment ("EA") Figures 1-2 through 1-7, is 1,050 feet.
 - (ii) The maximum distance between tower structures, utilizing the "Long Span Tangent" illustrated in EA Figure 1-3, is 1,800 feet.
- c. The minimum above-ground clearance must meet or exceed NESC07 guidelines. If required by terrain conditions on a particular transmission route, Sharyland will design special purpose towers to maintain proper clearances. Options available to satisfy NESC07 guidelines include taller structures, additional phase spacing and greater conductor tensions.

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

- d. Sharyland does not anticipate the need to utilize structures other than those illustrated in EA Figures 1-2 through 1-7. The tallest of those structures, the Long Span Tangent Structure (Figure 1-3) with leg extensions, would be 179 feet.

Preparer: Mark E. Caskey

Sponsor: Mark E. Caskey

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-2

In the Application at Question 5, page 8, Sharyland explains its decision to use double-circuit lattice steel towers instead of double-circuit monopole structure, and listed a number of factors involved in such decision. Please provide the following information for (i) double-circuit lattice steel towers and (ii) double-circuit monopole structures:

- a. Nominal right-of-way width;
- b. Nominal distance between structures ("span width");
- c. Size and number of foundations;
- d. Size of individual components;
- e. Ease (or lack thereof) of delivery to remote sites;
- f. Size and type of equipment necessary to handle components weight; and
- g. Costs.

RESPONSE:

- a. (i) The nominal right-of-way width for double-circuit lattice towers is 175 feet.
(ii) As explained in Sharyland's response to Seewald-SU 1-8 (RFI), Sharyland has not designed monopole structures for this project but has determined that a representative nominal right-of-way for double-circuit monopole structures is 170 feet.
- b. (i) The nominal distance between double-circuit lattice structures is 1,050 feet.
(ii) Sharyland has not designed monopole structures specifically for this project, and therefore has not determined nominal "span length" for such structures. Typically, however, the nominal length for steel monopole structures of the type illustrated in response to Seewald-SU 1-8 (RFI) would be 900 feet.
- c. (i) Each double-circuit lattice steel tower will require four individual foundations ranging in diameter from 2 feet to 6 feet.
(ii) Sharyland has not designed monopole structures specifically for this project. However, each double-circuit monopole tower typically would require one foundation or would be directly embedded, depending on the soil conditions.
- d. (i) The longest single component on any of the double-circuit lattice structures illustrated at EA Figures 1-2 through 1-7 is approximately 40 feet. This component consists of numerous pieces of angle iron ranging from 1-3/4" x 1"-3/4" x 1/8" to 8" x 8" x 1".

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

(ii) Sharyland has not designed monopole structures specifically for this project. Typically, however, monopole structures consist of two to four-pole sections, each with a nominal length not to exceed 40 feet. These sections have a diameter of approximately 8 feet at the base tapering to a narrower diameter at the top. The pole sections are large hollow tubes with internal bracing.

- e. (i) Sharyland will deliver, by flatbed truck, containerized kits of angled steel for use in the double-circuit lattice steel towers. These structures would typically be transported in four or five pieces, and if necessary can be transported in smaller pieces. The size and weight of these structures make them relatively easier, compared with monopole structures, to deliver to remote locations or difficult terrain.
- (ii) Delivery of steel monopole structures to remote sites or difficult terrain is typically more difficult than for corresponding steel lattice structures. Monopoles typically would be delivered in two or four-pole sections, and the size of these components (length and diameter) may require special delivery equipment, such as helicopters, in remote or difficult terrain.
- f. The type and size of equipment necessary to handle components weight cannot be determined in the abstract, but instead can only be determined after route selection when final structure design and terrain evaluation will occur.
- g. (i) The estimated cost for individual double-circuit lattice steel structures is:

Structure Type	Cost
Tangent	\$130,000
Long Span Tangent	\$160,000
Light Angle	\$185,000
Heavy Angle	\$245,000
Light Deadend	\$475,000
Heavy Deadend	\$640,000

(ii) Sharyland has not designed monopole structures specifically for this project. However, see Sharyland's response to Seewald-SU 1-8 (RFI) for representative costs of illustrative steel monopole structures.

