

CPS Energy and STEC
Proposed Howard Road to San Miguel 345 kV Transmission Line Project
PUC Docket No. 57115
Description of the Primary Alternative Routes

City Public Service Board (CPS Energy) and South Texas Electric Cooperative, Inc (STEC) have filed a Certificate of Convenience and Necessity (CCN) application with the Public Utility Commission of Texas (PUC) to construct a new 345-kV Transmission Line Project in Atascosa and Bexar Counties. In its CCN application for this project, CPS Energy and STEC have presented 34 alternative routes comprised of 109 segments for consideration by the PUC. The following table lists the segment combinations that make up CPS Energy’s and STEC’s 34 alternative routes and the length of each alternative route in miles. All routes and segments are available for selection and approval by the PUC. Only one multi-segment transmission line route will ultimately be constructed.

Alternative routes are not listed in any order of preference or priority.

PRIMARY ALTERNATIVE ROUTES	SEGMENT COMPOSITION	TOTAL LENGTH IN MILES
A	1-5-8-10-19-27-28-30-34-39-44-47-51-58-59-65-68B-74-82-86-98-106-108-110	47.77
B	1-5-9-18-26-29-38-48-63-66-72-84-89-95-97-101-102-106-108-110	56.67
C	2-10-19-25-26-29-37-39-44-47-51-58-59-65-68B-74-82-86-98-106-108-110	50.71
D	2-10-19-25-26-29-38-48-63-66-72-84-89-96-100-101-102-106-108-110	55.95
E	2-10-19-25-26-29-38-48-63-66-72-84-89-96-104-109-110	55.81
F	2-10-19-25-26-29-38-48-63-66-73-80-81-82-86-98-106-108-110	53.42
G	2-10-19-25-26-29-38-48-63-67-68A-68B-74-82-86-98-106-108-110	52.23
H	2-10-19-25-26-29-38-49-51-58-59-65-68B-74-82-86-98-106-108-110	50.05
I	2-10-19-27-28-30-34-39-44-50-45B-52-54-55-58-59-65-68B-71-75-77-87-94-99-107-108-110	50.81
J	2-8-9-13-17-29-38-48-63-66-72-84-88-90-91-97-101-105-109-110	58.92
K	3-6-14-19-27-28-30-31-35-41-45A-45B-52-56-61-62-70-78-99-107-108-110	49.78
L	3-6-15-16-22A-22B-32-35-41-45A-45B-52-54-55-58-59-65-68B-74-82-86-98-106-108-110	49.02
M	3-6-15-21-30-31-35-41-45A-45B-52-54-55-58-59-65-68B-74-82-86-98-106-108-110	46.99
N	3-6-15-21-30-34-39-40-41-45A-45B-52-54-55-58-59-65-68B-74-82-86-98-106-108-110	47.47
O	3-6-15-21-30-34-39-44-47-51-58-59-65-68B-74-81-85-90-91-97-101-102-106-108-110	47.60
P	3-6-15-21-30-34-39-44-47-51-58-59-65-68B-74-81-85-90-92-93-94-99-107-108-110	50.48
Q	3-6-15-21-30-34-39-44-47-51-58-59-65-68B-74-82-83-87-94-99-107-108-110	48.23

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R	3-6-15-21-30-34-39-44-47-51-58-59-65-68B-74-82-86-98-106-108-110	45.32
S	3-6-15-21-30-34-39-44-47-51-58-60-61-62-70-78-99-107-108-110	49.05
T	3-6-15-21-30-34-39-44-50-45B-52-56-61-62-70-78-99-107-108-110	47.90
U	3-6-20-28-30-31-35-41-45A-45B-52-56-61-62-69-75-77-87-94-99-107-108-110	49.15
V	3-6-20-28-30-31-35-41-45A-45B-53-57-62-69-75-76-78-99-107-108-110	50.47
W	3-6-20-28-30-31-35-41-45A-45B-53-57-62-69-75-77-87-94-99-107-108-110	49.44
X	3-6-20-28-30-31-35-41-45A-45B-53-57-62-70-76-77-87-94-99-107-108-110	50.85
Y	3-6-20-28-30-31-35-41-45A-45B-53-57-62-70-78-99-107-108-110	48.87
Z	3-6-20-28-30-34-39-40-41-45A-45B-52-56-61-62-70-78-99-107-108-110	49.05
AA	3-6-20-28-30-34-39-40-41-45A-45B-53-57-62-70-78-99-107-108-110	49.34
AB	3-6-20-28-30-34-39-44-50-45B-52-54-55-58-59-65-68B-71-75-77-87-94-99-107-108-110	49.88
AC	3-6-20-28-30-34-39-44-50-45B-52-56-61-62-70-78-99-107-108-110	48.35
AD	3-6-20-28-30-34-39-44-50-45B-53-57-62-70-78-99-107-108-110	48.64
AE	3-7-11-22A-12-24-46-57-62-70-78-99-107-108-110	51.03
AF	3-7-11-22A-22B-33-36-42-45A-45B-52-54-55-58-59-65-68B-74-82-86-98-106-108-110	50.66
AG	3-7-11-22A-22B-33-36-43-46-57-62-70-78-99-107-108-110	50.64
AH	1-4-17-29-38-48-63-66-72-84-89-96-104-109-110	56.19

Note: All distances listed below are approximate and rounded to the nearest hundredths of a mile. The distances of individual segments below may not sum to the total length of route presented above due to rounding.

