

Variance Request Form



Company: Avangrid Renewables
 Address: 1125 NW Couch Street, Suite 700
 City, State, Zip : Portland, OR, 97209

Variance: VAR-009
 Request No.: Rev 0
 Date Submit: 03/28/2017
 Date Agency Received:
 Agency Reference No.:

Request Prepared by: Kamber McAllister (ICF)
 Spread/Location (Milepost): N/A
 Alignment Sheet/Sta. No.:
 Landowner: BLM
 Current Land Use/Vegetative Cover: Chamise Chaparral, Disturbed Habitat, Montane Buckwheat Scrub, Northern Mixed Chaparral, Redshank Chaparral, Semi Desert Chaparral, Southern North Slope Chaparral, Scrub Oak Chaparral, Un-Vegetated Channel, Upper Sonoran Subshrub Scrub

Net Acreage Affected: 6.02 (temporary)
 Tract No.: N/A
 In or Within 50ft of a Wetland: ☐ Yes ☒ No
 Within 50ft of a Water Body: ☒ Yes ☐ No

Nearby Features (Water body, T&E Habitat, Wetlands, Noxious Weed): Waters are included on Figure 3.

Area, Residence, Cultural Resource Site (distance, etc.):

Variance Level: ☐ Level 1 ☐ Level 2 ☐ Level 3 (To Be Assigned by Designated Representative)
 Variance From: ☐ Permit ☐ Plan/Procedure ☐ Specification ☒ Drawing ☐ Mitigation Measure ☐ Other

Detailed Description of Variance:	Attachments ☐ Yes ☒ No	Photos? ☐ Yes ☒ No
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Variance 009 (VAR-009) includes additional temporary areas needed for turbine installation (Attachment A, Figure 1). The three classifications of variance areas include blade overhang areas, Nacelle taglines areas, and top section staging areas. A description of the activities to occur within these areas and the impacts are included below by classification. Attachment B includes a table showing the impacts by turbine site.

Blades Overhang Areas:

Due to the length of the blades (177 feet), VAR-009 includes additional areas for the blade tip to extend beyond the limits of disturbance. These areas include a buffer to take into account potential variation in crane pad location and distances the blades extend beyond the existing limits of disturbance. The blades will not touch the ground in these areas and will remain approximately 8-12 feet off the ground while they are overhanging these areas. When pitched to torque and install the rotor studs the blades will be approximately 3-10 feet of the ground depending on site topography.

Activities within Blade Overhang Areas include:

-
- Clearing brush
- Grading when necessary to be level with the pad (dependent on site topography)
- Placement of Deadman (tie downs with concrete block)
- Use of rough terrain forklift to reattach socks or repair cosmetic damage, if needed though none is anticipated.

Impacts include temporary impacts at 93 locations totaling 4.60 acres of temporary impacts (Attachment A, Figure 2). If site is flat, impacts will be limited to potential placement of Deadman, as the socks will be placed on the tips prior to assembly. Where blade overhangs extend over jurisdictional features (as shown on Figure 3), there will be no clearing or grading and no materials or equipment staging within the jurisdictional features; therefore no impacts to jurisdictional features are proposed.

Nacelle Tagline Areas:

Where there are insufficient areas to properly utilize the taglines for safety and control of the Nacelle lift, additional areas are being requested. Taglines will be secured between the Nacelle and vehicles prior to the lift. While the crane lifts the Nacelle, the taglines will be taught and at a sufficient distance from the lift to allow proper control. The Variance Areas ensure the Contractor is able to drive and park the vehicle connected to the taglines at the proper distance from the lift.

Activities within the Nacelle Tagline Areas include:

- Vehicles driving and parking in the areas during turbine erection. Vehicles will be pick-up trucks or skid steer with tagline wheels.
- Clearing/ grubbing in accordance with the fire plan.
- Grading (dependent on terrain).

Impacts include temporary impacts at 32 locations totaling 1.32 acres of temporary impacts (Figure 2).

Top Section Staging Areas:

The top section of the turbine needs to be staged to the side for proper sequencing during turbine erection. Current engineering does not allow for this space on three turbine pads.

Activities within the top section staging areas include:

- Clearing/ grubbing
- Grading (dependent on terrain)
- Semi-Truck and trailer ingress/egress for component drop off
- Use of rough terrain forklift

Impacts include temporary impacts at 3 locations totaling 0.10 acre of temporary impacts (Figure 2)

There will be no changes in construction methods or use associated with VAR-009. All known and newly discovered ESAs will be appropriately staked in the field and will be avoided or treated per the project permits. No oak trees or associated drip line will be impacted by any of these variance areas. Portions of this variance are located outside of existing survey boundaries for cultural resources and special status wildlife and plant species. New pedestrian field surveys for both cultural and biological resources were conducted. Additional resources were not identified during those surveys, however several proposed work areas bisect previously identified cultural resources. The details of these surveys and their findings and proposed mitigation are included in separate reports. The Biological Resource Memo is attached and the Cultural Resource Memo is submitted to the BLM separately per resource confidentiality requirements. Biological and cultural resources sweeps will be conducted prior to impacts, and monitoring will occur consistent with the requirements of the Project's permits.

Variance Justification:

VAR-009 is required in order to safely and properly construct the turbines.

Blade overhang areas are needed at sites where the blades will extend beyond the limits of disturbance during assembly. Clearing and grading may be necessary to allow proper angles for assembly of the rotors and to avoid surface damage to the blades from vegetation or rocks.

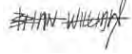
Nacelle tagline areas are needed for safety and constructability. The Nacelle weighs approximately 120,000 lbs. and it takes approximately 15 minutes for the crane to get the Nacelle to the top. During that time, it is imperative the Nacelle is controlled by the taglines, particularly if winds pick up. The additional tagline areas included in this variance are necessary to ensure the pickups with the taglines are able to drive out a sufficient distance from the crane to maintain this control during the lift.

Top Section Staging Areas are needed for safety and constructability. During turbine erection, the sequencing of the rotor assembly and the top section lift require the top section to be placed to the side to avoid lifting the top section between assembled blades. The three top section staging areas included in this variance are necessary at turbine sites that do not have sufficient area to stage the top section to the side without partially blocking the access road.