Preparer: Mark E. Caskey
Sponsor: Mark E. Caskey

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-3

In the Environmental Assessment at Figures 1-2 through 1-7, Sharyland has provided dimensional drawings of typical structures to be used in the project. For each of the following types of structures, please explain the circumstances in which they would be installed and include in your answer why that structure would be used to the exclusion of any of the other structures:

- a. "Typical Lattice 345-kV Double-Circuit Tangent Structure" (Figure 1-2);
- b. "Typical Lattice 345-kV Double-Circuit Long-Span Tangent Structure" (Figure 1-3);
- c. "Typical Lattice 345-kV Double-Circuit Light-Angle Structure" (Figure 1-4);
- d. "Typical Lattice 345-kV Double-Circuit Light Dead-End Structure" (Figure 1-5);
- e. "Typical Lattice 345-kV Double-Circuit Heavy-Angle Structure" (Figure 1-6); and
- f. "Typical Lattice 345-kV Double-Circuit Heavy Dead-End Structure" (Figure 1-7).

RESPONSE:

As a general matter, specific structure selection is determined based on the most economical structure design for a particular application, and less economical structures would be "excluded." Please refer to CFI-SU 1-2 for the estimated costs for various structure types. The typical use for various structure types is explained below.

- a. The "Tangent" structure would be used for locations where the line deviates from 0° to 1° from centerline. The nominal span length of this structure is 1,050 feet, with a maximum span length of approximately 1,200 feet.
- b. The "Long-Span Tangent" structure would be used for locations where the line deviates from 0° to 1° from centerline, and where a longer span length is required. The nominal span length for this structure is 1,200 feet, with a maximum span length of approximately 1,800 feet.
- c. The "Light-Angle" structure would be used for locations where the line deviates from 1° to 10° from centerline.
- d. The "Light-Dead-End" structure would be used for locations where the line deviates up to 40° from centerline.
- e. The "Heavy-Angle" structure would be used for locations where the line deviates from 10° to 25° from centerline.

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

- f. The "Heavy-Dead-End" structure would be used for locations where the line deviates from 40° to 90° from centerline.

Preparer: Mark E. Caskey
Sponsor: Mark E. Caskey

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-4

With regard to the Transmission Facilities cost estimates provided by Sharyland in the Application at Question 13 and in Attachment 3, please provide a description of every cost item included in each of the listed cost categories, to-wit:

- a. Right-of-Way and Land Acquisition
- b. Engineering and Design (Utility)
- c. Engineering and Design (Contract)
- d. Procurement of Material and Equipment (including stores)
- e. Construction of Facilities (Utility)
- f. Construction of Facilities (Contract)
- g. Other (all costs not included in the above categories)

RESPONSE:

- a. "Right-of-Way and Land Acquisition" includes the cost of right-of-way easements and professional land acquisition services. Professional land acquisition services include records searches, title abstract, right-of-way negotiation and similar services.
- b. "Engineering and Design (Utility)" includes the cost of Sharyland's internal engineering labor for the design of the structures and transmission line.
- c. "Engineering and Design (Contract)" includes the cost of contracted professional labor and services for the design of the structures and transmission line; environmental and routing evaluation services; and surveying and mapping services.
- d. "Procurement of Material and Equipment (including stores)" includes the costs of all materials, to be procured directly by Sharyland, (including warehousing, taxes and delivery) required to construct the line. These materials include:
 - Lattice steel
 - Conductor
 - OPGW/Static wire
 - Insulators and associated transmission line hardware

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

- e. "Construction of Facilities (Utility)" includes Sharyland's in-house costs related to construction activities and project management.
- f. "Construction of Facilities (Contract)" includes Sharyland's estimated contracted costs related to contractor-furnished construction labor and materials (e.g., foundation concrete, foundation reinforcing steel); contractor-furnished equipment; and contracted construction supervision and inspection services.
- g. "Other (all costs not included in the above categories) includes Sharyland's internal and contracted costs, such as regulatory; Commission oversight costs; ERCOT Reactive Compensation Study costs; Sharyland General and Administrative costs; and costs associated with contracted administrative support.