Segment 1: 1.37 miles

Segment 1 begins at Howard Road Substation, located approximately three miles northeast of the intersection of State Highway (SH) 16 and SH 1604. The segment leaves the Howard Road Substation and proceeds southwest for approximately 0.05 mile. The segment then turns west for approximately 0.81 miles. The segment then angles to the northwest for approximately 0.51 mile. The segment terminates at its intersection with Segments 4 and 5.

Segment 2: 2.74 miles

Segment 2 begins at Howard Road Substation, located approximately three miles northeast of the intersection of SH 16 and SH 1604. The segment leaves the Howard Road Substation and proceeds generally south-southwest for approximately 1.18 miles, briefly paralleling the west side of an existing transmission line near Howard Road Substation. The segment then turns west-northwest for

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approximately 0.29 mile, and then turns southwest for approximately 0.27 mile, crossing the Medina River. The segment then turns west for approximately for 0.21 mile, crossing the Medina River. The segment generally proceeds south-southeast for approximately 0.79 mile. The segment terminates at its intersection with Segments 8 and 10.

Segment 3: 0.49 mile

Segment 3 begins at Howard Road Substation, located approximately three miles northeast of the intersection of SH 16 and SH 1604. The segment leaves the Howard Road Substation and proceeds east-southeast for approximately 0.10 mile, crossing an existing transmission line and SH 16. The segment generally proceeds south for approximately 0.39 mile, paralleling the east side of an existing transmission line. The segment terminates at its intersection with Segments 6 and 7.

Segment 4: 3.86 miles

Segment 4 begins at the intersection of Segments 1 and 5. The segment generally proceeds west approximately 0.45 mile. The segment then turns south for approximately 0.15 mile. The segment then turns west for approximately 0.69 mile, crossing the Medina River. The segment then turns south for approximately 0.20 mile, then angles southwest for approximately 0.17 mile. The segment then turns south for approximately 1.99 miles, crossing Elm Creek. The segment then angles southwest for approximately 0.21 mile. The segment terminates at its intersection with Segments 13 and 17.

Segment 5: 2.02 miles

Segment 5 begins at the intersection of Segments 1 and 4. The segment generally proceeds south for approximately 2.02 miles, crossing the Medina River. The segment terminates at its intersection with Segments 8 and 9.

Segment 6: 2.31 miles

Segment 6 begins at the intersection of 3 and 7. The segment generally proceeds south for approximately 0.49 mile, and then angles southwest for approximately 0.34 mile, paralleling the east side of an existing transmission line. The segment then angles south for approximately 1.48 miles, paralleling the east side of an existing transmission line and crossing the Medina River Natural Area, Medina River, and Elm Creek. The segment terminates at its intersection with segments 14, 15, and 20.

Segment 7: 4.58 miles

Segment 7 begins at the intersection of Segments 3 and 6. The segment generally proceeds east-southeast for approximately 0.76 mile. The segment then angles south-southeast for 0.45 mile, crossing the Medina River Natural Area. The segment then turns east for approximately 0.22 mile. The segment generally proceeds south-southeast for approximately 0.68 mile. The segment generally proceeds east for approximately 1.39 miles. The segment then turns south for approximately 1.08 miles, crossing the Medina River Natural Area and the Medina River. The segment terminates at its intersection with Segment 11.

Segment 8: 0.42 mile

Segment 8 begins at Segments 2 and 10. The segment heads west for approximately 0.42 mile. The segment terminates at its intersection with Segments 5 and 9.

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Segment 9: 1.08 miles

Segment 9 begins at its intersection with Segments 5 and 8. The segment generally proceeds south for approximately 0.72 mile, crossing Elm Creek. The segment then turns west for approximately 0.36 mile, paralleling the north side of an existing transmission line. The segment terminates at its intersection with Segments 13 and 18.

Segment 10: 0.80 mile

Segment 10 begins at its intersection with Segments 2 and 8. The segment heads south for approximately 0.80 mile, crossing Elm Creek and an existing transmission line. The segment terminates at its intersection with Segments 14 and 19.

Segment 11: 1.62 miles

Segment 11 begins at its intersection with Segment 7. The segment generally proceeds south for approximately 1.62 miles. The segment terminates at its intersection with Segments 16 and 22A.

Segment 12: 2.65 miles

Segment 12 begins at its intersection with Segments 22A and 22B. The segment generally proceeds east for approximately 1.22 miles. The segment then turns northeast for approximately 0.15 mile, crossing an existing transmission line. The segment then generally proceeds east-southeast for approximately 0.88 mile, crossing an existing railroad. The segment angles south-southeast for approximately 0.40 mile. The segment terminates at its intersection with Segment 24.

Segment 13: 0.90 mile

Segment 13 begins at its intersection with Segments 9 and 18. The segment heads west for approximately 0.90 mile, paralleling the north side of an existing transmission line. The segment terminates at its intersection with Segments 4 and 17.

Segment 14: 1.02 miles

Segment 14 begins at its intersection with Segments 6, 15, and 20. The segment generally proceeds west for approximately 1.02 miles, paralleling the south side of an existing transmission line and crosses SH 16. The segment terminates at its intersection with Segments 10 and 19.

