

Appendix F – Visual Simulations

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APPENDIX F – VISUAL SIMULATIONS

F.1 Introduction

Visual simulations were developed to demonstrate the potential impacts and associated contrast caused by the addition of the Project in a variety of landscape conditions. The landscapes crossed by the Project range from flat, sagebrush-dominated basins to steep, densely vegetated mountains. Twelve simulations were prepared at ten viewpoints throughout the Project study area including residential areas, travel routes, and recreation areas. The simulated condition includes both standard mitigation as well as selective mitigation measures as proposed.

A visual contrast worksheet (BLM form 8400-4) was prepared for each agency approved key observation points (KOP) to describe the visual contrast generated by the Project. These sheets were prepared for all viewpoints regardless of jurisdiction crossed. The methodology used to determine project contrast is defined in Appendix E – Visual Resources Supporting Data.

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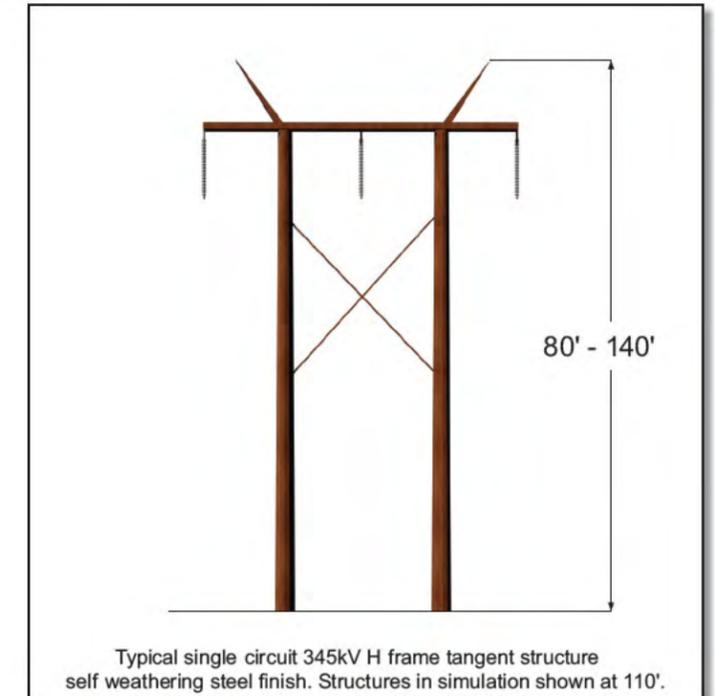
Existing Condition – View looking northwest from the Richfield Canal Trail, north of 600 North, in a residential area in Richfield



View Location: Community of Richfield looking northwest toward Interstate 70. Approximate distance of transmission line from photo location is 0.2 mile.



Simulated Condition – View of alternative route N1, N2, N3, N4, N5, and N6 for the 345kV transmission line

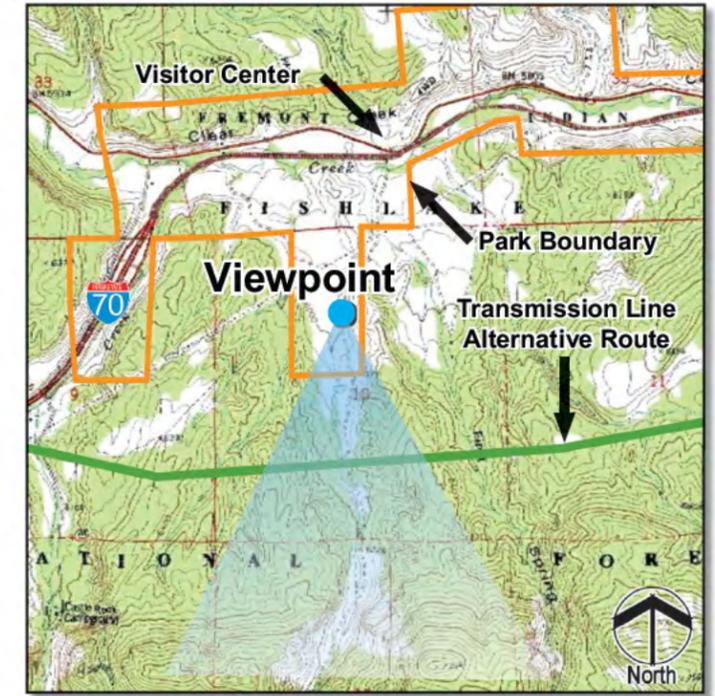


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

Photo Date: 12 18 09 Time: 12:15 p.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case by case basis.



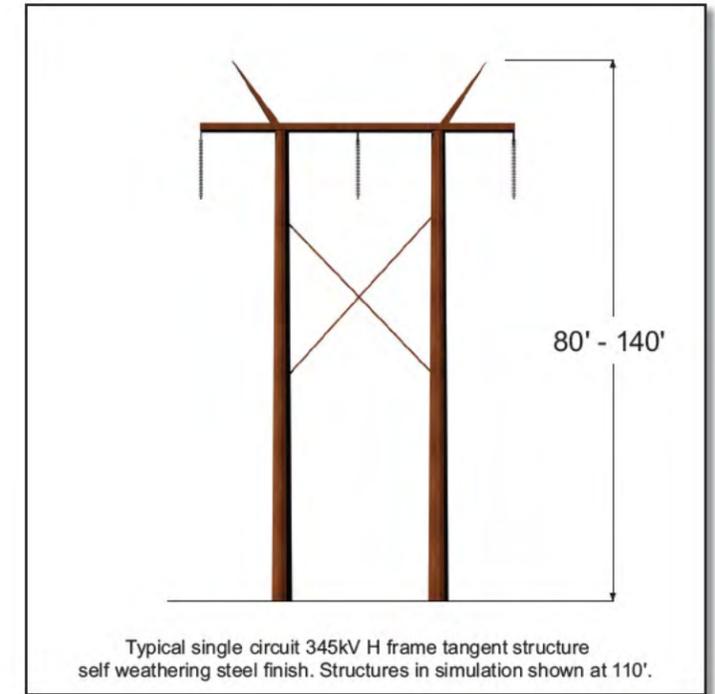
Existing Condition – View looking south from Paiute ATV Trail No. 1 in the Fremont Indian State Park



View Location: Paiute ATV Trail No. 1 south of Fremont Indian State Park Visitor Center looking south. Approximate distance of transmission line from photo location is 0.5 mile.



Simulated Condition – View of alternative route N1, N2, N3, N4, N5, and N6 for the 345kV transmission line in the Fishlake National Forest

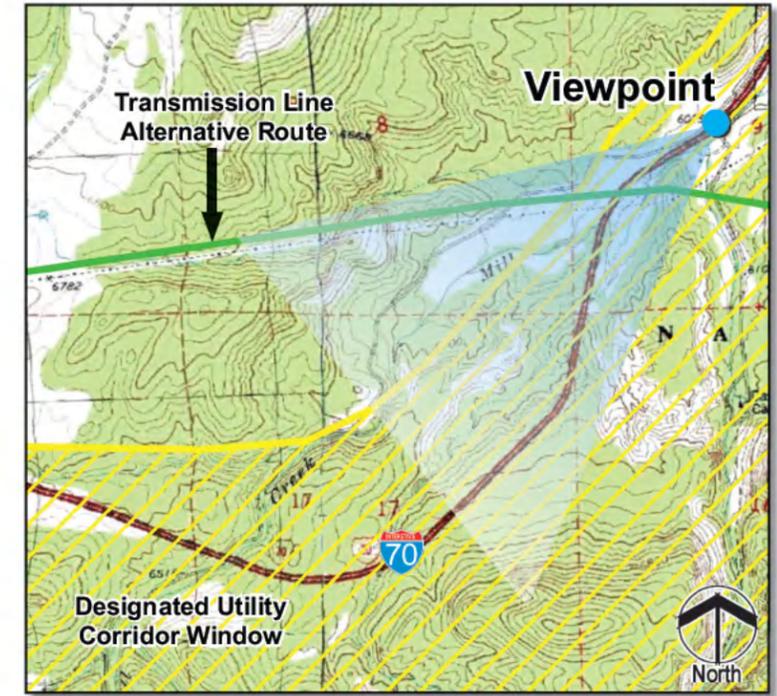


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

Photo Date: 7 22 10 Time: 11:59 a.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case by case basis.



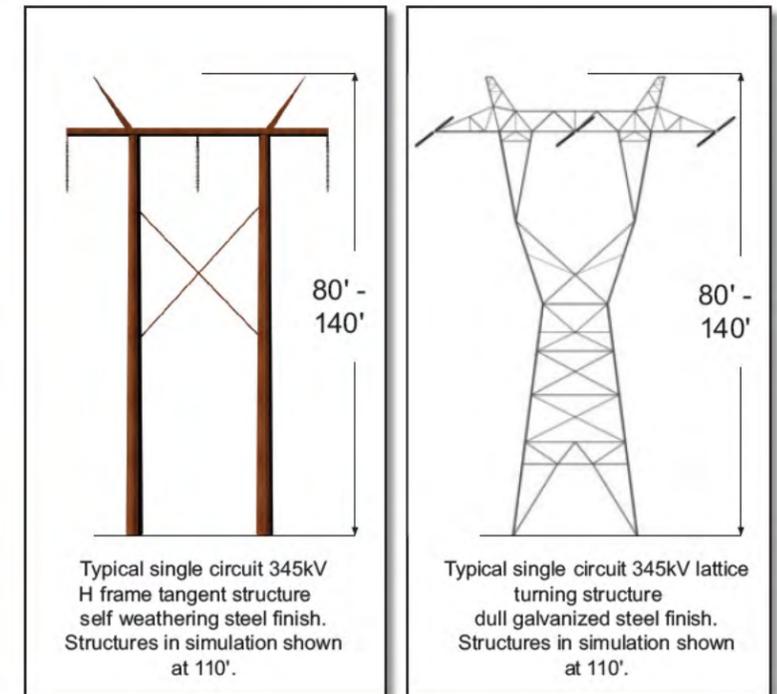
Existing Condition – View looking southwest from westbound Interstate 70 toward the location where the transmission line would leave the designated utility corridor window in the Fishlake National Forest



View Location: West of Fremont Indian State Park from Interstate 70. Approximate distance of transmission line from photo location is 0.3 mile.