Preparer: Mark D. Meyer
Sponsor: Mark D. Meyer

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-5

For each proposed Route, and for each segment within each proposed Route, please provide all documents that relate to the estimated costs included in each of the cost categories listed in Request No. CFI-SU 1-4.

RESPONSE:

Please see attached Exhibit CFI-SU 1-5 (Highly Sensitive Protected Material) for Sharyland's response to this request. The attached response has been designated Highly Sensitive Protected Material and is being provided pursuant to the Protective Order in Docket No. 38290.

Sharyland does not calculate costs for the specific circumstances of individual route segments, and therefore there are no documents that relate to such costs.

Preparer: Mark D. Meyer
Sponsor: Mark D. Meyer

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-6

For all estimated "Right-of-Way and Land Acquisition" costs, please describe the assumptions upon which these costs are based and state the source of all land value data used.

RESPONSE:

A portion of the response to this request is being provided at Exhibit CFI-SU 1-6 (Highly Sensitive Protected Material). This portion of the response has been designated Highly Sensitive Protected Material and is being provided pursuant to the Protective Order in Docket No. 38290.

Sharyland estimated "Right-of-Way and Land Acquisition" costs based on the following assumptions. First, Sharyland made an assumption as to the cost of Right-of-Way per acre. That assumption was based on Sharyland's general knowledge of land costs in the area. Second, the cost of Professional Land Acquisition services was estimated based on the budget estimates developed by Sharyland's Land Acquisition Contractor.

Preparer: Mark D. Meyer
Sponsor: Mark D. Meyer

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-7

For proposed Segments AA and V, please provide the following:

- a. all documents related to the design and construction of the segments;
- b. a description of the towers to be used for the crossing of the North Palo Duro Canyon
- c. a description of the amount of line sag anticipated on the span across the North Palo Duro Canyon;
- d. the projected cost of the line (including tower structures) from the end points of the crossings;
- e. a statement as to whether additional right-of-way will be necessary to accomplish the crossing of the North Palo Duro Canyon; and
- f. a statement as to whether mid-point towers within the North Palo Duro Canyon are anticipated to be needed.

RESPONSE:

- a. The illustrative structure types that would be used are provided in EA Figures 1-2 through 1-7, cost estimates for those structures are provided in response to CFI-SU 1-2, and documents related to cost estimates are provided in response to CFI-SU 1-5. Sharyland has not engaged in design or construction-related work on any specific route segments, and therefore there are no documents related to these specific segments. Upon selection of a route by the Commission, Sharyland will perform the necessary survey, geotechnical investigation and soil analysis and then will engage in design and construction analyses for specific links.
- b. Please refer to Sharyland's response to CFI-SU 1-7a. Sharyland anticipates that a tower of the type illustrated in EA Figure 1-3 (Tangent Long-Span structure) would be used, but final design work would not be performed until the Commission has selected a final route.
- c. Sharyland has not yet determined the amount of line sag. Upon designation of a route by the Commission, Sharyland will perform final design for the selected route. Please refer to Sharyland's responses to CFI-SU 1-7a and CFI-SU 1-7b.
- d. Sharyland has not designed specific structures and has not developed cost estimates for the portion of the line "from the end points to the crossings." In developing estimated route costs, Sharyland applied a 20 percent construction

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

cost premium to the estimated span of both Links AA and U within the general vicinity of the canyon.

- e. Sharyland does not anticipate the need for additional right-of-way to accomplish the crossing of the North Palo Duro Canyon beyond the specified 175 feet nominal right-of-way.
- f. For the purpose of this question, Sharyland assumes that "mid-point towers" refers to a tower placed on the canyon floor. Sharyland does not anticipate the need for "mid-point towers." For the canyon crossing, Sharyland may place towers on a secondary level, below the cap rock, and the span length is sufficient to span the canyon.