Segment 15: 0.63 mile

Segment 15 begins at its intersection with Segments 6, 14 and 20. The segment generally proceeds east for approximately 0.63 mile. The segment terminates at its intersection with Segments 16 and 21.

Segment 16: 3.32 miles

Segment 16 begins at its intersection with Segments 15 and 21. The segment heads southeast for approximately 0.52 mile. The segment then turns and generally proceeds east for approximately 0.58 mile. Then turns south for approximately 1.12 miles. The segment then turns east-southeast for approximately 1.10 miles, paralleling the north side of SH 1604. The segment terminates at its intersection with Segments 11 and 22A.

Segment 17: 2.45 miles

Segment 17 begins at its intersection with Segments 4 and 13. The segment heads southwest for approximately 0.16 mile, crossing an existing transmission line. The segment then turns south for approximately 0.69 mile. The segment then turns and generally proceeds west-southwest for

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approximately 0.22 mile, paralleling the north side of SH 1604. The segment then turns and generally proceeds south for approximately 1.38 miles, crossing SH 1604. The segment terminates at its intersection with Segments 26 and 29.

Segment 18: 1.67 miles

Segment 18 begins at its intersection with Segments 9 and 13. The segment generally proceeds south for approximately 1.67 miles, crossing an existing transmission line and SH 1604. The segment terminates at its intersection with Segments 25 and 26.

Segment 19: 1.53 miles

Segment 19 begins at its intersection with Segments 10 and 14. The segment generally proceeds south for approximately 1.53 miles, crossing SH 1604. The segment terminates at its intersection with Segments 25 and 27.

Segment 20: 2.90 miles

Segment 20 begins at its intersection with Segments 6, 14 and 15. The segment heads south for approximately 0.82 mile, crossing SH 1604. The segment then turns west for approximately 0.40 mile. The segment then turns and generally proceeds south for approximately 1.68 miles. The segment terminates at its intersection with Segments 27 and 28.

Segment 21: 2.78 miles

Segment 21 begins at its intersection with Segments 15 and 16. The segment generally proceeds south-southeast for approximately 0.43 mile. The segment then begins curving southeast for approximately 0.30 mile, paralleling the north side of SH 1604. The segment then turns and generally proceeds south for approximately 2.05 miles, crossing SH 1604. The segment terminates at its intersection with Segments 28 and 30.

Segment 22A: 0.32 mile

Segment 22A begins at its intersection with Segments 11 and 16. The segment heads south for approximately 0.32 mile, crossing SH 1604. The segment terminates at its intersection with Segments 12 and 22B.

Segment 22B: 2.75 miles

Segment 22B begins at its intersection with Segments 12 and 22A. The segment generally proceeds south for approximately 2.75 miles, crossing Gallinas Creek. The segment terminates at its intersection with Segments 32 and 33.

Segment 24: 8.42 miles

Segment 24 begins at its intersection with Segment 12. The segment generally proceeds northeast for approximately 0.53 mile, crossing Losoya Creek. The segment then turns and generally proceeds southeast for approximately 1.90 miles, crossing Losoya Creek and United States Highway (US) 281. The segment then turns southwest for approximately 0.25 mile. The segment then turns southeast for approximately 0.21 mile. The segment then turns southwest for approximately 0.54 mile. The segment then turns southeast for approximately 0.42 mile, and then angles south-southeast for approximately 0.64 mile. The segment then turns west-southwest for approximately 0.32 mile. The segment then angles and generally proceeds south-southwest for approximately 1.39 miles. The segment then turns and generally proceeds southeast for approximately 1.05 miles. The segment then angles south for approximately 0.93

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mile. The segment then turns southeast for approximately 0.24 mile. The segment terminates at its intersection with Segments 43 and 46.

Segment 25: 0.80 mile

Segment 25 begins at its intersection with Segments 19 and 27. The segment heads west for approximately 0.80 mile. The segment terminates at its intersection with Segments 18 and 26.

Segment 26: 1.44 miles

Segment 26 begins at its intersection with Segments 18 and 25. The segment heads south-southwest for approximately 0.43 mile. The segment then turns west for approximately 0.40 mile. The segment then angles southwest for approximately 0.30 mile. The segment then turns west of approximately 0.31 mile. The segment terminates at its intersection with Segments 17 and 29.

Segment 27: 1.57 miles

Segment 27 begins at its intersection with Segments 19 and 25. The segment generally proceeds south for approximately 0.80 mile. The segment then turns east for approximately 0.35 mile, crossing SH 16. The segment then turns and generally proceeds southeast for approximately 0.42 mile. The segment terminates at its intersection with Segments 20 and 28.

Segment 28: 0.96 miles

Segment 28 begins at its intersection with Segments 20 and 27. The segment heads east for approximately 0.53 mile and then angles southeast for approximately 0.43 mile. The segment terminates at its intersection with Segments 21 and 30.

Segment 29: 3.21 miles

Segment 29 begins at its intersection with Segments 17 and 26. The segment heads south for approximately 0.36 mile, and then angles southeast for approximately 0.20 mile. The segment then angles and generally proceeds south for approximately 2.65 miles. The segment terminates at its intersection with Segments 37 and 38.