Simulated Condition – View of alternative route N1, N2, N3, N4, N5, and N6 for the 345kV transmission line in the Fishlake National Forest

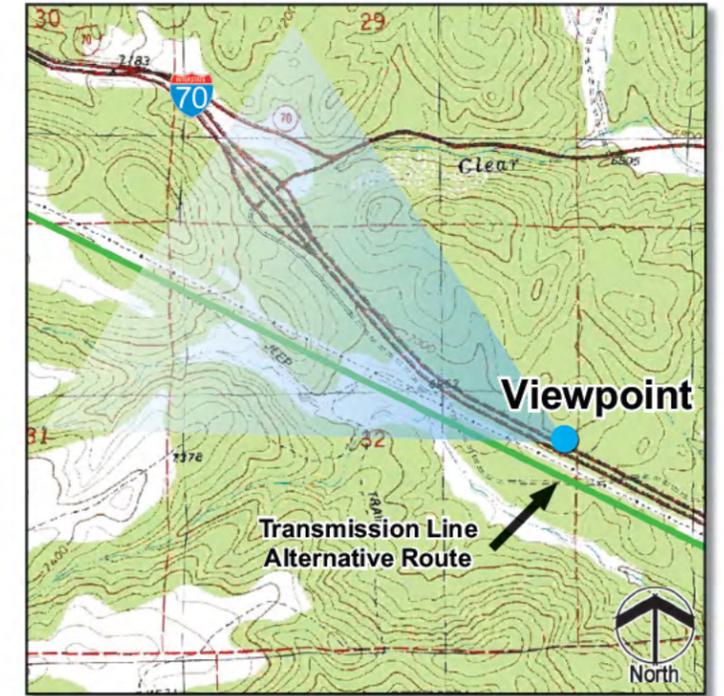


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

Photo Date: 7 22 10 Time: 12:31 p.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case by case basis.



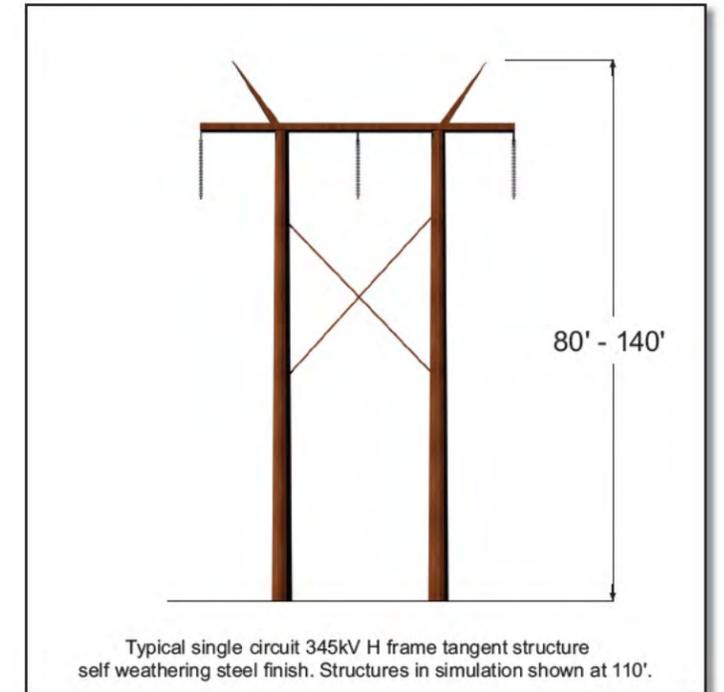
Existing Condition – View looking northwest from westbound Interstate 70



View Location: East of Clear Creek Canyon Road Exit on Interstate 70 looking northwest. Approximate distance of transmission line from photo location is 0.7 mile.



Simulated Condition – View of alternative route N1, N2, N3, N4, N5, and N6 for the 345kV transmission line in the Fishlake National Forest



Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

Photo Date: 7 22 10 Time: 12:57 p.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case by case basis.



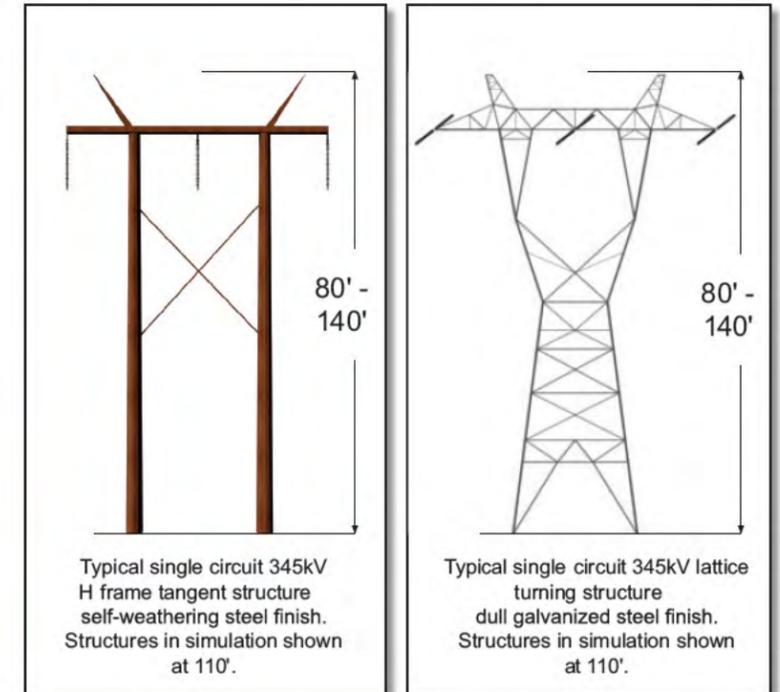
Existing Condition – View looking southeast from State Route 161 just south of Cove Fort Historic Site



View Location: Cove Fort Historic Site looking southeast towards the Tushar Mountains. Approximate distance of transmission line from photo location is 1.0 mile.



Simulated Condition – View of alternative route N1, N2, N3, N4, N5, and N6 for the 345kV transmission line in the Fishlake National Forest

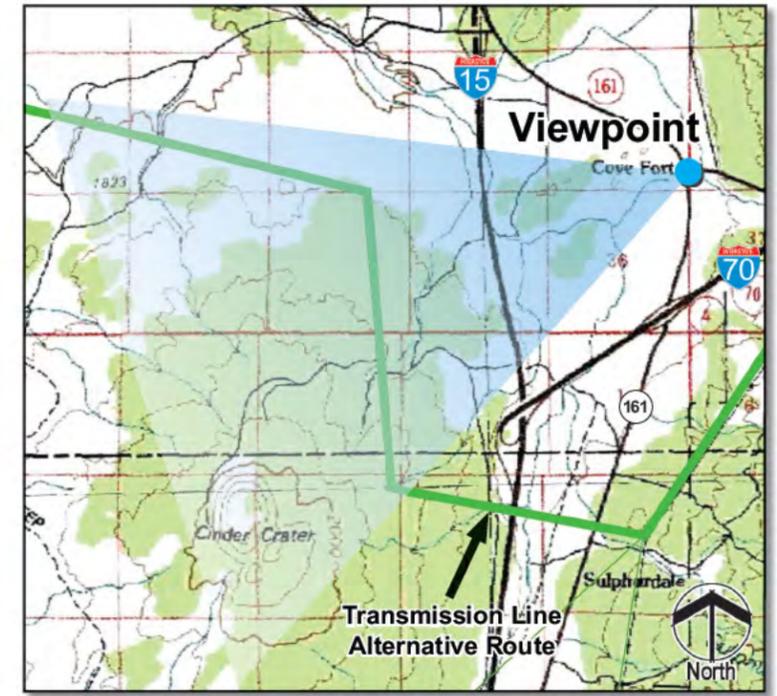


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

Photo Date: 7 22 10 Time: 2:34 p.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case-by-case basis.



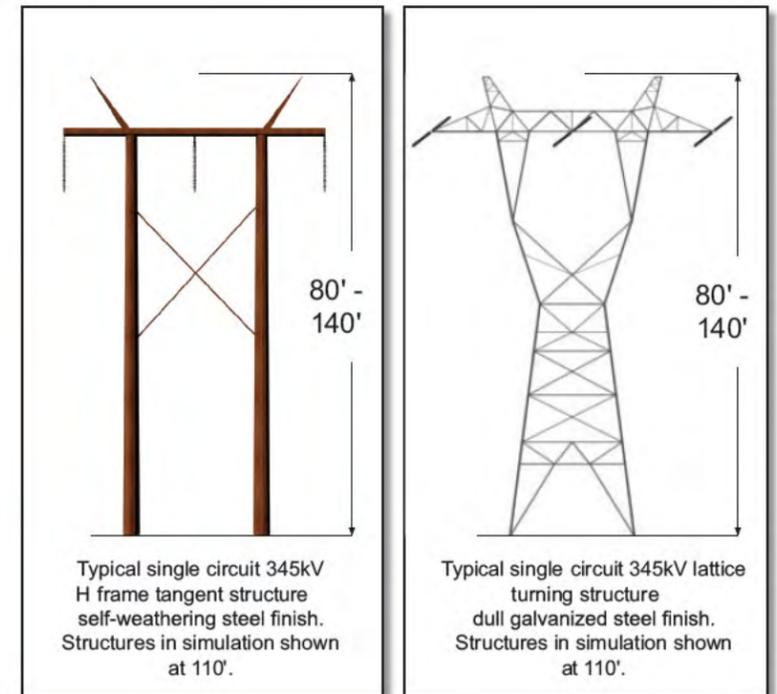
Existing Condition – View looking southwest from Cove Fort Historic Site



View Location: Cove Fort Historic Site looking southwest towards ancient cinder cone. Approximate distance of transmission line from photo location is 2.5 miles.



Simulated Condition – View of alternative route N1, N2, and N3 for the 345kV transmission line

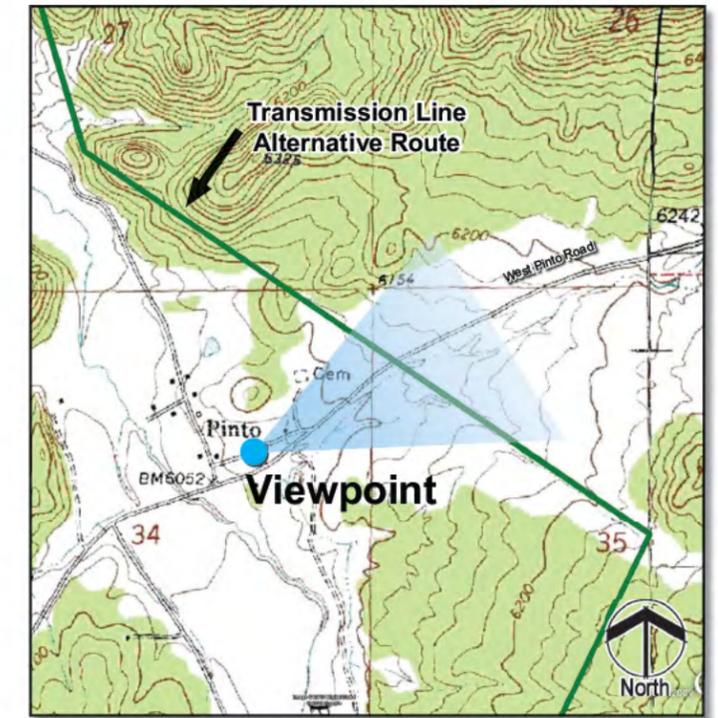


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

Photo Date: 7 22 10 Time: 3:59 p.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case-by-case basis.