For Avangrid Renewables Use Only

Additional Surveys Required	Surveyed Corridor Description	Additional Surveys Completed
Cultural Survey ☒ Yes ☐ No	Additional biological resources and cultural resource surveys were conducted for the portions of the site outside previous survey boundaries.	☒ Yes ☐ No
T & E Survey ☒ Yes ☐ No		☒ Yes ☐ No

Report Document Survey:

Sign-Off (as appropriate)	Name (print)	Approval Signature	Conditions (see attached)
Avangrid Permit Manager	Kristen Goland		☐ Yes ☒ No
Lead Environmental Inspector	Talia Haley		☐ Yes ☒ No
Designated Biologist	James Hickman		☐ Yes ☒ No
Cultural Resource Specialist	Brian Williams		☐ Yes ☒ No

For BLM Project Manager or Compliance Contact Use Only

Variance Approved: ☐ Variance Denied: ☐ Date:

Signature:

For Compliance Manager and Monitor Use Only

Variance Approved: ☐ Variance Denied: ☐ Date:

Signature:

Stipulations:

Spread:

Variance Request No.:

VARIANCE CONDITIONS

Name:

Title:

Organization:

Conditions:

Name:

Title:

Organization:

Conditions:

Name:

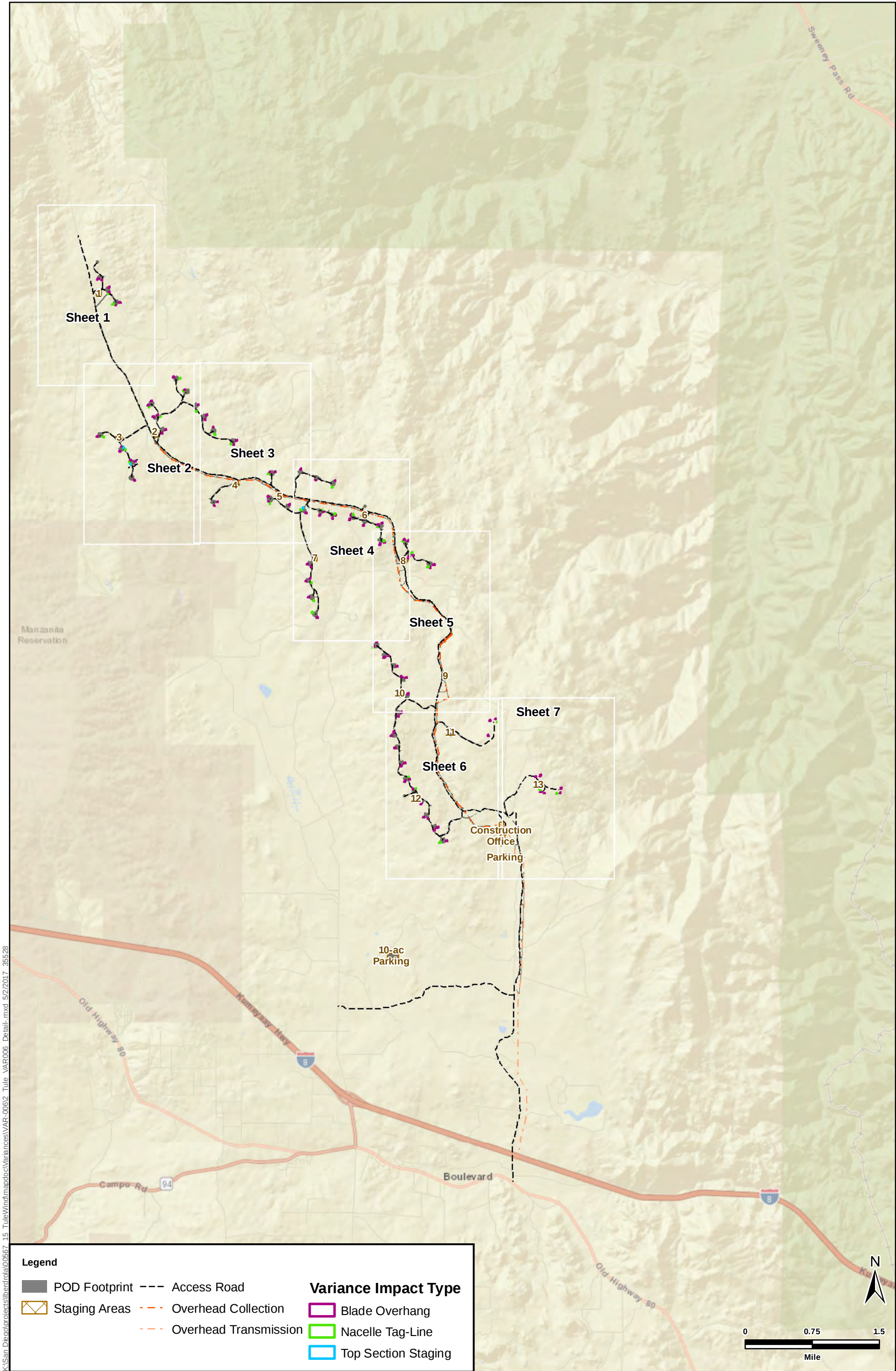
Title:

Organization:

Conditions:

Attachment A

Figures

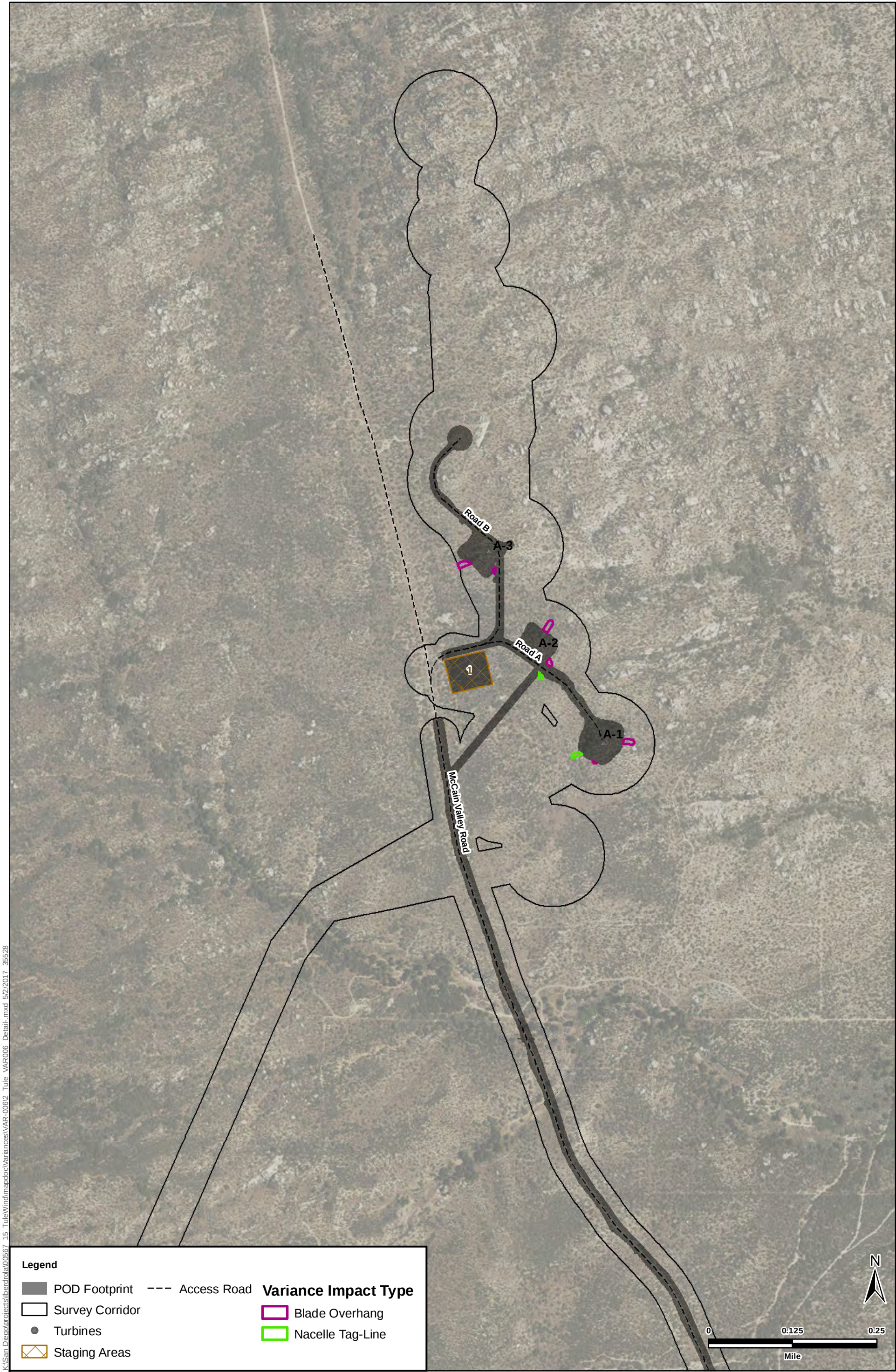


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Source: ICF; Avangrid (2016); Imagery (2008).



Figure 1 Overview
Variance 6 Tagline Installation
Tule Wind Project



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Legend

POD Footprint

Survey Corridor

Turbines

Staging Areas

Access Road

Variance Impact Type

Blade Overhang

Nacelle Tag-Line

Source: ICF; Avangrid (2016); Imagery (2008).

Figure 2 Sheet 1
Variance 6 Tagline Installation
Tule Wind Project



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Source: ICF; Avangrid (2016); Imagery (2008).