Segment 30: 1.87 miles

Segment 30 begins at its intersection with Segments 21 and 28. The segment heads south for approximately 1.87 mile. The segment terminates at its intersection with Segments 31 and 34.

Segment 31: 0.93 mile

Segment 31 begins at its intersection with Segments 30 and 34. The segment heads east for approximately 0.93 mile, crossing Galvan Creek. The segment terminates at its intersection Segments 32 and 35.

Segment 32: 1.21 miles

Segment 32 begins at its intersection with Segments 22B and 33. The segment proceeds west for approximately 1.21 miles. The segment terminates at its intersection with Segments 31 and 35.

Segment 33: 1.73 miles

Segment 33 begins at its intersection with Segments 22B and 32. The segment heads southeast for approximately 0.87 mile. Then segment then angles east for approximately 0.86 mile, crossing an existing transmission line and railroad. The segment terminates at its intersection with Segment 36.

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Segment 34: 0.53 mile

Segment 34 begins at its intersection with Segments 30 and 31. The segment heads south for approximately 0.53 mile. The segment terminates at its intersection with Segments 37 and 39.

Segment 35: 3.34 miles

Segment 35 begins at its intersection with Segments 31 and 32. The segment heads south for approximately 1.21 miles. The segment then angles and generally proceeds southeast for approximately 2.13 miles. The segment terminates at its intersection with Segments 40 and 41.

Segment 36: 4.22 miles

Segment 36 begins at its intersection with Segment 33. The segment generally proceeds south-southeast for approximately 1.46 miles, paralleling the east side of an existing railroad. The segment then angles and generally proceeds east for approximately 1.19 miles, crossing US 281. The segment then turns south for approximately 0.23 mile. The segment then turns east for approximately 0.11 mile. The segment then turns south for approximately 1.23 miles. The segment terminates at its intersection with Segments 42 and 43.

Segment 37: 3.48 miles

Segment 37 begins at its intersection with Segments 29 and 38. The segment heads east for approximately 1.01 miles. The segment then angles northeast for approximately 0.76 mile. The segment then angles and generally proceeds east for approximately 1.71 miles, crossing SH 16. The segment terminates at its intersection with Segments 34 and 39.

Segment 38: 6.69 miles

Segment 38 begins at its intersection with Segments 29 and 37. The segment generally proceeds south-southeast for approximately 0.72 mile. The segment then turns east for approximately 0.54 mile. The segment then turns south for approximately 2.15 miles, crossing an existing transmission line and Palo Alto Creek. The segment then turns west for approximately 0.35 mile. The segment then turns south for approximately 0.90 mile. The segment then angles southwest for approximately 0.55 mile. The segment then turns southeast for approximately 0.51 mile. The segment then turns southwest for approximately 0.33 mile. The segment then turns and generally proceeds southeast for 0.64 mile. The segment terminates at its intersection with Segments 48 and 49.

Segment 39: 2.06 miles

Segment 39 begins at its intersection with Segments 34 and 37. The segment heads south for approximately 2.06 miles. The segment terminates at its intersection with Segments 40 and 44.

Segment 40: 2.16 miles

Segment 40 begins at its intersection with Segments 39 and 44. The segment heads east for approximately 0.77 mile. The segment then angles southeast for approximately 0.66 mile, crossing Galvan Creek. The segment then angles east-southeast for approximately 0.73 mile. The segment terminates at its intersection with Segments 35 and 41.

Segment 41: 1.68 miles

Segment 41 begins at its intersection with Segments 35 and 40. The segment generally proceeds southeast for approximately 1.68 miles, crossing an existing transmission line. The segment terminates at its intersection with Segments 42 and 45A.

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Segment 42: 1.97 miles

Segment 42 begins at its intersection with Segments 36 and 43. The segment generally proceeds west for approximately 1.17 mile, crossing US 281 and an existing railroad. The segment then turns south-southwest for approximately 0.20 mile, paralleling the west side of the existing railroad. The segment then turns and generally proceeds west for approximately 0.60 miles. The segment terminates at its intersection with Segments 41 and 45A.

Segment 43: 1.98 miles

Segment 43 begins at its intersection with Segments 36 and 42. The segment generally proceeds east for approximately 1.98 miles. The segment terminates at its intersection with Segments 24 and 46.

Segment 44: 2.66 miles

Segment 44 begins at its intersection with Segments 39 and 40. The segment heads south for approximately 1.35 miles. The segment then angles and generally proceeds south-southeast for approximately 1.31 miles. The segment terminates at its intersection with Segments 47 and 50.

Segment 45A: 4.24 miles

Segment 45A begins at its intersection with Segments 41 and 42. The segment heads south-southeast for approximately 3.56 miles, paralleling the east side of an existing transmission line and crossing Farm-to-Market Road (FM) 1470. The segment then angles south-southwest for approximately 0.68 mile, continuing to parallel the east side of the existing transmission line. The segment terminates at its intersection with Segments 45B and 50.

Segment 45B: 0.10 mile

Segment 45B begins at its intersection with Segments 45A and 50. The segment heads south for approximately 0.10 mile, paralleling the east side of an existing transmission line. The segment terminates at its intersection with Segments 52 and 53.