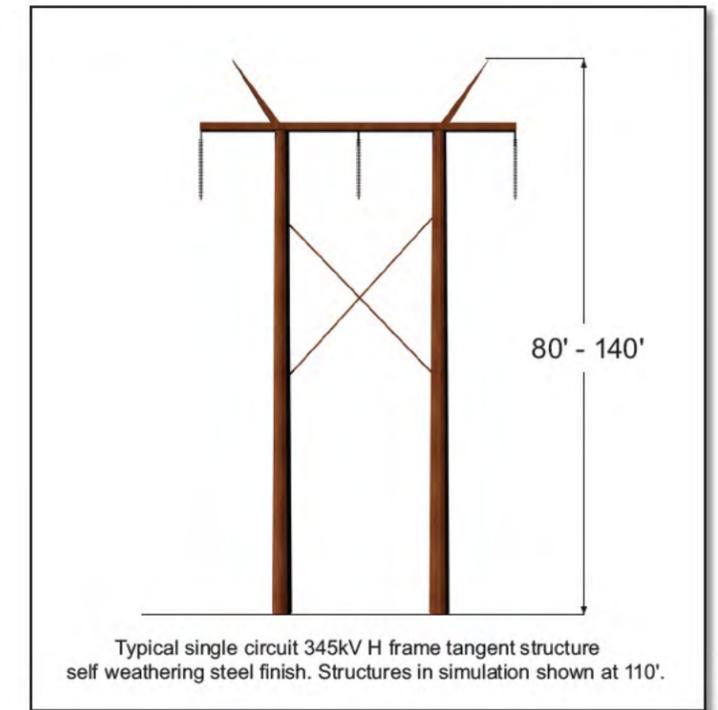
Existing Condition – View looking northeast from the community of Pinto along West Pinto Road



View Location: Pinto Community looking northeast along West Pinto Road. Approximate distance of transmission line from photo location is 0.3 mile.



Simulated Condition – View of alternative route S1 and S5 for the 345kV transmission line crossing West Pinto Road

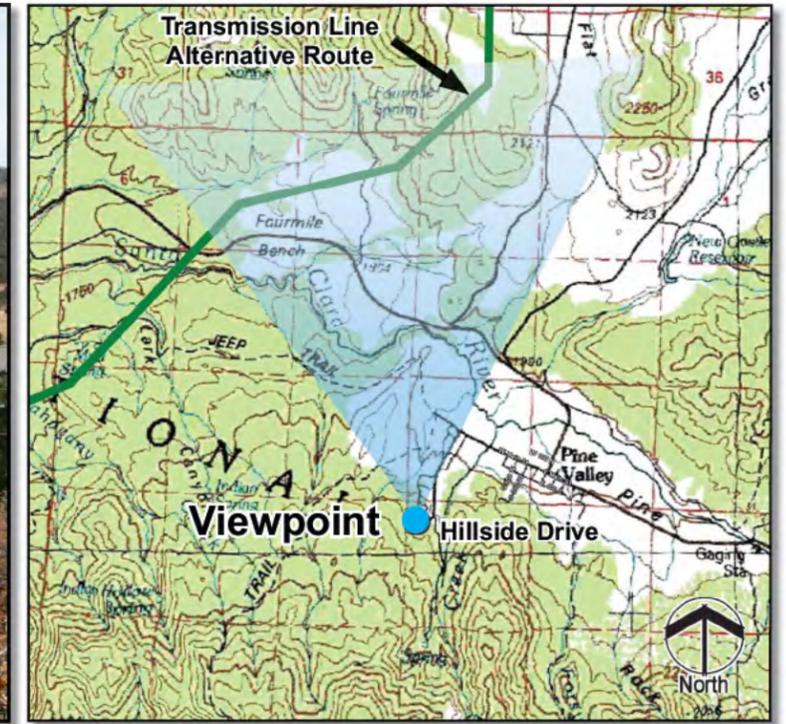


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

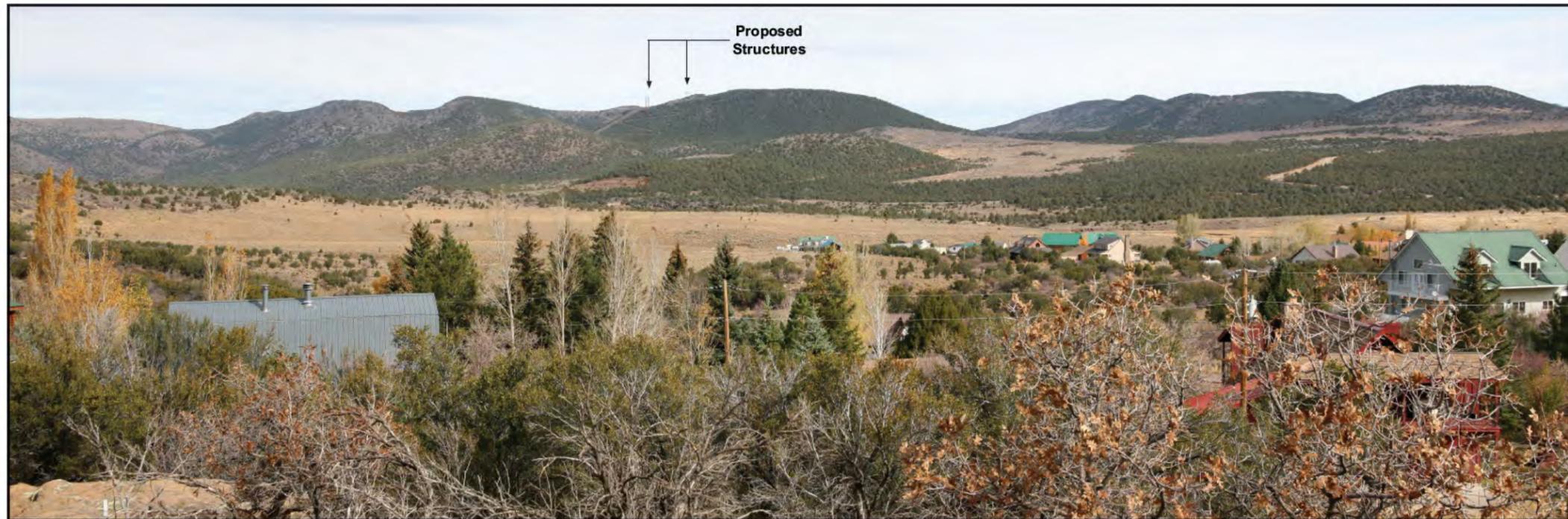
Photo Date: 10 23 09 Time: 9:16 a.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case by case basis.



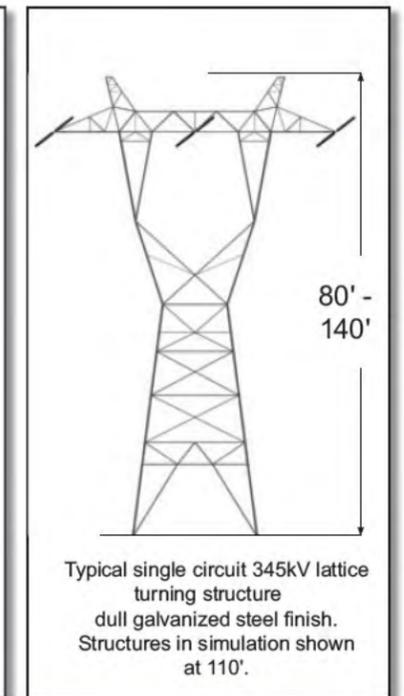
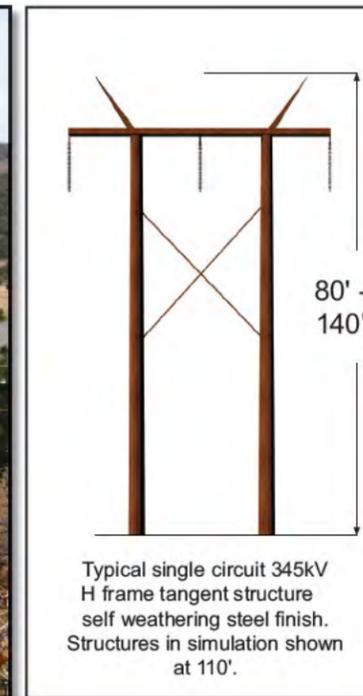
Existing Condition – View looking north from Hillside Drive in Pine Valley community toward the Dixie National Forest



View Location: Pine Valley residential area looking north toward the Dixie National Forest. Approximate distance of transmission line from photo location is 2.7 miles.