Figure 2 Sheet 3
Variance 6 Tagline Installation
Tule Wind Project

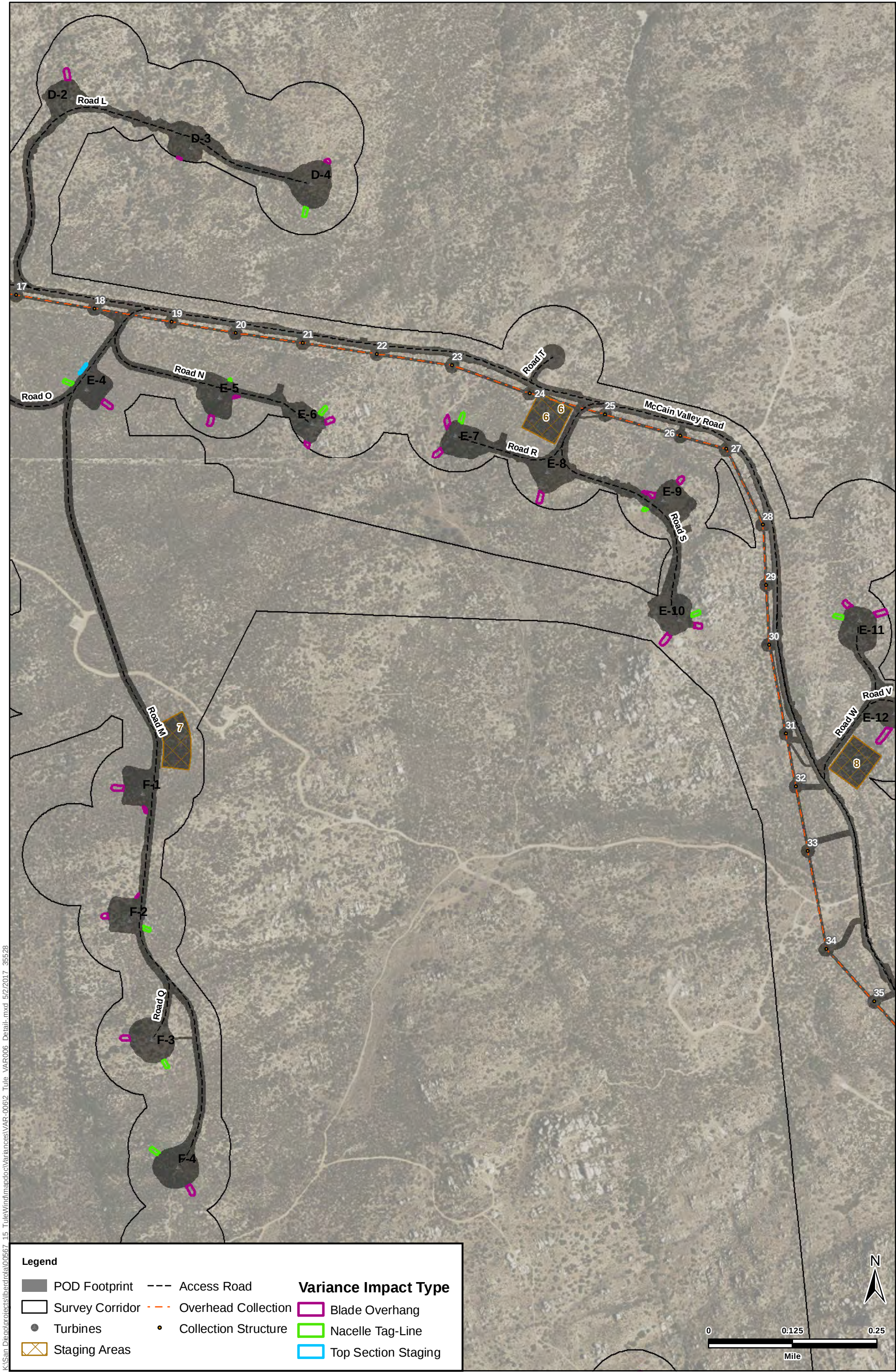


Figure 2 Sheet 4
Variance 6 Tagline Installation
Tule Wind Project

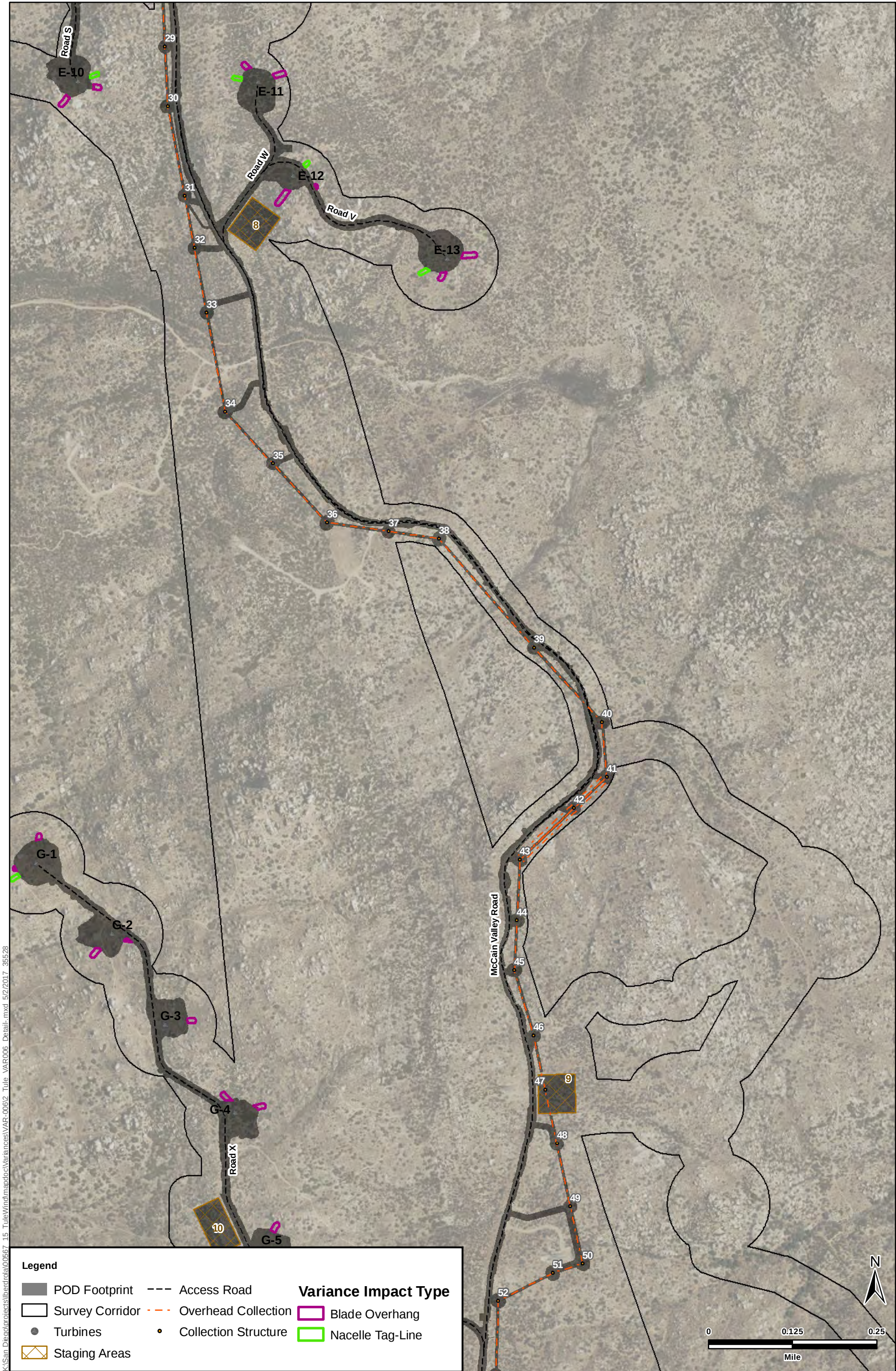


Figure 2 Sheet 5
Variance 6 Tagline Installation
Tule Wind Project

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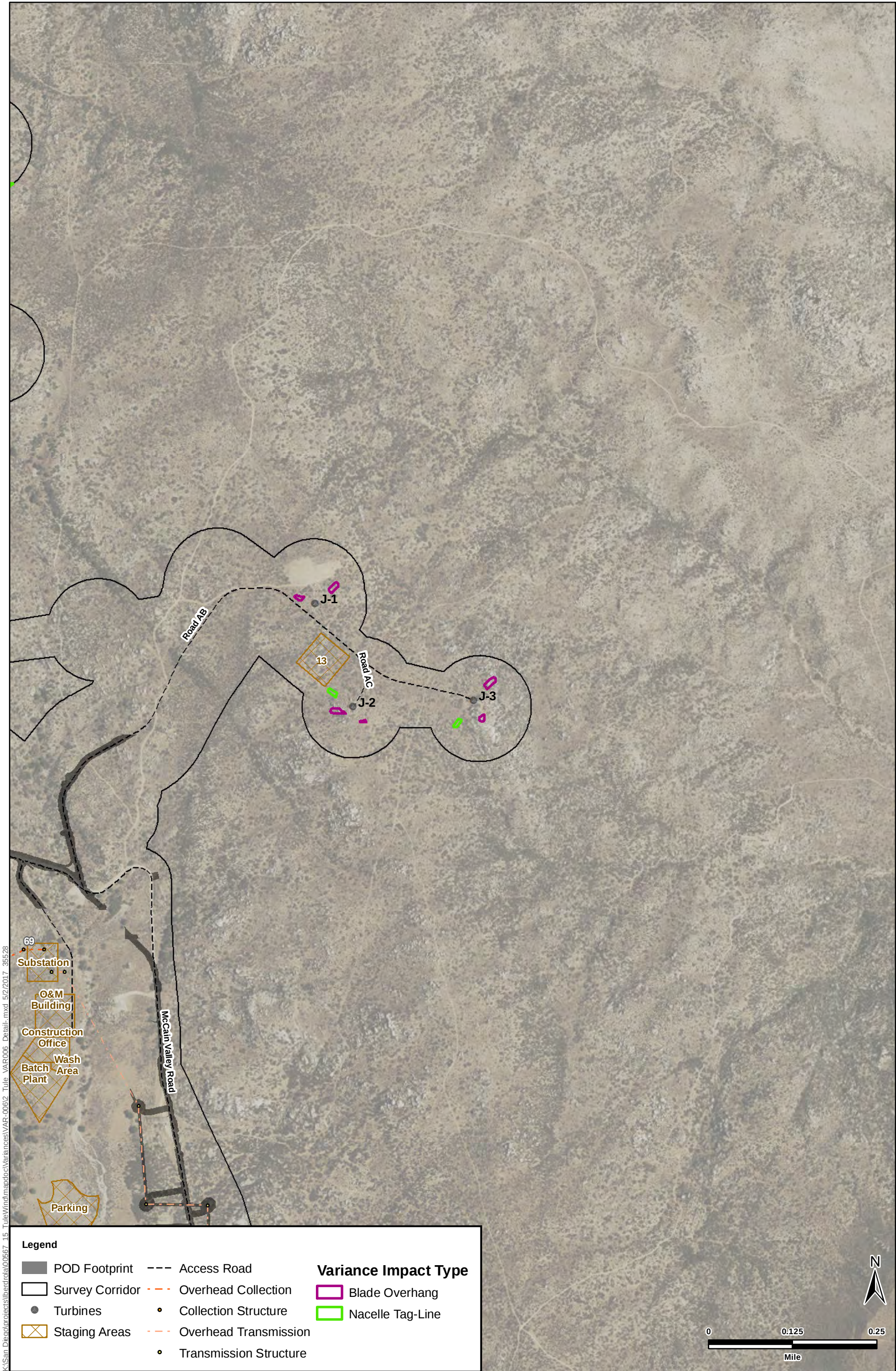


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Source: ICF; Avangrid (2016); Imagery (2008).