Segment 46: 7.09 miles

Segment 46 begins at its intersection with Segments 24 and 43. The segment generally proceeds south for approximately 1.39 miles, crossing FM 536. The segment then turns west-southwest for approximately 0.16 mile, paralleling the south side of FM 536. The segment then angles and generally proceeds southeast for approximately 1.06 miles, paralleling the east side of FM 1784. The segment then turns and generally proceeds southwest for approximately 2.47 miles, crossing FM 1784. The segment then turns southeast for approximately 0.90 mile. The segment then turns and generally proceeds south for approximately 1.11 miles, crossing FM 3006 and paralleling the west side of Interstate Highway (IH) 37. The segment terminates at its intersection with Segments 53 and 57.

Segment 47: 1.55 miles

Segment 47 begins at its intersection with Segments 44 and 50. The segment heads southwest for approximately 1.55 miles. The segment terminates at its intersection with Segments 49 and 51.

Segment 48: 11.53 miles

Segment 48 begins at its intersection with Segments 38 and 49. The segment heads southwest for approximately 1.13 miles. The segment then turns west for approximately 0.47 mile. The segment then turns southwest for approximately 0.53 mile, crossing Agua Negra Creek. The segment then turns west-northwest for approximately 0.16 mile, paralleling the north side of FM 476. The segment then turns and

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generally proceeds southwest for approximately 2.97 miles, crossing FM 476. The segment then turns southeast for approximately 0.60 mile, crossing an existing transmission line. The segment then turns southwest for approximately 0.41 mile. The segment then turns and generally proceeds southeast for approximately 2.23 miles, crossing Atascosa River and FM 2146. The segment then turns southwest for approximately 0.85 mile. The segment then turns and generally proceeds southeast for approximately 2.18 miles, crossing Salt Branch Creek. The segment terminates at its intersection with Segment 63.

Segment 49: 2.40 miles

Segment 49 begins at its intersection with Segments 38 and 48. The segment heads east-northeast for approximately 0.24 mile, crossing Palo Alto Creek. The segment then angles and generally proceeds southeast for approximately 2.16 miles, crossing an existing transmission line and SH 16. The segment terminates at its intersection with Segments 47 and 51.

Segment 50: 4.72 miles

Segment 50 begins at its intersection with Segments 44 and 47. The segment generally proceeds southeast for approximately 2.22 miles, crossing FM 1470. The segment then angles east-southeast for approximately 2.50 miles, crossing Galvan Creek and an existing transmission line. The segment terminates at its intersection with Segments 45A and 45B.

Segment 51: 5.86 miles

Segment 51 begins at its intersection with Segments 47 and 49. The segment generally proceeds southeast for approximately 0.59 mile. The segment then turns south-southwest for approximately 0.25 mile. The segment then angles and generally proceeds southeast for approximately 1.11 miles, crossing FM 1470. The segment then turns and generally proceeds southwest for approximately 0.96 mile. The segment then turns east-southeast for approximately 0.37 mile. The segment then turns southwest for approximately 0.32 mile. The segment then turns southeast for approximately 0.46 mile, paralleling the north side of FM 476. The segment then turns southwest for approximately 0.27 mile, crossing FM 476. The segment then turns and generally proceeds southeast for approximately 0.68 mile. The segment then turns southwest for approximately 0.28 mile. The segment then turns east-southeast for approximately 0.57 mile. The segment terminates at its intersection with Segments 55 and 58.

Segment 52: 0.39 miles

Segment 52 begins at its intersection with Segments 45B and 53. The segment heads south-southwest for approximately 0.39 mile, paralleling the east side of an existing transmission line. The segment terminates at its intersection with Segments 54 and 56.

Segment 53: 4.20 miles

Segment 53 begins at its intersection with Segments 45B and 52. The segment heads southeast for approximately 0.75 mile. The segment then angles east for approximately 0.19 mile, crossing an existing railroad and US 281. The segment then turns southeast for approximately 0.17 mile. The segment then angles and generally proceeds east-southeast for approximately 3.09 miles, crossing Gallinas Creek and FM 3006. The segment terminates at its intersection with Segments 46 and 57.

Segment 54: 0.38 mile

Segment 54 begins at its intersection with Segments 52 and 56. The segment heads southwest for approximately 0.38 mile, crossing an existing transmission line and Galvan Creek. The segment terminates at its intersection with Segment 55.

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Segment 55: 3.28 miles

Segment 55 begins at its intersection with Segment 54. The segment heads west-southwest for approximately 0.31 mile, crossing Galvan Creek. The segment then turns south-southwest for approximately 2.25 miles, crossing Elm Creek. The segment then turns and generally proceeds west-southwest for approximately 0.72 mile, crossing FM 476. The segment terminates at its intersection with Segments 51 and 58.

Segment 56: 3.54 miles

Segment 56 begins at its intersection with Segments 52 and 54. The segment heads south-southwest for approximately 1.27 miles, paralleling the east side of an existing transmission line. The segment then angles southeast for approximately 0.37 mile. The segment then turns southwest for approximately 0.70 mile. The segment then angles south for approximately 1.20 miles, paralleling the east side of an existing transmission line and crossing Atascosa River. The segment terminates at its intersection with Segments 60 and 61.

Segment 57: 3.40 miles

Segment 57 begins at its intersection with Segments 46 and 53. The segment generally proceeds south for approximately 2.16 miles, paralleling the west side of IH 37. The segment then turns west-southwest for approximately 0.41 mile, and then angles southwest for approximately 0.83 mile. The segment terminates at its intersection with Segments 61 and 62.