Preparer: Mark E. Caskey
Sponsor: Mark E. Caskey

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-8

For each segment proposed in the Application on all proposed routes, please state the length of the segment that parallels existing electric transmission line right-of-way, and identify the owner of such paralleled right-of-way.

RESPONSE:

See Exhibit Seewald-SU 1-1, "Length of ROW parallel to existing transmission line ROW." Sharyland has not identified specific owners for paralleled right-of-way. Sharyland believes that in most, if not all, instances paralleled right-of-way will be owned either by Southwestern Public Service ("SPS") or Golden Spread Electric Cooperative (or its members).

Preparer: Rob R. Reid
Mark Meyer
Sponsor: Rob R. Reid
Mark Meyer

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-9

For each segment proposed in the Application on all proposed routes, please state the length of the segment that uses existing electric transmission line right-of-way, and identify the owner of such right-of-way.

RESPONSE:

None of the links (segments) proposed in the Application on all proposed alternative routes utilize existing transmission line right-of-way.

Preparer: Rob R. Reid
Sponsor: Rob R. Reid

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-10

Does Sharyland contend that it has accurately identified property boundaries on segments T, U, V, W, and AA on Attachment 4-1a, entitled "Apparent Property Boundaries in the Vicinity of Sharyland's Preferred and Alternate Routes (Revised 5/28/2010)"? If so, please provide all of the documents upon which Sharyland relied to identify the property boundaries.

RESPONSE:

The "apparent property boundaries" shown on Attachment 4-1a show property boundaries based on survey abstract data. In particular, the blue property lines shown on Attachment 4-1a, as well as Attachment 4-1b, 4-1c, and 4-1d (collectively, Attachment 4-1), represent property boundaries encompassed by abstracts. Survey abstracts do not necessarily reflect the actual limits of property ownership in that one landowner may own property described in multiple survey abstracts and more than one landowner may own smaller parcels of land within a particular survey abstract.

Preparer: Mark D. Meyer
Sponsor: Mark D. Meyer

**SHARYLAND UTILITIES, L.P.'S RESPONSES TO
CURRIE FAMILY INTERESTS'
FIRST REQUEST FOR INFORMATION**

CFI-SU 1-11

For each of Segments T, U, V, W, and AA, please state the length of each segment that parallels apparent property lines. Please indicate on a map where Sharyland contends that such segments parallel apparent property lines.