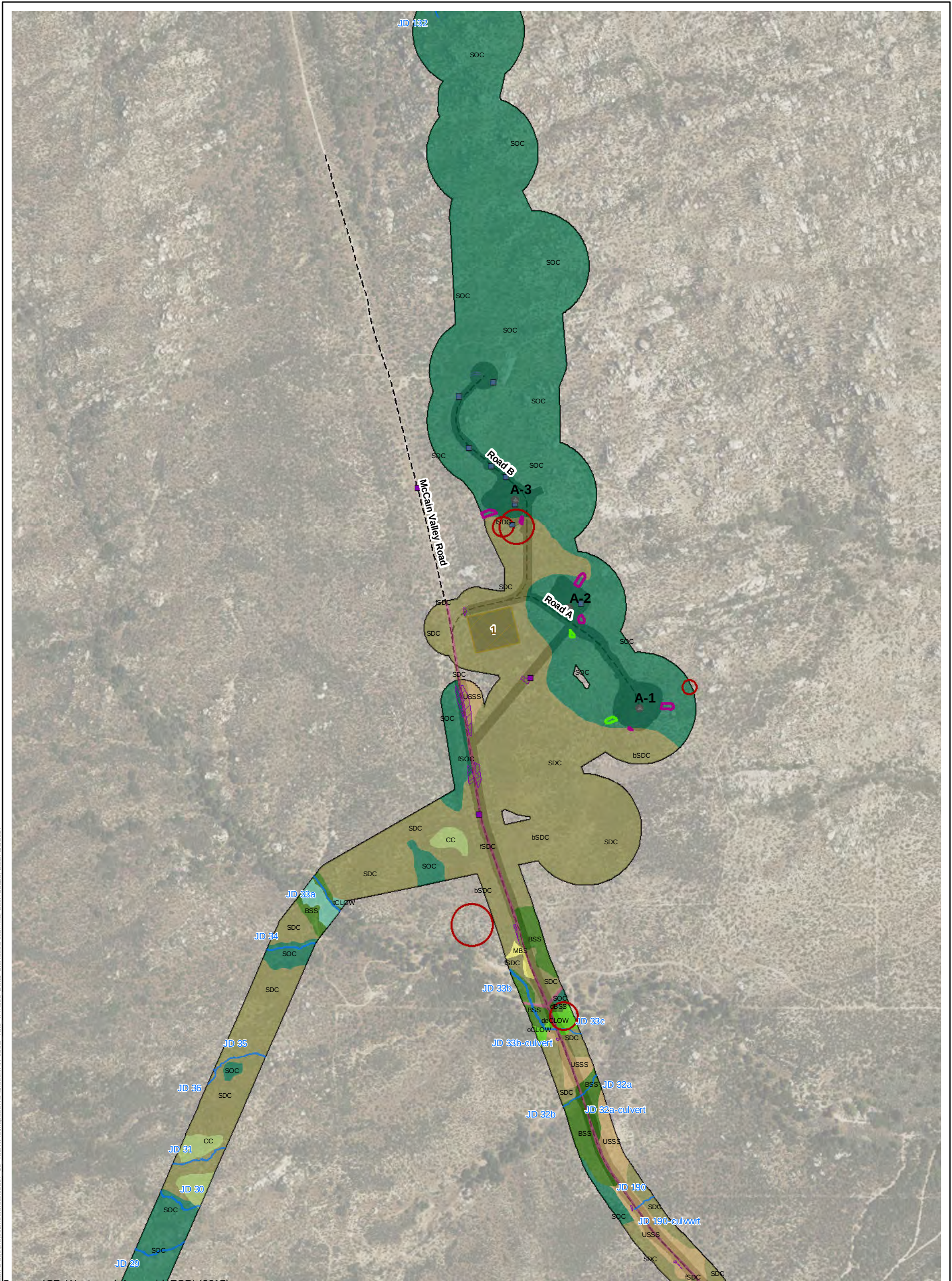
Figure 2 Sheet 6
Variance 6 Tagline Installation
Tule Wind Project



Source: ICF; Avangrid (2016); Imagery (2008).



Figure 2 Sheet 7
Variance 6 Tagline Installation
Tule Wind Project



Source: ICF, Westwood, Avangrid, ESRI (2017)

Legend

- | | | |
|--|--|---|
| <ul style="list-style-type: none">TurbinesSurvey CorridorAccess RoadStaging AreasPOD Footprint | Rare Plant Areas (2016) <ul style="list-style-type: none">Jacumba milkvetchOcean blue larkspurNest ESAJurisdictional Waters | <ul style="list-style-type: none">Open Coast Live Oak WoodlandScrub Oak ChaparralSemi Desert ChaparralUpper Sonoran Subshrub Scrub |
| Variance Impact Type <ul style="list-style-type: none">Blade OverhangNacelle Tag-Line | Habitat <ul style="list-style-type: none">Big Sagebrush ScrubChamise ChaparralDense Coast Live Oak WoodlandDisturbed HabitatMontane Buckwheat Scrub | |
| Rare Plant Points (2016) <ul style="list-style-type: none">Jacumba milkvetchOcean blue larkspur | | |