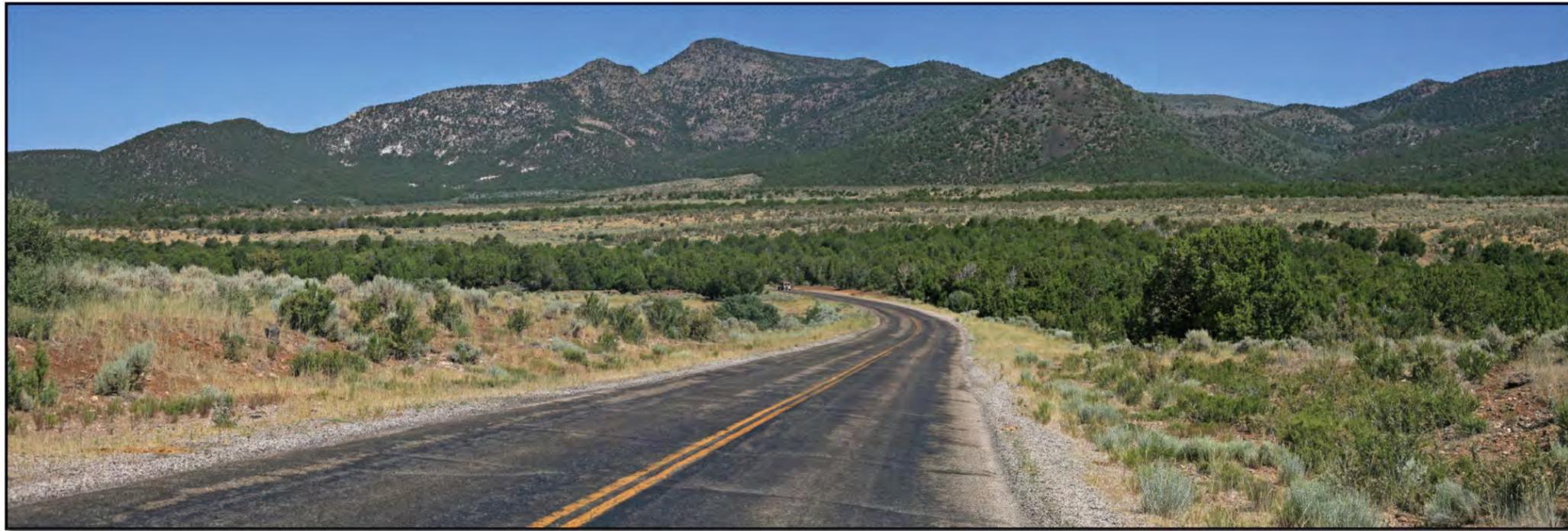


Simulated Condition – View of alternative route S1 and S5 for the 345kV transmission line in the Dixie National Forest

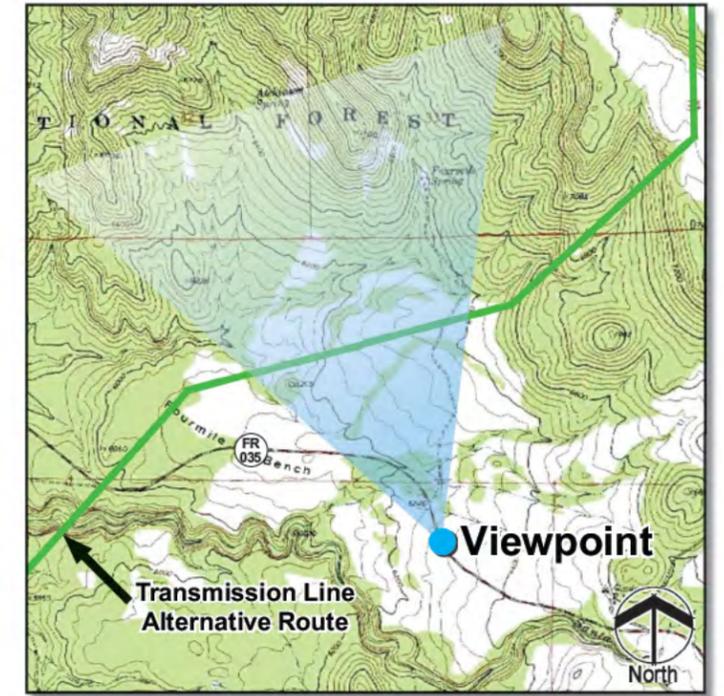


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

Photo Date: 10 23 09 Time: 11:19 a.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case by case basis.



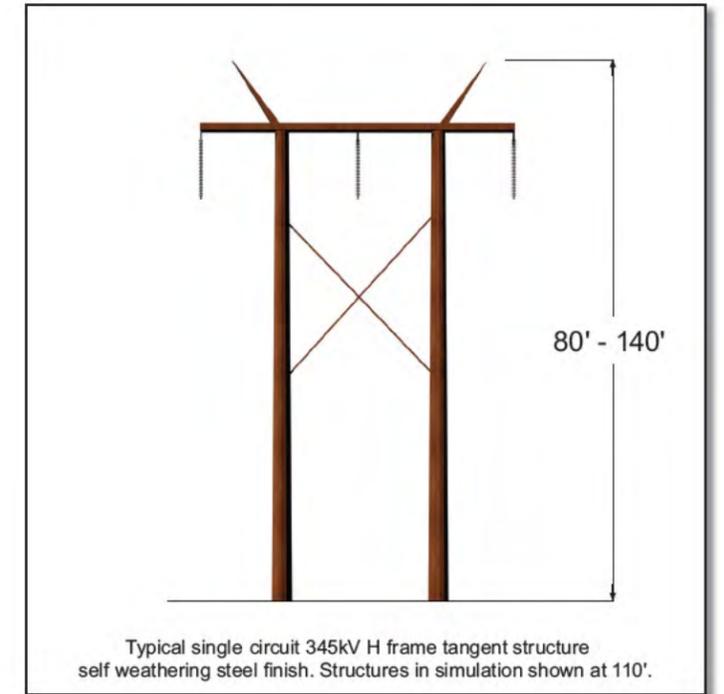
Existing Condition – View looking north-northwest from westbound Forest Road 035



View Location: Looking north-northwest from Forest Road 035 west of Pine Valley toward Atchinson Mountain. Approximate distance of transmission line from photo location is 0.8 mile.

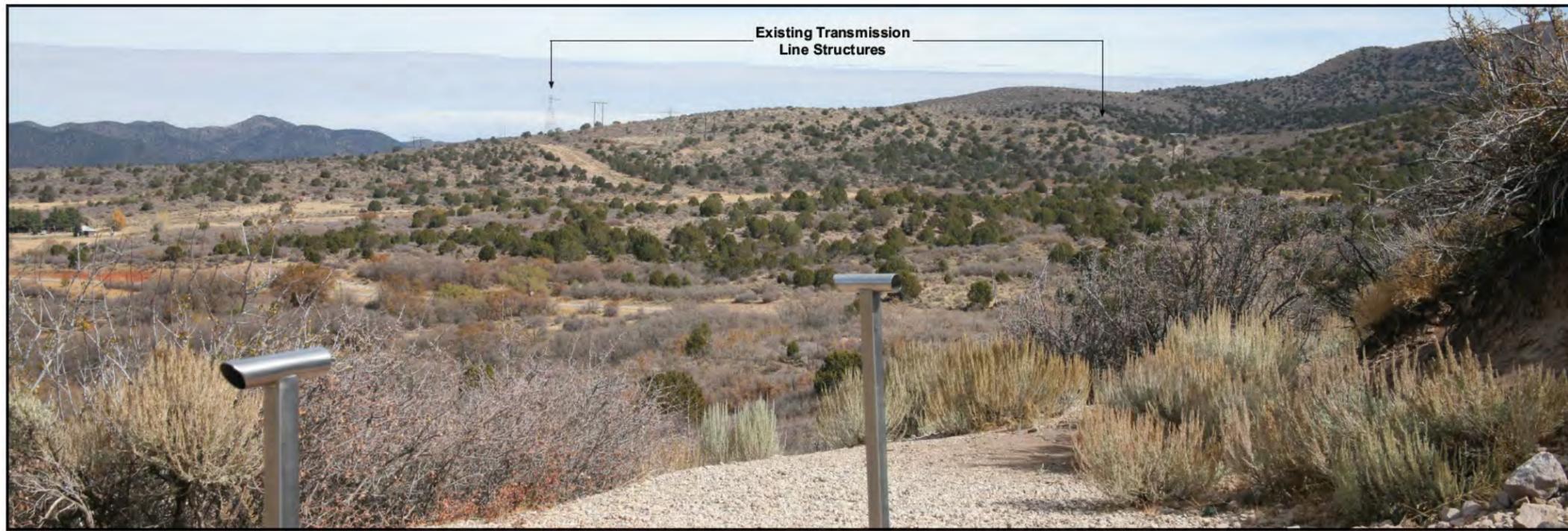


Simulated Condition – View of alternative route S1 and S5 for the 345kV transmission line in the Dixie National Forest