Segment 58: 0.15 mile

Segment 58 begins at its intersection with Segments 51 and 55. The segment heads south-southwest for approximately 0.15 mile. The segment terminates at its intersection with Segments 59 and 60.

Segment 59: 3.59 miles

Segment 59 begins at its intersection with Segments 58 and 60. The segment generally proceeds south-southwest for approximately 3.59 miles, crossing an existing transmission line, Atascosa River and Salt Branch Creek. The segment terminates at its intersection with Segment 65.

Segment 60: 2.33 miles

Segment 60 begins at its intersection with Segments 58 and 59. The segment heads east-southeast for approximately 0.30 mile. The segment then turns south-southwest for approximately 0.33 mile. The segment then turns east-southeast for approximately 1.7 miles, paralleling the north side of an existing transmission line, crossing FM 476 and crossing another existing transmission line. The segment terminates at its intersection with Segments 56 and 61.

Segment 61: 3.38 miles

Segment 61 begins at its intersection with Segments 56 and 60. The segment heads southeast for approximately 0.22 mile, paralleling the north side of an existing transmission line. The segment then generally proceeds east for approximately 3.16 miles, crossing Atascosa River, US 281, and Galvan Creek. The segment terminates at its intersection with Segments 57 and 62.

Segment 62: 4.52 miles

Segment 62 begins at its intersection with Segments 57 and 61. The segment generally proceeds southeast for approximately 1.46 miles, crossing an existing transmission line and SH 97. The segment then turns

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west-southwest for approximately 0.14 mile. The segment then turns and generally proceeds south-southeast for approximately 0.68 mile, crossing Presleano Creek. The segment then angles southwest for approximately 1.22 miles, crossing Atascosa River and an existing railroad. The segment then turns west for approximately 0.26 mile, paralleling the north side of FM 1334. The segment then angles southwest for approximately 0.27 mile, crossing FM 1334. The segment then angles south for approximately 0.49 mile, crossing an existing transmission line. The segment terminates at its intersection with Segments 69 and 70.

Segment 63: 0.96 mile

Segment 63 begins at its intersection with Segment 48. The segment generally proceeds south-southwest for approximately 0.96 mile. The segment terminates at its intersection with Segments 66 and 67.

Segment 65: 1.16 miles

Segment 65 begins at its intersection with Segment 59. The segment heads southeast for approximately 0.41 mile. The segment then angles south for approximately 0.75 mile, crossing FM 3350. The segment terminates at its intersection with Segments 68A and 68B.

Segment 66: 5.23 miles

Segment 66 begins at its intersection with Segments 63 and 67. The segment generally proceeds south-southwest for approximately 0.58 mile, crossing SH 173 and an existing transmission line. The segment then angles and generally proceeds west-southwest for approximately 0.36 mile. The segment then angles and generally proceeds south for approximately 1.52 miles. The segment then turns east-southeast for approximately 0.37 mile. The segment then angles south-southeast for approximately 2.4 miles, crossing SH 97 and an existing transmission line. The segment terminates at its intersection with Segments 72 and 73.

Segment 67: 2.51 miles

Segment 67 begins at its intersection with Segments 63 and 66. The segment generally proceeds east-southeast for approximately 2.51 miles, paralleling the north side of an existing transmission line and crossing SH 282. The segment terminates at its intersection with Segment 68A.

Segment 68A: 0.34 mile

Segment 68A begins at its intersection with Segment 67. The segment heads southeast for approximately 0.34 mile, paralleling the north side of an existing transmission line. The segment terminates at its intersection with Segments 65 and 68B.

Segment 68B: 4.63 miles

Segment 68B begins at its intersection with Segments 65 and 68A. The segment heads southeast for approximately 1.67 miles, paralleling the north side of an existing transmission line and crossing Bonita Creek. The segment then turns south for approximately 0.63 mile, crossing an existing transmission line. The segment then heads east for approximately 0.10 mile. The segment then angles and generally proceeds southeast for approximately 0.12 mile, crossing SH 97. The segment then turns and generally proceeds south for approximately 1.22 miles, crossing an existing transmission line. The segment then angles and generally proceeds southeast for approximately 0.89 mile. The segment terminates at its intersection with Segments 71 and 74.

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Segment 69: 4.31 miles

Segment 69 begins at its intersection with Segments 62 and 70. The segment then heads south-southwest for approximately 1.14 miles, crossing an existing transmission line. The segment then turns and generally proceeds southeast for approximately 0.83 mile, paralleling the north side of US 281 and crossing an existing transmission line. The segment then turns southwest for approximately 0.10 mile, crossing US 281. The segment then angles south for approximately 0.86 mile. The segment then turns west for approximately 0.36 mile. The segment then turns south for approximately 0.44 mile. The segment then turns and generally proceeds west 0.58 mile, crossing East Metate Creek. The segment terminates at its intersection with Segments 71 and 75.