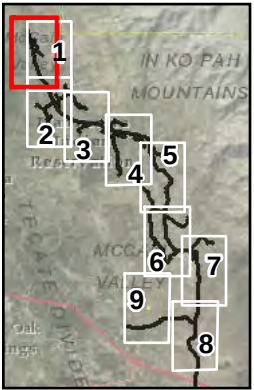
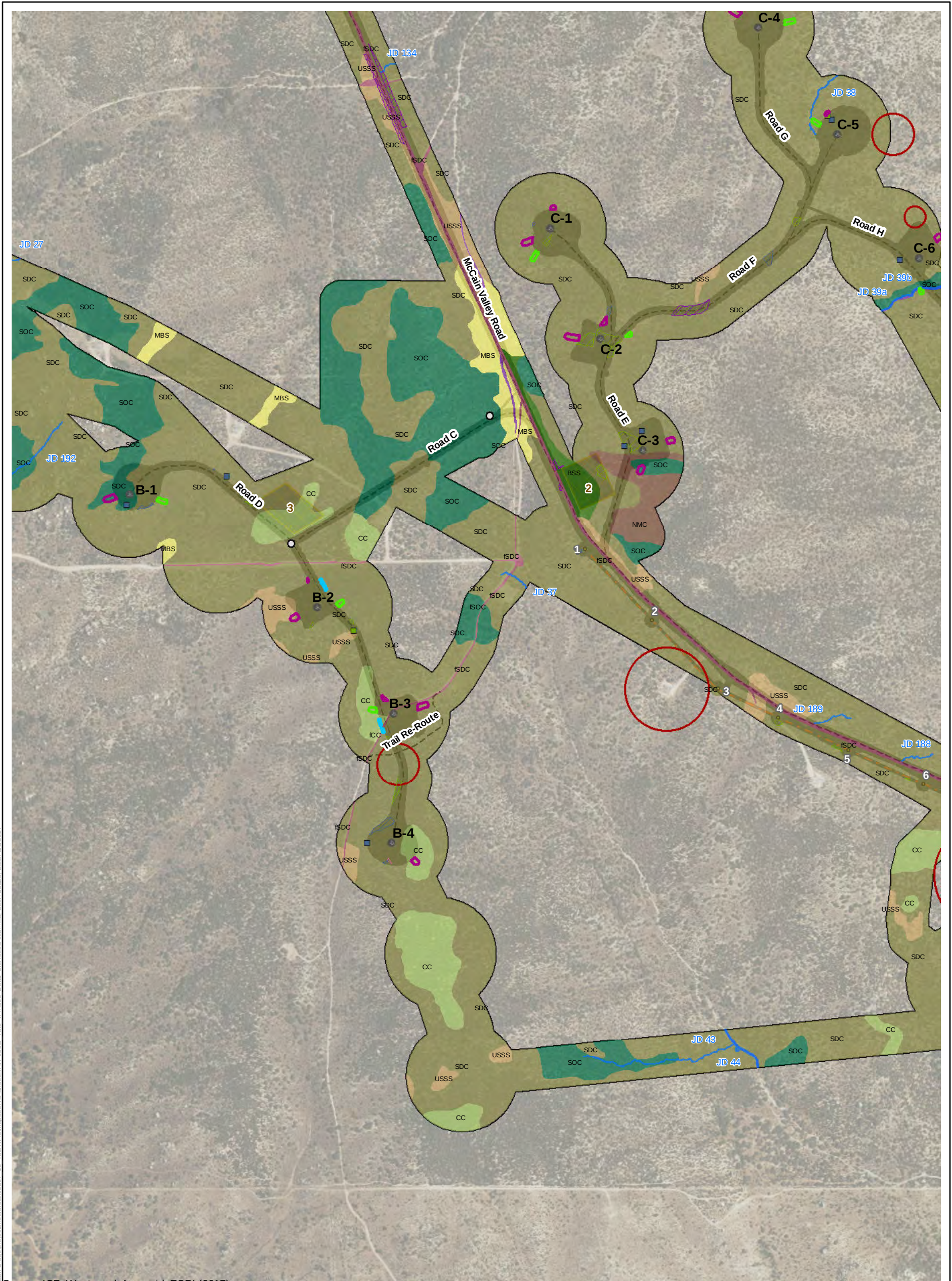


Figure 3 Sheet 1
Bio VAR-006 B Tagline Installation
Tule Wind Project



Source: ICF; Westwood; Avangrid; ESRI (2017)

Legend

- | | | | |
|---|---|---|--|
| <ul style="list-style-type: none">TurbinesCollection StructureOverhead CollectionSurvey CorridorAccess RoadStaging AreasPOD Footprint | Rare Plant Points (2016) <ul style="list-style-type: none">Desert BeautyOcean blue larkspur Rare Plant Areas (2016) <ul style="list-style-type: none">Desert beautyJacumba milkvetchOcean blue larkspurPayson's jewel flowerNest ESAJurisdictional Waters | Habitat <ul style="list-style-type: none">Big Sagebrush ScrubChamise ChaparralDisturbed HabitatMontane Buckwheat ScrubNorthern Mixed ChaparralScrub Oak ChaparralSemi Desert ChaparralUn-Vegetated ChannelUpper Sonoran Subshrub Scrub | Special Status Species <ul style="list-style-type: none">Silvery Legless Lizard (<i>Anniella pulchra pulchra</i>) |
|---|---|---|--|
- Variance Impact Type**
- Blade Overhang
 - Nacelle Tag-Line
 - Top Section Staging

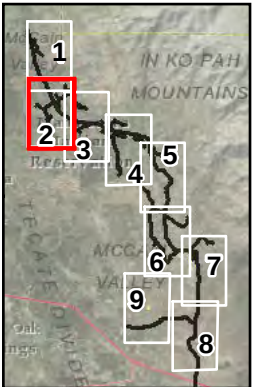
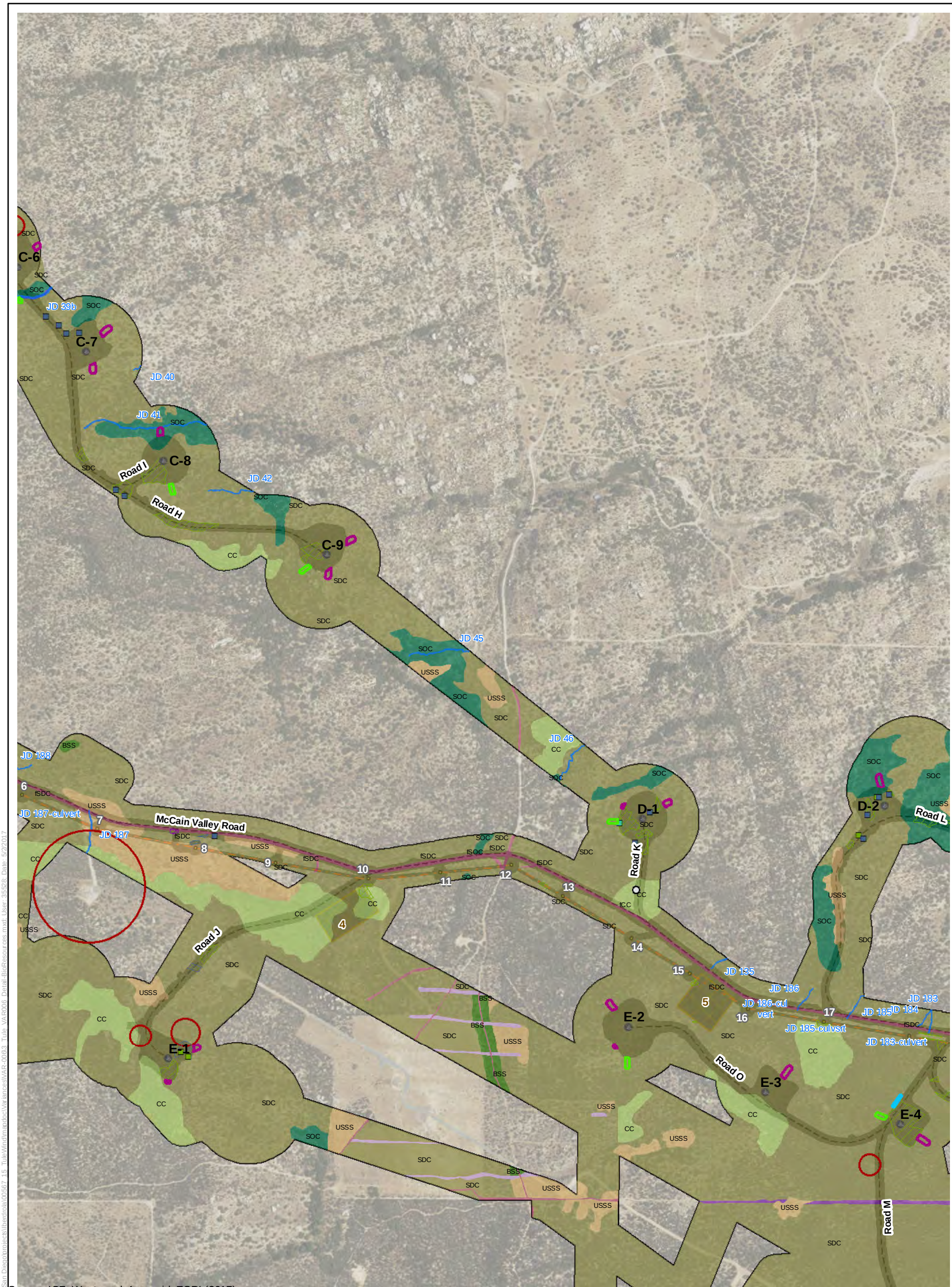