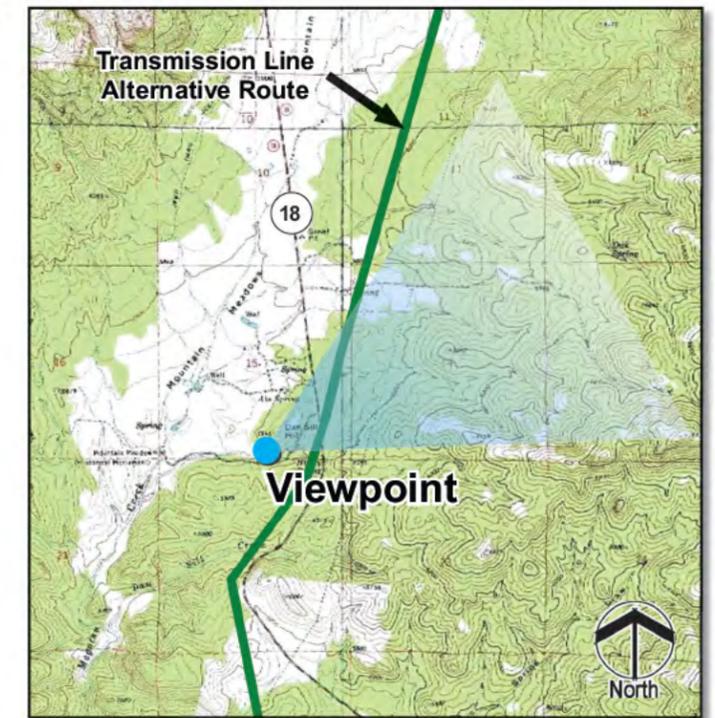


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

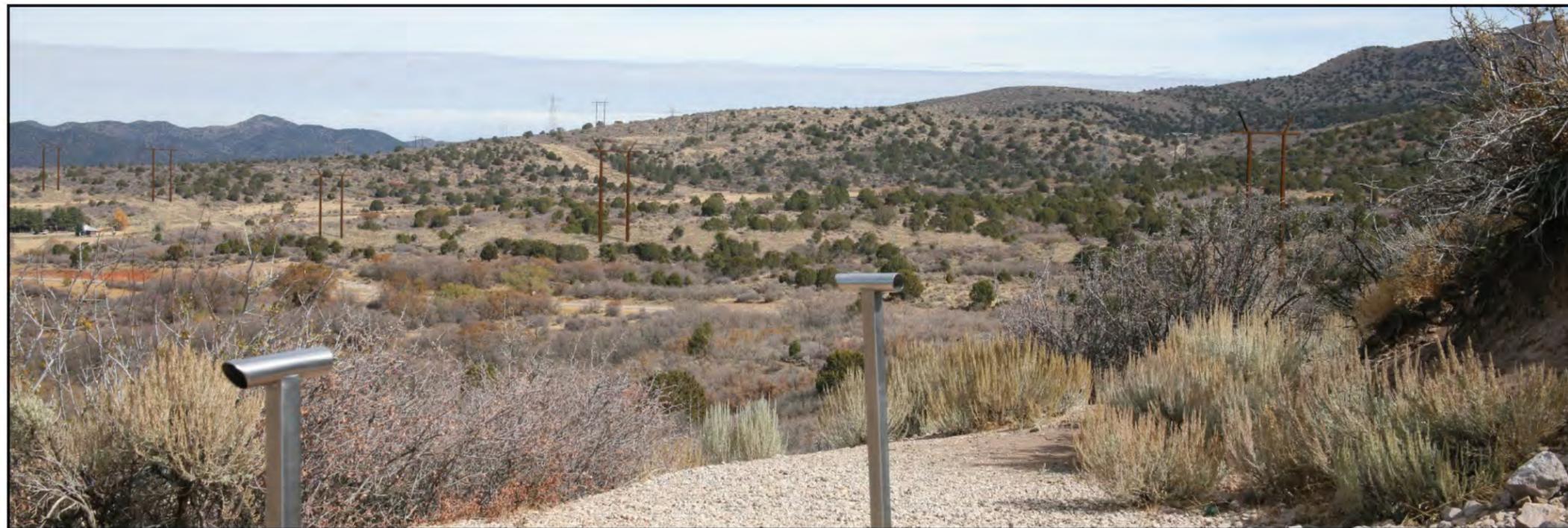
Photo Date: 7 23 10 Time: 11:44 a.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case by case basis.



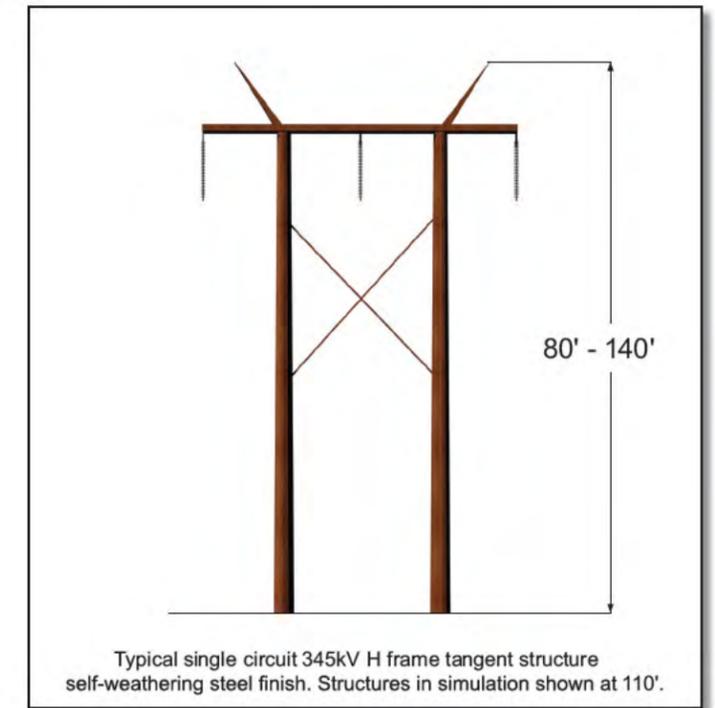
Existing Condition – View looking northeast from the overlook and memorial for the Mountain Meadows Historic Site, toward the existing Intermountain Power Plant transmission line and State Route 18



View Location: Mountain Meadows Historic Site overlook and memorial looking northeast. Approximate distance of transmission line from photo location is 0.4 mile.

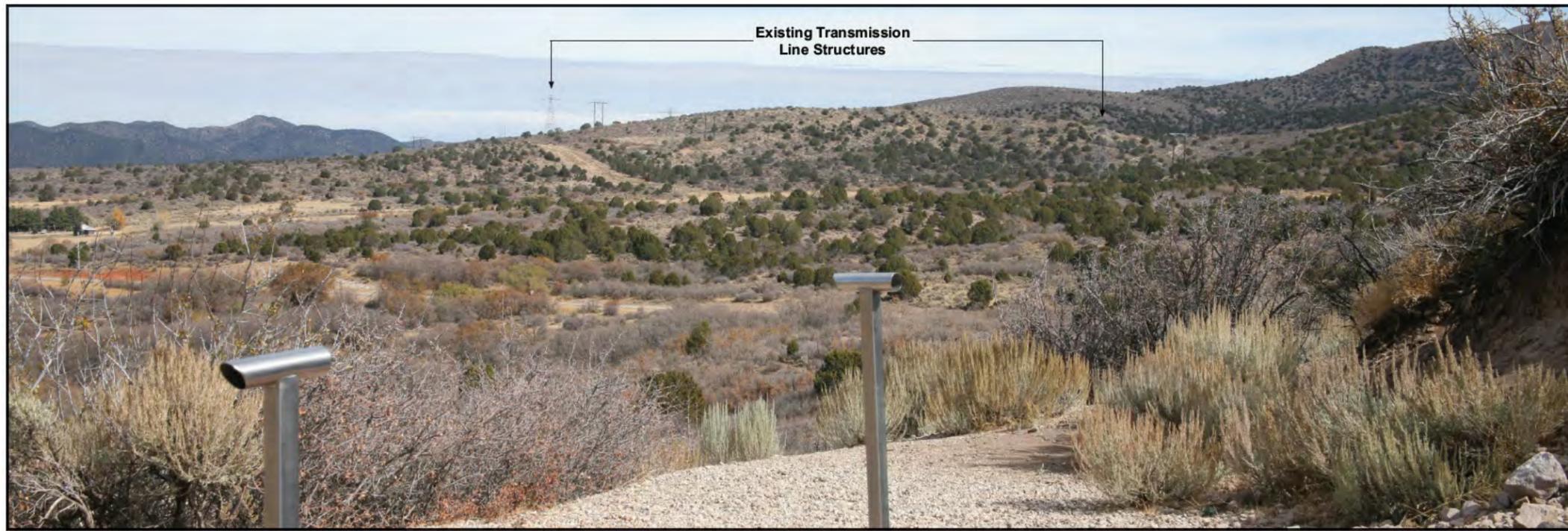


Simulated Condition – View of alternative route S2 for the 345kV transmission line west of the existing Intermountain Power Plant transmission line

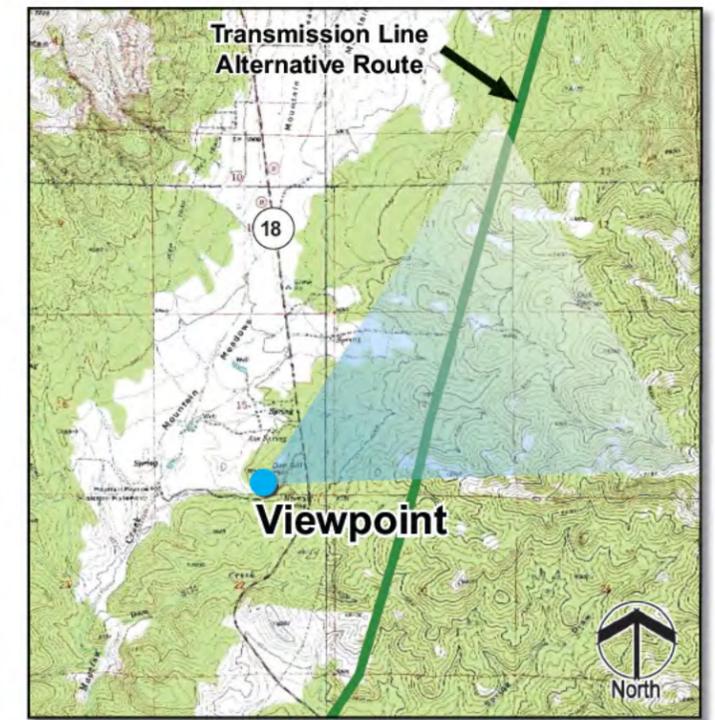


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

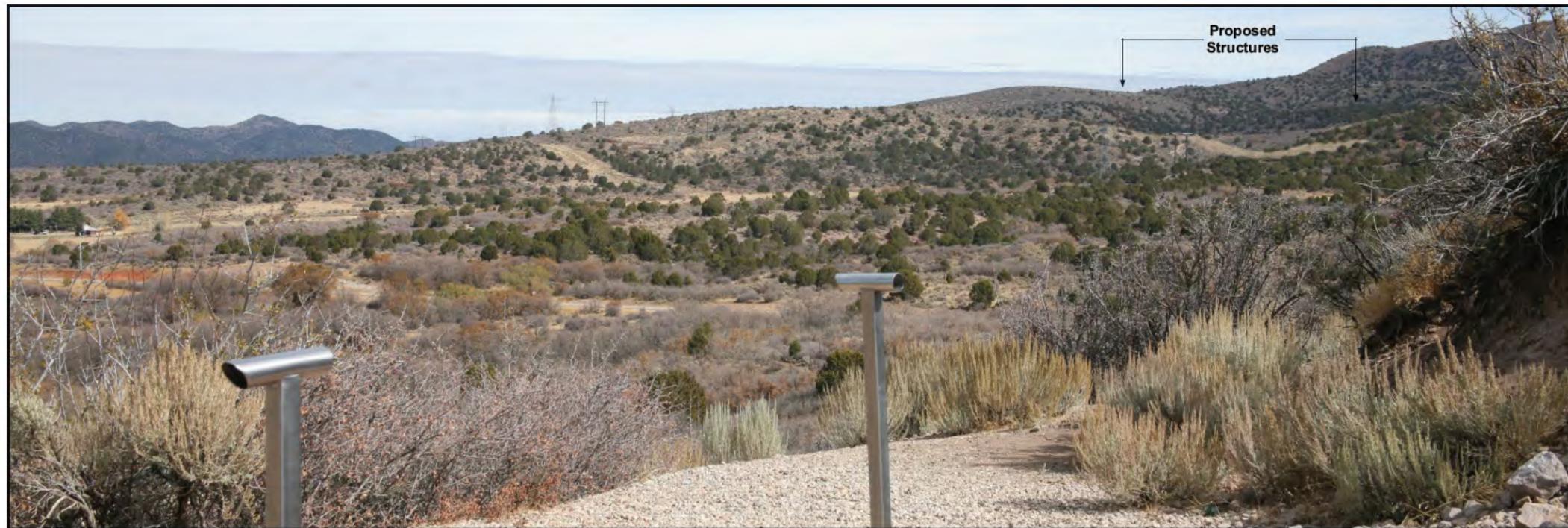
Photo Date: 10 23 09 Time: 12:45 p.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case-by-case basis.