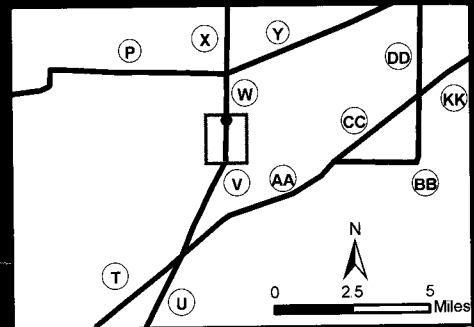
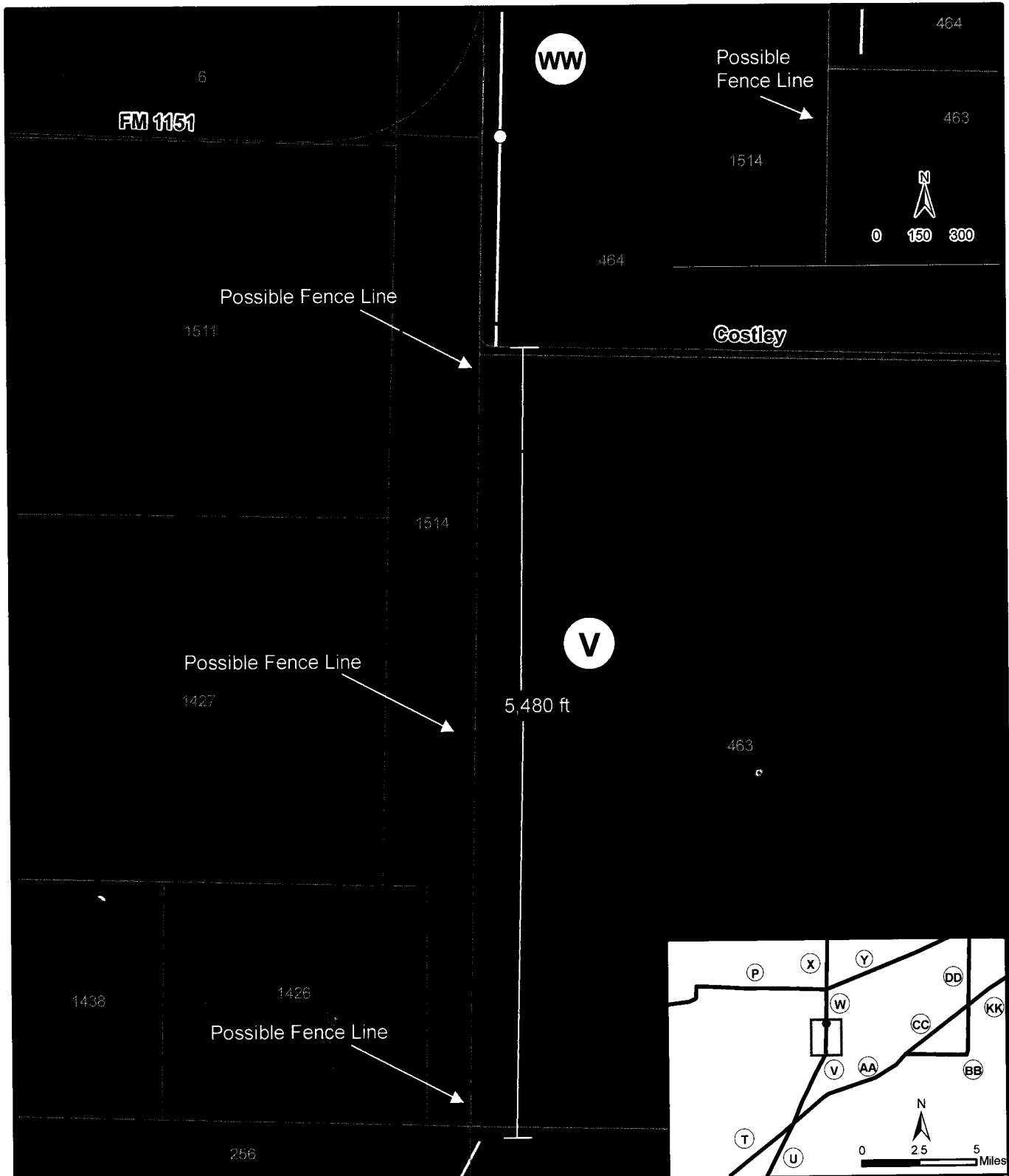
RESPONSE:

See Exhibit Seewald-SU 1-1 "Length of ROW paralleling apparent property lines (not following existing ROW)." See attached Exhibit CFI-SU 1-11. Length of ROW paralleling apparent property lines are measured along a route when no other existing transmission line right-of-way or other compatible right-of-way (roads, highways, pipelines, etc.) is paralleled. See also Section 4.6.1 of the Environmental Assessment.

Preparer: Rob R. Reid
Sponsor: Rob R. Reid

**EXHIBIT CFI-SU 1-5
(HIGHLY SENSITIVE PROTECTED MATERIAL)**

EXHIBIT CFI-SU 1-6
(HIGHLY SENSITIVE PROTECTED MATERIAL)



Ⓐ	Link Designation
○	Link Intersection
—	Alternative Link
463	Abstract Number
---	Texas Surveys
—	Length Paralleling
—	Apparent Property Lines

N

0 500 1,000 Feet

PBS&J

- Engineering
- Environmental Consulting
- Surveying

EXHIBIT CURRIE-SU 1-11