Figure 3 Sheet 2
Bio VAR-006 B Tagline Installation
Tule Wind Project



Source: ICF; Westwood; Avangrid; ESRI (2017)

Legend

- Legend:**

 - Turbines
 - Collection Structure
 - Overhead Collection
 - Survey Corridor
 - Access Road
 - Staging Areas
 - POD Footprint
 - Variance Impact Type**
 - Blade Overhang
 - Nacelle Tag-Line
 - Top Section Staging
 - Rare Plant Points (2016)**
 - Desert Beauty
 - Ocean blue larkspur
 - Warty stemmed ceanothus
 - Rare Plant Areas (2016)**
 - Desert beauty
 - Jacumba milkvetch
 - Ocean blue larkspur
 - Nest ESA
 - Jurisdictional Waters
 - Habitat**
 - Big Sagebrush Scrub
 - Chamise Chaparral
 - Disturbed Habitat
 - Non Native Grass
 - Scrub Oak Chaparral
 - Semi Desert Chaparral
 - Un-Vegetated Channel
 - Upper Sonoran Subshrub Scrub
 - Special Status Species**
 - Silvery Legless Lizard (*Anniella pulchra pulchra*)

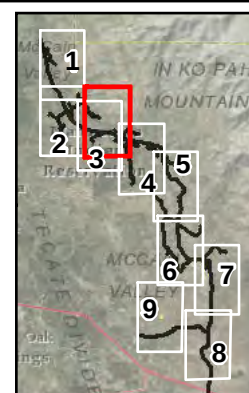
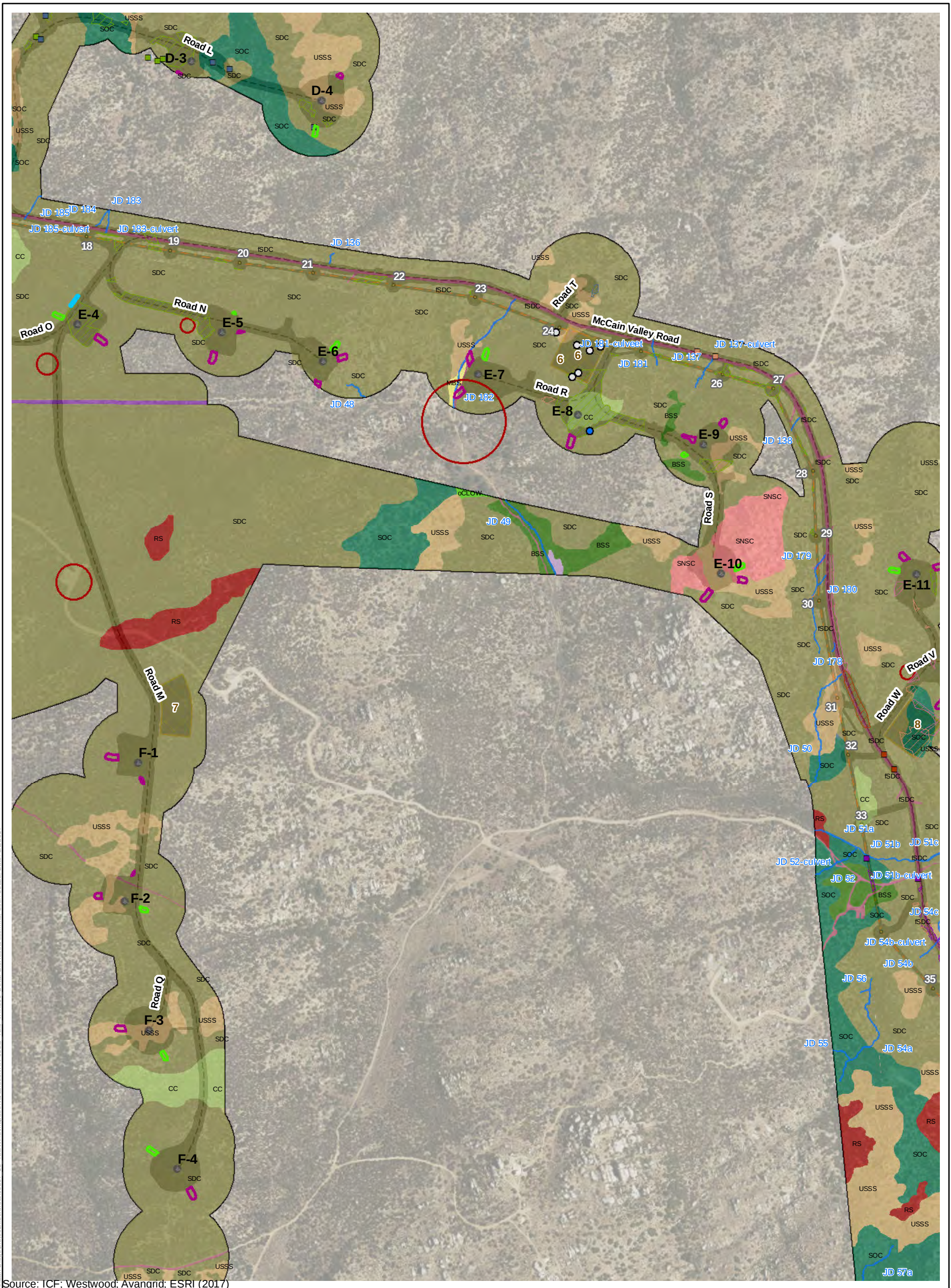


Figure 3 Sheet 3
Bio VAR-006 B Tagline Installation
Tule Wind Project



Source: ICF; Westwood; Avangrid; ESRI (2017)