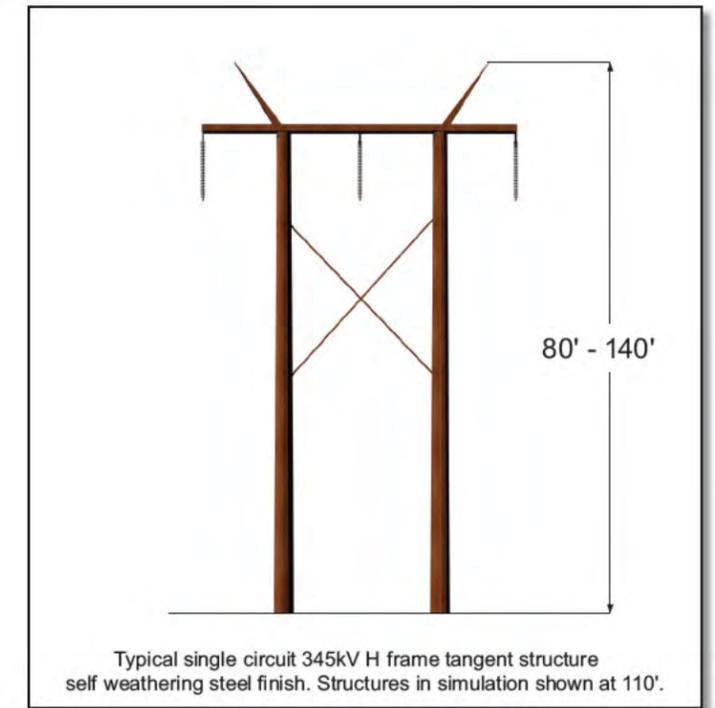
Existing Condition – View looking northeast from the overlook and memorial for the Mountain Meadows Historic Site, toward the existing Intermountain Power Plant transmission line and State Route 18



View Location: Mountain Meadows Historic Site overlook and memorial looking northeast. Approximate distance of transmission line from photo location is 1.8 miles.



Simulated Condition – View of alternative route S4 for the 345kV transmission line east of the existing Intermountain Power Plant transmission line

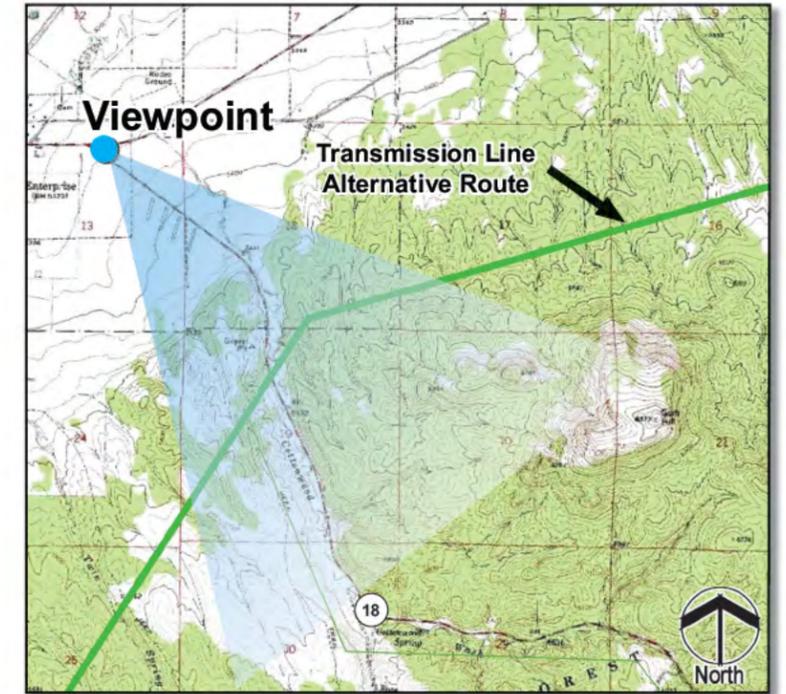


Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

Photo Date: 10 23 09 Time: 12:45 p.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case by case basis.



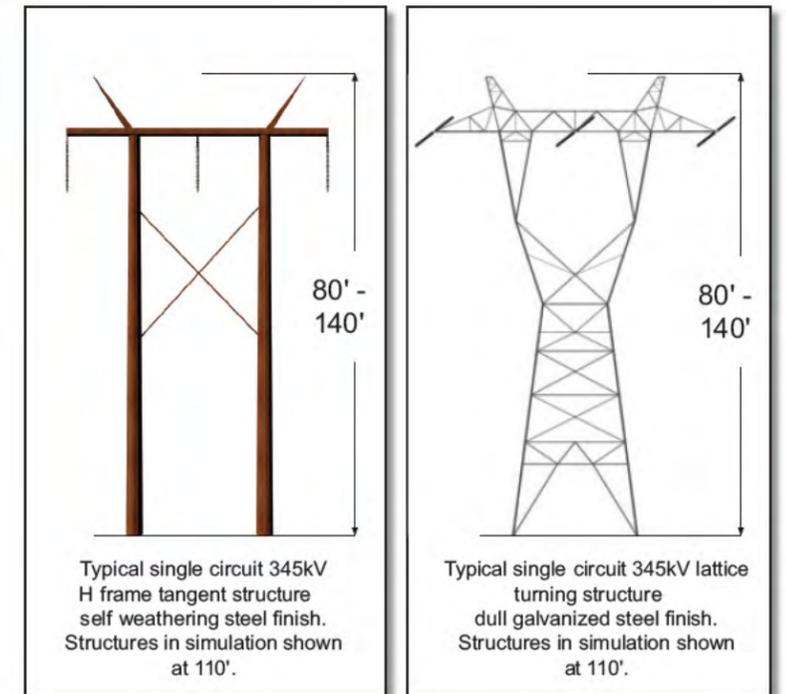
Existing Condition – View looking southeast from State Route 18 adjacent to Heritage Park in Enterprise, Utah



View Location: State Route 18 in Enterprise, Utah looking southeast. Approximate distance of transmission line from photo location is 1.25 miles.



Simulated Condition – View of alternative route S3 and S6 for the 345kV transmission line in the Dixie National Forest



Sigurd to Red Butte No. 2 - 345kV Transmission Project Draft EIS

Photo Date: 7 23 10 Time: 12:20 p.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, conductor sag, vegetation clearing, and access roads will vary on a case by case basis.

Date: July 6, 2010
District: Color District
Resource Area: BLM – Richfield Field Office
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project Key Observation Point : 1 – Richfield VRM Class: III	Location Township 23S Range 3W Section 26	Location Sketch
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Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Flat (foreground) Steep (background)	Scattered (foreground) Scattered (background)	Short, vertical
Line	Horizontal (foreground) Undulating (background)	Irregular (foreground) Irregular (background)	Geometric, vertical
Color	Red, tan (foreground) Red, tan (background)	Browns, tans, greens (foreground) Greens (background)	Brown
Texture	Fine (foreground) Moderate (background)	Fine to coarse (foreground) Moderate (background)	Moderate, uniform

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Flat (foreground) Steep (background)	Scattered (foreground) Scattered (background)	Tall, vertical
Line	Horizontal (foreground) Undulating (background)	Irregular (foreground) Irregular (background)	Geometric, vertical
Color	Red, tan (foreground) Red, tan (background)	Browns, tans, greens (foreground) Greens and tans (background)	Brown
Texture	Fine (foreground) Moderate (background)	Fine to coarse (foreground) Moderate (background)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form			X				X				X	
	Line			X				X				X	
	Color			X		X						X	
	Texture			X				X				X	

Does project design meet visual resource management objectives?
Yes

Additional mitigating measures recommended?

- Sensitive resource avoidance
- Minimize ground disturbance

Evaluators Names:

Marc Schwartz, Kevin Rauhe

Date: July 6, 2010
District: Color District
Resource Area: BLM – Richfield Field Office
Activity (program): Electric Utility Facilities



Northwest View from the west side of Richfield

Weak/moderate contrast would result from the construction and operation of the proposed Project within a landscape setting designated as VRM Class III. The proposed structures would introduce a stronger vertical element in the landscape as compared to the existing transmission line. The construction of the Project also would result in minimal vegetation clearing and landform modification based on the use of existing access and sparse vegetation. Due to the occurrence of moderate topography, portions of the proposed Project will be backdropped.

Date: July 6, 2010
Forest: Fishlake National Forest
Ranger District: Beaver Ranger District
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project Key Observation Point : 2 – Fremont Indian State Park SIO Level: Moderate	Location Township 26S Range 4W Section 34	Location Sketch 
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Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Rolling to flat (foreground) Rugged (background)	Dense, regular (foreground) Dense, irregular (background)	Short, vertical
Line	Undulating (foreground) Bold (background)	Horizontal (foreground) Horizontal (background)	Geometric, vertical
Color	Tans (foreground) Tans and white (background)	Tans (foreground) Tans and greens (background)	Brown
Texture	Fine (foreground) Moderate (background)	Fine (foreground) Moderate (background)	Moderate, uniform

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Rolling to flat (foreground) Rugged (background)	Dense, regular (foreground) Geometric, irregular (background)	Tall, vertical
Line	Undulating (foreground) Straight to bold (background)	Horizontal (foreground) Horizontal (background)	Geometric, vertical
Color	Tans (foreground) Tans and white (background)	Tans (foreground) Tans and greens (background)	Brown
Texture	Fine (foreground) Fine to moderate (background)	Fine (foreground) Fine and moderate (background)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/ Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form		X			X					X		
	Line	X					X					X	
	Color		X				X					X	
	Texture		X			X						X	

Does project design meet visual resource management objectives?
N/A¹

Additional mitigating measures recommended?
Minimize ground disturbance
Minimize tree clearing

Evaluators Names:
Marc Schwartz, Kevin Rauhe

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Fishlake National Forest
Ranger District: Beaver Ranger District
Activity (program): Electric Utility Facilities



South View from trail north of the Fremont Indian State Park Visitor Center and Museum

Moderate contrast would result from the construction and operation of the proposed Project within a landscape setting designated as a moderate SIO (Scenic Integrity Objective). The proposed structures would introduce a stronger vertical element in the landscape as compared to the existing transmission line. Furthermore, the construction of the Project would require vegetation clearing and access roads on steep terrain thus increasing line and color contrasts. Through selective clearing of vegetation and constructing access roads parallel to the contours, landscape contrast would be reduced. The majority of the Project will be backdropped due to the steep terrain, which also would reduce contrast.