Segment 70: 5.61 miles

Segment 70 begins at its intersection with Segments 62 and 69. The segment heads southeast for approximately 0.46 mile. The segment then turns and generally proceeds south for approximately 0.66 mile. The segment then turns southeast for approximately 0.95 mile, crossing Georgetown Creek. The segment then turns and generally proceeds south for approximately 0.89 mile, crossing an existing transmission line. The segment then angles and generally proceeds southwest for approximately 0.73 mile, crossing US 281. The segment then angles south for approximately 0.94 mile. The segment then angles southeast for approximately 0.32 mile. The segment then angles south for approximately 0.66 mile, crossing East Metate Creek. The segment terminates at its intersection with Segments 76 and 78.

Segment 71: 3.51 miles

Segment 71 begins at its intersection with Segments 68B and 74. The segment proceeds east for approximately 0.96 miles. The segment then angles southeast for approximately 0.16 mile. The segment then turns east for approximately 2.39 miles. The segment terminates at its intersection with Segments 69 and 75.

Segment 72: 3.49 miles

Segment 72 begins at its intersection with Segments 66 and 73. The segment generally proceeds southwest for approximately 2.16 miles, crossing Stancel Creek. The segment then turns south-southeast for approximately 1.33 miles. The segment terminates at its intersection with Segment 84.

Segment 73: 2.56 miles

Segment 73 begins at its intersection with Segments 66 and 72. The segment heads southeast for approximately 0.47 mile. The segment then generally proceeds south for approximately 0.77 mile, crossing FM 1332. The segment then angles southeast for approximately 0.18 mile. The segment then angles south for approximately 1.14 miles. The segment terminates at its intersection with Segment 80.

Segment 74: 2.92 miles

Segment 74 begins at its intersection with Segments 68B and 71. The segment heads south for approximately 0.47 mile. The segment then angles southwest for approximately 0.16 mile. The segment then angles and generally proceeds south for approximately 2.29 miles. The segment terminates at its intersection with Segments 81 and 82.

Segment 75: 1.40 miles

Segment 75 begins at its intersection with Segments 69 and 71. The segment heads south for approximately 1.40 miles. The segment terminates at its intersection with Segments 76 and 77.

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Segment 76: 1.51 miles

Segment 76 begins at its intersection with Segments 75 and 77. The segment heads east for approximately 1.51 miles. The segment terminates at its intersection with Segments 70 and 78.

Segment 77: 1.27 miles

Segment 77 begins at its intersection with Segments 75 and 76. The segment heads south for approximately 1.27 miles. The segment terminates at its intersection with Segments 83 and 87.

Segment 78: 5.56 miles

Segment 78 begins at its intersection with Segments 70 and 76. The segment generally proceeds south for approximately 4.08 miles. The segment then angles and generally proceeds southwest for approximately 1.48 miles, crossing Metate Creek. The segment terminates at its intersection with Segments 94 and 99.

Segment 80: 2.75 miles

Segment 80 begins at its intersection with Segment 73. The segment proceeds east for approximately 1.08 miles. The segment then angles southeast for approximately 0.32 mile. The segment then turns east for approximately 1.35 miles, crossing Goose Creek. The segment terminates at its intersection with Segments 81 and 85.

Segment 81: 1.05 miles

Segment 81 begins at its intersection with Segments 80 and 85. The segment generally proceeds east for approximately 1.05 miles, crossing SH 16. The segment terminates at its intersection with Segments 74 and 82.

Segment 82: 0.41 mile

Segment 82 begins at its intersection with Segments 74 and 81. The segment heads east for approximately 0.41 mile. The segment terminates at its intersection with Segments 83 and 86.

Segment 83: 3.11 miles

Segment 83 begins at its intersection with Segments 82 and 86. The segment generally proceeds east for approximately 3.11 miles, crossing Salt Branch Creek and Metate Creek. The segment terminates at its intersection with Segments 77 and 87.

Segment 84: 1.99 miles

Segment 84 begins at its intersection with Segment 72. The segment generally proceeds south for approximately 1.99 miles, crossing La Parita Creek. The segment terminates at its intersection with Segments 88 and 89.

Segment 85: 1.70 miles

Segment 85 begins at its intersection with Segments 80 and 81. The segment heads south for approximately 1.70 miles, paralleling the west side of SH 16 and crossing Goose Creek and La Parita Creek. The segment terminates at its intersection with Segments 88 and 90.

Segment 86: 3.67 miles

Segment 86 begins at its intersection with Segments 82 and 83. The segment heads south for approximately 3.67 miles, crossing La Parita Creek. The segment terminates at its intersection with Segments 92, 93 and 98.

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Segment 87: 3.71 miles

Segment 87 begins at its intersection with Segments 77 and 83. The segment heads south for approximately 3.71 miles, crossing Metate Creek and Salt Branch Creek. The segment terminates at its intersection with Segments 93 and 94.

Segment 88: 4.70 miles

Segment 88 begins at its intersection with Segments 84 and 89. The segment generally proceeds east for approximately 4.70 miles. The segment terminates at its intersection with Segments 85 and 90.

Segment 89: 2.04 miles

Segment 89 begins at its intersection with Segments 84 and 88. The segment generally proceeds south for approximately 2.04 miles, crossing Turkey Creek. The segment terminates at its intersection with Segments 95 and 96.

Segment 90: 1.92 miles

Segment 90 begins at its intersection with Segments 85 and 88. The segment heads south for approximately 1.40 miles, paralleling the west side of SH 16. The segment then angles southwest for approximately 0.30 mile. The segment then angles south for approximately 0.22 mile. The segment terminates at its intersection with Segments 91 and 92.