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: September 2, 2010
Forest: Fishlake National Forest
Ranger District: Fillmore Ranger District
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project	Location Township 26S Range 4 ½W Section 9	Location Sketch 
SIO Level: Moderate		

Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Rolling to steep (foreground) Rugged (background)	Rounded, scattered (foreground) Rounded, dense (background)	Short, vertical
Line	Undulating (foreground) Bold (background)	Irregular (foreground) Regular (background)	Geometric, vertical
Color	Tans, whites, reds (foreground) Tans (background)	Tans and greens (foreground) Greens (background)	Brown
Texture	Moderate (foreground) Rough (background)	Fine to moderate (foreground) Moderate (background)	Moderate, uniform

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Rolling to steep (foreground) Rugged (background)	Rounded, scattered (foreground) Rounded, dense (background)	Tall, vertical
Line	Undulating to straight (foreground) Bold (background)	Regular (foreground) Regular (background)	Geometric, vertical
Color	Tans, whites, reds (foreground) Tans (background)	Tans and greens (foreground) Greens (background)	Grey, brown
Texture	Moderate (foreground) Rough (background)	Fine to moderate (foreground) Moderate (background)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form			X			X			X			
	Line		X			X				X			
	Color			X			X				X		
	Texture			X			X				X		

Does project design meet visual resource management objectives?
N/A¹

Additional mitigating measures recommended?
Minimize ground disturbance
Minimize tree clearing

Evaluators Names:
Marc Schwartz, Kevin Rauhe

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: September 2, 2010
Forest: Fishlake National Forest
Ranger District: Fillmore Ranger District
Activity (program): Electric Utility Facilities



Southwest View from Interstate 70

Weak/moderate to moderate contrast would result from the construction and operation of the proposed Project within a landscape setting designated as a moderate SIO (Scenic Integrity Objective). The proposed structures would introduce a stronger vertical element in the landscape as compared to the existing transmission line. The construction of the Project also would result in moderate vegetation clearing and minor landform modification based on construction of access roads on moderately steep topography. Through selective clearing of vegetation and constructing access roads parallel to the contours, landscape contrast would be reduced. The mountains in the background would backdrop portions of the Project, which also would reduce contrast.

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Fishlake National Forest
Ranger District: Beaver Ranger District
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project Key Observation Point : 4 – I-70 SIO Level: Moderate	Location Township 25S Range 5W Section 33	Location Sketch
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Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Rolling	Rounded, narrow	Short, vertical
Line	Undulating, diagonal	Regular, straight	Geometric, vertical
Color	Tan, brown	Tans, greens	Brown
Texture	Moderate	Moderate	Moderate, uniform

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Rolling	Rounded, wide	Tall, vertical
Line	Undulating, diagonal	Regular, straight	Geometric, vertical
Color	Tan, brown	Tans, greens	Brown
Texture	Moderate	Moderate	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form			X			X				X		
	Line			X				X				X	
	Color			X				X				X	
	Texture			X				X				X	

Does project design meet visual resource management objectives?
 N/A¹

Additional mitigating measures recommended?
 Minimize Ground Disturbance
 Minimize Tree Clearing

Evaluators Names:
 Marc Schwartz, Kevin Rauhe

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Fishlake National Forest
Ranger District: Beaver Ranger District
Activity (program): Electric Utility Facilities



Northwest View from I-15 south of Beaver

Weak/moderate contrast would result from the construction and operation of the proposed Project within a landscape setting designated as a moderate SIO (Scenic Integrity Objective). The proposed structures would introduce a stronger vertical element in the landscape as compared to the existing transmission line. The construction of the Project also would result in minimal vegetation clearing and landform modification based on the use of existing access and paralleling an existing utility corridor. Due to the occurrence of moderate topography, portions of the proposed Project would be backdropped. Contrast would therefore be reduced in such locations.

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
District: Color Country
Resource Area: BLM – Cedar City Field Office
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project Key Observation Point : 5 – Cove Fort VRM Class: IV	Location Township 25S Range 7W Section 25	Location Sketch
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Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Flat (foreground) Rolling (background)	Low, uniform (foreground) Smooth, regular (background)	N/A
Line	Horizontal (foreground) Undulating (background)	Horizontal (foreground) Rounded (background)	N/A
Color	Tans (foreground) Tans (background)	Tans and greens (foreground) Greens and tans (background)	N/A
Texture	Smooth (foreground) Moderate (background)	Fine to moderate (foreground) Moderate (background)	N/A

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Flat (foreground) Rolling (background)	Low, uniform (foreground) Smooth, regular (background)	Tall, vertical
Line	Horizontal (foreground) Straight, undulating (background)	Horizontal (foreground) Straight to rounded (background)	Geometric, vertical
Color	Tans (foreground) Tans (background)	Tans and greens (foreground) Tans and greens (background)	Brown
Texture	Smooth (foreground) Moderate (background)	Fine to moderate (foreground) Fine to moderate (background)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features													
		Landform/ Water Body				Vegetation				Structures					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
Elements	Form			X				X							
	Line		X				X				X				
	Color			X			X						X		
	Texture			X				X					X		

Does project design meet visual resource management objectives?
Yes

Additional mitigating measures recommended?

- Sensitive resource avoidance
- Minimize tree clearing

Evaluators Names:

Marc Schwartz, Kevin Rauhe

Date: July 6, 2010
District: Color Country
Resource Area: BLM – Cedar City Field Office
Activity (program): Electric Utility Facilities



Southwest View from Cove Fort

Weak/moderate to moderate contrast would result from the construction and operation of the proposed Project within a landscape setting designated as VRM Class IV. The proposed structures would introduce a new vertical element in the landscape but since the Project is located over 2 miles from this viewpoint, structure contrast would be weak/moderate. The construction of the Project also would result in moderate vegetation clearing and limited landform modification based on the use of existing access on gently sloping topography. Through selective clearing and overland construction techniques where possible, project contrast would be reduced. The foothills in the background would backdrop the Project, which also would reduce contrast.

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project Key Observation Point : 6 – Pinto SIO Level: High	Location Township 37S Range 15W Section 34	Location Sketch 
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Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Flat (foreground) Rolling to steep (background)	Low, uniform (foreground) Rounded to indistinct (background)	N/A
Line	Horizontal (foreground) Diagonal, undulating (background)	Horizontal (foreground) Regular (background)	N/A
Color	Tans (foreground) Tans (background)	Tans and greens (foreground) Greens (background)	N/A
Texture	Smooth (foreground) Moderate (background)	Fine to moderate (foreground) Moderate (background)	N/A

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Flat (foreground) Rolling to steep (background)	Low, uniform (foreground) Rounded to indistinct (background)	Tall, vertical
Line	Horizontal (foreground) Diagonal, undulating (background)	Horizontal (foreground) Regular (background)	Geometric, vertical
Color	Tans (foreground) Tans (background)	Tans and greens (foreground) Greens (background)	Brown
Texture	Smooth (foreground) Moderate (background)	Fine to moderate (foreground) Moderate (background)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features												
		Landform/ Water Body				Vegetation				Structures				
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
Elements	Form			X				X		X				
	Line			X				X		X				
	Color			X				X			X			
	Texture			X				X			X			

Does project design meet visual resource management objectives?
N/A¹

Additional mitigating measures recommended?
Minimize ground disturbance

Evaluators Names:
Marc Schwartz, Kevin Rauhe

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities



Northeast View from the east side of Pinto

Moderate contrast would result from the construction and operation of the proposed Project within a landscape setting designated as a moderate SIO (Scenic Integrity Objective). The proposed structures would introduce a new vertical element in the landscape. However, the construction of the Project would result in minimal vegetation clearing and landform modification based on the use of existing access and sparse vegetation. Due to the occurrence of moderate topography, portions of the proposed Project would be backdropped from this viewpoint, which would reduce contrast.

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project Key Observation Point : 7 – Pine Valley SIO Level: High	Location Township 39S Range 15W Section 15	Location Sketch
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Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Rolling to flat (foreground) Rugged (background)	Dense, regular (foreground) Dense, irregular (background)	N/A
Line	Undulating (foreground) Bold (background)	Vertical to horizontal (foreground) Rounded (background)	N/A
Color	Tans (foreground) Tans and greys (background)	Tans (foreground) Tans and greens (background)	N/A
Texture	Fine (foreground) Moderate (background)	Fine (foreground) Moderate (background)	N/A

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Rolling to flat (foreground) Rugged (background)	Dense, regular (foreground) Geometric, irregular (background)	Tall vertical
Line	Undulating (foreground) Straight to bold (background)	Vertical to horizontal (foreground) Straight to rounded (background)	Geometric, vertical
Color	Tans (foreground) Tans and greys (background)	Tans (foreground) Tans and greens (background)	Brown
Texture	Fine (foreground) Fine to moderate (background)	Fine (foreground) Fine to moderate (background)	Fine, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/ Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form			X				X				X	
	Line		X				X				X		
	Color		X				X					X	
	Texture			X				X				X	

Does project design meet visual resource management objectives?
N/A¹

Additional mitigating measures recommended?
Minimize ground disturbance
Minimize tree clearing

Evaluators Names:
Marc Schwartz, Kevin Rauhe

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities

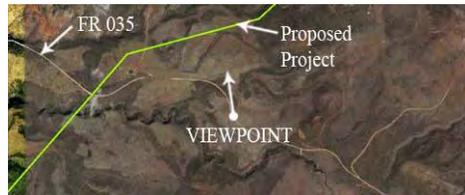


North View from a residential area in Pine Valley

Moderate contrast would result from the construction and operation of the proposed Project within a landscape setting designated as a high SIO (Scenic Integrity Objective). The proposed transmission line structures would introduce a new vertical element in the landscape. Also, the construction of the Project would require vegetation clearing and access roads to be built on steep terrain. However, since the Project is located over 2 miles away from this viewpoint, structure contrast would be reduced. Through mitigation measures including selective clearing of vegetation and constructing access roads parallel to the contours, landscape contrast also would be reduced. The majority of the Project would be backdropped due to the steep terrain, which would further reduce contrast.

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: September 2, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project	Location Township 39S Range 15W Section 9	Location Sketch 
Key Observation Point : 8 – Forest Road 035 (FR 035)		
SIO Level: High		

Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Rolling (foreground) Rugged (background)	Rounded, scattered (foreground) Rounded, dense (background)	N/A
Line	Undulating (foreground) Bold (background)	Regular (foreground) Irregular (background)	N/A
Color	Tans (foreground) Tans and white (background)	Tans and greens (foreground) Tans and greens (background)	N/A
Texture	Moderate (foreground) Rough (background)	Moderate (foreground) Moderate (background)	N/A

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Rolling (foreground) Rugged (background)	Rounded, scattered (foreground) Rounded, dense (background)	Tall, vertical
Line	Undulating to straight (foreground) Bold (background)	Regular (foreground) Irregular (background)	Geometric, vertical
Color	Tans (foreground) Tans and white (background)	Tans and greens (foreground) Tans and greens (background)	Brown
Texture	Fine to moderate (foreground) Rough (background)	Fine to moderate (foreground) Moderate (background)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form			X			X		X				
	Line		X				X		X				
	Color			X			X			X			
	Texture		X			X				X			

Does project design meet visual resource management objectives?
N/A¹

Additional mitigating measures recommended?
Sensitive resource avoidance
Minimize tree clearing

Evaluators Names:
Marc Schwartz, Kevin Rauhe

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: September 2, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities



Northwest View from Forest Road 035

Moderate to moderate/strong contrast would result from the construction and operation of the proposed Project within a landscape setting designated as a high SIO (Scenic Integrity Objective). The proposed structures would introduce a new vertical element into a primary natural landscape. The construction of the Project would also result in moderate vegetation clearing and minor landform modification based on the use of existing access. Through selective clearing and the use of overland construction techniques where possible, project contrast would be reduced. The mountains in the background would backdrop the Project, which also would reduce contrast.

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project	Location Township 38S Range 16W Section 15	Location Sketch 
SIO Class: High		

Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Rolling (foreground) Moderate to steep (background)	Scattered (foreground) Scattered (background)	Tall, vertical
Line	Undulating (foreground) Undulating, diagonal (background)	Irregular (foreground) Irregular (background)	Geometric, vertical
Color	Tans (foreground) Tans (background)	Greens and tans (foreground) Greens and tans (background)	Grey, brown
Texture	Smooth (foreground) Moderate (background)	Moderate (foreground) Moderate (background)	Moderate, uniform

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Rolling (foreground) Moderate to steep (background)	Scattered (foreground) Scattered (background)	Tall, vertical
Line	Straight to undulating (foreground) Undulating, diagonal (background)	Regular (foreground) Irregular (background)	Geometric, vertical
Color	Tans (foreground) Tans (background)	Tans (foreground) Greens and tans (background)	Brown, grey
Texture	Smooth (foreground) Moderate (background)	Moderate (foreground) Moderate (background)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form			X			X					X	
	Line		X			X					X		
	Color			X		X				X			
	Texture			X			X				X		

Does project design meet visual resource management objectives?
N/A¹

Additional mitigating measures recommended?

- Minimize ground disturbance
- Minimize tree clearing
- Match transmission line spans

Evaluators Names:

Marc Schwartz, Kevin Rauhe

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities



Northeast View from Mountain Meadows Massacre Site Overlook

Moderate contrast would result from the construction and operation of the proposed Project within a landscape setting designated as high SIO (Scenic Integrity Objective). The proposed structures, due to their proximity to the viewer, introduce a stronger vertical element in the landscape as compared to the existing transmission lines. The construction of the Project also would result in some vegetation clearing and construction of access roads. By using overland construction techniques and minimizing vegetation clearing, landscape contrast would be reduced. Since the majority of the Project would be backdropped by the foothills, this also would reduce contrast.

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project Key Observation Point : 10 – Mountain Meadows Massacre Site (Alternative S4) SIO Class: High	Location Township 38S Range 16W Section 15	Location Sketch 
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Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Rolling (foreground) Moderate to steep (background)	Scattered (foreground) Scattered (background)	Tall, vertical
Line	Undulating (foreground) Undulating, diagonal (background)	Irregular (foreground) Irregular (background)	Geometric, vertical
Color	Tans (foreground) Tans (background)	Greens and tans (foreground) Greens and tans (background)	Grey, brown
Texture	Smooth (foreground) Moderate (background)	Moderate (foreground) Moderate (background)	Moderate, uniform

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Rolling (foreground) Moderate to steep (background)	Scattered (foreground) Scattered (background)	Tall, vertical
Line	Straight to undulating (foreground) Undulating to straight (background)	Irregular (foreground) Irregular (background)	Geometric, vertical
Color	Tans (foreground) Tans (background)	Greens and tans (foreground) Greens and tans (background)	Grey, brown
Texture	Smooth (foreground) Moderate (background)	Moderate (foreground) Moderate (background)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/ Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form			X				X				X	
	Line			X				X				X	
	Color			X				X				X	
	Texture			X				X				X	

Does project design meet visual resource management objectives?
N/A¹

Additional mitigating measures recommended?

- Minimize ground disturbance
- Minimize tree clearing
- Match transmission line spans

Evaluators Names:

Marc Schwartz, Kevin Rauhe

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities



Northeast View from Mountain Meadows Massacre Site Overlook

Weak contrast would result from the construction and operation of the proposed Project within a landscape setting designated as high SIO (Scenic Integrity Objective). Since the proposed structures would be further away from this viewpoint than the existing transmission lines, structure contrast also would be weak. The construction of the Project would result in some vegetation clearing and construction of access roads. By using overland construction techniques and minimizing vegetation clearing, landscape contrast would be reduced. Since the majority of the Project would be backdropped by the foothills, this would further reduce structure contrast.

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project Key Observation Point : 11 – Enterprise and Utah State Route 18 (SR 18) SIO Level: High	Location Township 37S Range 17W Section 13	Location Sketch
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Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Flat (foreground) Rolling to rugged (background)	Dense, regular (foreground) Dense, irregular (background)	N/A
Line	Horizontal (foreground) Bold (background)	Horizontal (foreground) Rounded to horizontal (background)	N/A
Color	Tans (foreground) Tans and greens (background)	Tans (foreground) Tans and greens (background)	N/A
Texture	Fine (foreground) Rough (background)	Fine (foreground) Moderate (background)	N/A

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Flat (foreground) Rolling to rugged (background)	Dense, regular (foreground) Geometric, irregular (background)	Tall, vertical
Line	Horizontal (foreground) Straight to bold (background)	Horizontal (foreground) Straight and horizontal (background)	Geometric, vertical
Color	Tans (foreground) Tans and green (background)	Tans (foreground) Tans and greens (background)	Brown
Texture	Fine (foreground) Fine to rough (background)	Fine (foreground) Fine and moderate (background)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/ Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form			X			X				X		
	Line		X				X				X		
	Color			X				X				X	
	Texture		X					X				X	

Does project design meet visual resource management objectives?
N/A¹

Additional mitigating measures recommended?
Minimize ground disturbance
Minimize tree clearing

Evaluators Names:
Marc Schwartz, Kevin Rauhe

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
Forest: Dixie National Forest
Ranger District: Pine Valley Ranger District
Activity (program): Electric Utility Facilities



Southeast View from SR 18 at the southeast edge of Enterprise

Weak/moderate contrast would result from the construction and operation of the proposed Project within a landscape setting designated as a high SIO (Scenic Integrity Objective). The proposed structures would introduce a new vertical element in the landscape. However, since the Project is located over one mile away from this viewpoint, structure contrast would be reduced. The construction of the Project would include vegetation clearing and landform modification based on the construction of new access roads on steep terrain. Through selective vegetation clearing and building access roads parallel with the contours, landscape contrast would be reduced. Due to the steep terrain in the middleground and background, portions of the Project would be backdropped, which would further reduce contrast.

¹ Compliance with USFS SIOs was determined based on effects to scenic integrity (see page E-23)

Date: July 6, 2010
District: Color Country
Resource Area: BLM – Richfield Field Office
Activity (program): Electric Utility Facilities

Project Name: Sigurd to Red Butte No. 2 345kV Transmission Project <hr/> Key Observation Point : 12 I-70 <hr/> VRM Class: III	Location Township 23S Range 2W Section 4	Location Sketch 
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Characteristic Landscape Description

	Landform/Water	Vegetation	Structures
Form	Flat to rolling hills (foreground), Rolling hills to mountainous (middleground) Mountainous (background)	Dense, regular (foreground) Dense, regular (middleground)	Short, vertical
Line	Smooth, straight, horizontal (foreground) Undulating; curving (middleground) Undulating, diagonal (background)	Horizontal (foreground) Rounded (middleground)	Geometric, vertical
Color	Tan, beige (foreground) Brown, tan (middleground) Tan, grey, white (background)	Tan (foreground) Tan (middleground)	Brown
Texture	Fine (foreground) Fine, smooth – medium (middleground) Coarse texture (background)	Fine to moderate (foreground) Moderate (middleground)	Moderate, uniform

Proposed Activity Description (Facility)

	Landform/Water	Vegetation	Structures
Form	Flat to rolling hills (foreground), Rolling hills to mountainous (middleground) Mountainous (background)	Dense, regular (foreground) Dense, regular (middleground)	Tall, vertical
Line	Smooth, straight, horizontal (foreground) Undulating to straight (middleground) Undulating, diagonal (background)	Horizontal (foreground) Rounded (middleground)	Geometric, vertical
Color	Tan, beige (foreground) Brown, tan (middleground) Tan, grey, white (background)	Tan (foreground) Tan (middleground)	Brown
Texture	Fine (foreground) Fine, smooth – medium (middleground) Coarse texture (background)	Fine to moderate (foreground) Moderate (middleground)	Moderate, uniform

Degree of Contrast

Degree of Contrast		Features											
		Landform/ Water Body				Vegetation				Structures			
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None
Elements	Form			X				X			X		
	Line			X				X				X	
	Color			X				X				X	
	Texture			X				X				X	

Does project design meet visual resource management objectives?
Yes

Additional mitigating measures recommended?

Minimize ground disturbance, sensitive resource avoidance

Evaluators Names:

Marc Schwartz, Kevin Rauhe

Date: July 6, 2010
District: Color Country
Resource Area: BLM – Richfield Field Office
Activity (program): Electric Utility Facilities



Southwest View from I-70

Weak to weak/moderate contrast would result from the construction and operation of the proposed Project within a modified setting designated as VRM Class III. The proposed structures would introduce a stronger vertical element in the landscape as compared to the existing transmission line. The construction of the Project would also result in minimal vegetation clearing and landform modification based on the use of existing access and sparse vegetation. Due to the occurrence of moderate topography, portions of the proposed Project will be backdropped.