Segment 91: 0.28 mile

Segment 91 begins at its intersection with Segments 90 and 92. The segment heads south for approximately 0.28 mile. The segment terminates at its intersection with Segments 95 and 97.

Segment 92: 1.74 miles

Segment 92 begins at its intersection with Segments 90 and 91. The segment proceeds east for approximately 0.25 miles, crossing SH 16. The segment then angles southeast for approximately 0.56 mile. The segment then turns east for approximately 0.93 mile. The segment terminates at its intersection with Segments 86, 93 and 98.

Segment 93: 3.07 miles

Segment 93 begins at its intersection with Segments 86, 92 and 98. The segment generally proceeds east for approximately 3.07 miles, crossing La Parita Creek. The segment terminates at its intersection with Segments 87 and 94.

Segment 94: 1.05 miles

Segment 94 begins at its intersection with Segments 87 and 93. The segment heads east for approximately 0.39 mile, and then angles southeast for approximately 0.66 mile. The segment terminates at its intersection with Segments 78 and 99.

Segment 95: 4.48 miles

Segment 95 begins at its intersection with Segments 89 and 96. The segment heads east for approximately 4.48 miles, crossing Turkey Creek. The segment terminates at its intersection with Segments 91 and 97.

Segment 96: 2.79 miles

Segment 96 begins at its intersection with Segments 89 and 95. The segment heads south for approximately 0.56 mile, and then angles southwest for approximately 0.24 mile, crossing FM 140. The segment then angles south for approximately 1.63 miles. The segment then angles southeast for

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approximately 0.36 mile, paralleling the east side of an existing transmission line. The segment terminates at its intersection with Segments 100 and 104.

Segment 97: 3.05 miles

Segment 97 begins at its intersection with Segments 91 and 95. The segment generally proceeds south for approximately 1.07 miles, crossing FM 140. The segment then angles southwest for approximately 0.17 mile. The segment then angles south for approximately 1.81 miles, crossing Turkey Creek. The segment terminates at its intersection with Segments 100 and 101.

Segment 98: 3.37 miles

Segment 98 begins at its intersection with Segments 86, 92 and 93. The segment generally proceeds south for approximately 3.37 miles, crossing FM 140, Turkey Creek and FM 3387. The segment terminates at its intersection with Segments 102 and 106.

Segment 99: 2.86 miles

Segment 99 begins at its intersection with Segments 78 and 94. The segment heads south for approximately 2.86 miles, crossing FM 140 and Christine Creek. The segment terminates at its intersection with Segment 107.

Segment 100: 4.29 miles

Segment 100 begins at its intersection with Segments 96 and 104. The segment heads east for approximately 1.75 miles, and then angles southeast for approximately 0.27 mile. The segment then generally proceeds east for approximately 2.27 miles. The segment terminates at its intersection with Segments 97 and 101.

Segment 101: 0.28 mile

Segment 101 begins at its intersection with Segments 97 and 100. The segment generally proceeds east for approximately 0.28 mile, crossing SH 16. The segment terminates at its intersection with Segments 102 and 105.

Segment 102: 1.46 miles

Segment 102 begins at its intersection with Segments 101 and 105. The segment heads east-southeast for approximately 1.46 miles. The segment terminates at its intersection with Segments 98 and 106.

Segment 104: 6.20 miles

Segment 104 begins at its intersection with Segments 96 and 100. The segment generally proceeds east-southeast for approximately 5.48 miles, paralleling the northeast side of an existing transmission line. The segment then turns east for approximately 0.72 mile, crossing SH 16. The segment terminates at its intersection with Segments 105 and 109.

Segment 105: 3.64 miles

Segment 105 begins at its intersection with Segments 101 and 102. The segment heads south for approximately 3.64 miles, paralleling the east side of SH 16 and crossing Macho Creek. The segment terminates at its intersection with Segments 104 and 109.

Segment 106: 4.36 miles

Segment 106 begins at its intersection with Segments 98 and 102. The segment heads south for approximately 0.68 mile, and then angles south-southeast for approximately 2.11 miles. The segment then

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angles east-southeast for approximately 1.57 miles, crossing Macho Creek. The segment terminates at its intersection with Segments 107 and 108.

Segment 107: 3.57 miles

Segment 107 begins at its intersection with Segment 99. The segment heads south for approximately 1.38 miles. The segment then angles and generally proceeds southwest for approximately 2.19 miles, crossing La Parita Creek and Turkey Creek. The segment terminates at its intersection with Segments 106 and 108.

Segment 108: 0.16 mile

Segment 108 begins at its intersection with Segments 106 and 107. The segment generally proceeds south for approximately 0.16 mile, crossing an existing railroad. The segment terminates at its intersection with Segments 109 and 110.

Segment 109: 4.20 miles

Segment 109 begins at its intersection with Segments 104 and 105. The segment generally proceeds east for approximately 4.20 miles, crossing an existing railroad. The segment terminates at its intersection with Segments 108 and 110.

Segment 110: 0.17 mile

Segment 110 begins at its intersection with Segments 108 and 109. The segment heads south for approximately 0.17 mile, before reaching the San Miguel Substation, located approximately 4 miles east of SH 16 and approximately 0.65 mile southwest of FM 3387.