- Legend**
- Turbines
 - Collection Structure
 - Overhead Collection
 - Survey Corridor
 - Access Road
 - Staging Areas
 - POD Footprint
 - Variance Impact Type**
 - Blade Overhang
 - Nacelle Tag-Line
 - Top Section Staging
 - Rare Plant Points (2016)**
 - Desert Beauty
 - Jacumba milkvetch
 - Mountain springs bush lupine
 - Ocean blue larkspur
 - Sticky geraea
 - Rare Plant Areas (2016)**
 - Desert beauty
 - Jacumba milkvetch
 - Mountain springs bush lupine
 - Ocean blue larkspur
 - Payson's jewel flower
 - Sticky geraea
 - Nest ESA
 - Jurisdictional Waters**
 - Blue
 - Habitat**
 - Big Sagebrush Scrub
 - Chamise Chaparral
 - Disturbed Habitat
 - Montane Buckwheat Scrub
 - Non Native Grass
 - Open Coast Live Oak Woodland

- Redshank Chaparral
- Scrub Oak Chaparral
- Semi Desert Chaparral
- Southern North Slope Chaparral
- Un-Vegetated Channel
- Upper Sonoran Manzanita Chaparral
- Upper Sonoran Subshrub Scrub
- Special Status Species**
- Black-Tailed Jackrabbit (*Lepus californicus bennettii*)
- Silvery Legless Lizard (*Anniella pulchra pulchra*)

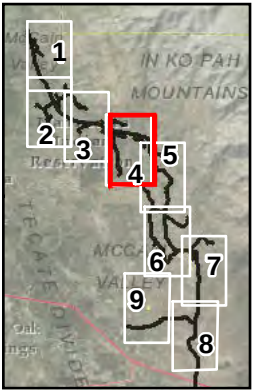


Figure 3 Sheet 4
Bio VAR-006 B Tagline Installation
Tule Wind Project

Attachment B

Impacts by Site and Activity

Table 1: Impacts by Site and Activity

Site	Variance Activity	Temporary Impacts (acres)
A-1	Blade Overhang	0.080
	Nacelle Tag-Line	0.049
	<i>A-1 Subtotal</i>	<i>0.129</i>
A-2	Blade Overhang	0.125
	Nacelle Tag-Line	0.023
	<i>A-2 Subtotal</i>	<i>0.148</i>
A-3	Blade Overhang	0.097
	<i>A-3 Subtotal</i>	<i>0.097</i>
B-1	Blade Overhang	0.077
	Nacelle Tag-Line	0.049
	<i>B-1 Subtotal</i>	<i>0.126</i>
B-2	Blade Overhang	0.057
	Nacelle Tag-Line	0.035
	Top Section Staging	0.035
	<i>B-2 Subtotal</i>	<i>0.127</i>
B-3	Blade Overhang	0.086
	Nacelle Tag-Line	0.035
	Top Section Staging	0.027
	<i>B-3 Subtotal</i>	<i>0.149</i>
B-4	Blade Overhang	0.044
	<i>B-4 Subtotal</i>	<i>0.044</i>
C-1	Blade Overhang	0.095
	Nacelle Tag-Line	0.051
	<i>C-1 Subtotal</i>	<i>0.146</i>
C-2	Blade Overhang	0.130
	Nacelle Tag-Line	0.021
	<i>C-2 Subtotal</i>	<i>0.152</i>
C-3	Blade Overhang	0.099
	<i>C-3 Subtotal</i>	<i>0.099</i>
C-4	Blade Overhang	0.070
	Nacelle Tag-Line	0.050
	<i>C-4 Subtotal</i>	<i>0.121</i>
C-5	Blade Overhang	0.015
	Nacelle Tag-Line	0.046
	<i>C-5 Subtotal</i>	<i>0.061</i>
C-6	Blade Overhang	0.044
	Nacelle Tag-Line	0.021
	<i>C-6 Subtotal</i>	<i>0.066</i>
C-7	Blade Overhang	0.135
	<i>C-7 Subtotal</i>	<i>0.135</i>
C-8	Blade Overhang	0.046

Site	Variance Activity	Temporary Impacts (acres)
	Nacelle Tag-Line	0.050
	<i>C-8 Subtotal</i>	<i>0.096</i>
C-9	Blade Overhang	0.113
	Nacelle Tag-Line	0.054
	<i>C-9 Subtotal</i>	<i>0.167</i>
D-1	Blade Overhang	0.064
	Nacelle Tag-Line	0.049
	<i>D-1 Subtotal</i>	<i>0.114</i>
D-2	Blade Overhang	0.082
	<i>D-2 Subtotal</i>	<i>0.082</i>
D-3	Blade Overhang	0.007
	<i>D-3 Subtotal</i>	<i>0.007</i>
D-4	Blade Overhang	0.021
	Nacelle Tag-Line	0.050
	<i>D-4 Subtotal</i>	<i>0.072</i>
E-1	Blade Overhang	0.056
	<i>E-1 Subtotal</i>	<i>0.056</i>
E-2	Blade Overhang	0.084
	Nacelle Tag-Line	0.051
	<i>E-2 Subtotal</i>	<i>0.135</i>
E-3	Blade Overhang	0.086
	<i>E-3 Subtotal</i>	<i>0.086</i>
E-4	Blade Overhang	0.082
	Nacelle Tag-Line	0.051
	Top Section Staging	0.034
	<i>E-4 Subtotal</i>	<i>0.167</i>
E-5	Blade Overhang	0.086
	Nacelle Tag-Line	0.006
	<i>E-5 Subtotal</i>	<i>0.092</i>
E-6	Blade Overhang	0.090
	Nacelle Tag-Line	0.049
	<i>E-6 Subtotal</i>	<i>0.139</i>
E-7	Blade Overhang	0.137
	Nacelle Tag-Line	0.051
	<i>E-7 Subtotal</i>	<i>0.187</i>
E-8	Blade Overhang	0.078
	<i>E-8 Subtotal</i>	<i>0.078</i>
E-9	Blade Overhang	0.106
	Nacelle Tag-Line	0.020
	<i>E-9 Subtotal</i>	<i>0.126</i>
E-10	Blade Overhang	0.141
	Nacelle Tag-Line	0.049
	<i>E-10 Subtotal</i>	<i>0.190</i>
E-11	Blade Overhang	0.141
	Nacelle Tag-Line	0.050

Site	Variance Activity	Temporary Impacts (acres)
	<i>E-11 Subtotal</i>	<i>0.191</i>
E-12	Blade Overhang	0.144
	Nacelle Tag-Line	0.031
	<i>E-12 Subtotal</i>	<i>0.175</i>
E-13	Blade Overhang	0.163
	Nacelle Tag-Line	0.052
	<i>E-13 Subtotal</i>	<i>0.215</i>
F-1	Blade Overhang	0.105
	<i>F-1 Subtotal</i>	<i>0.105</i>
F-2	Blade Overhang	0.050
	Nacelle Tag-Line	0.037
	<i>F-2 Subtotal</i>	<i>0.086</i>
F-3	Blade Overhang	0.063
	Nacelle Tag-Line	0.046
	<i>F-3 Subtotal</i>	<i>0.109</i>
F-4	Blade Overhang	0.075
	Nacelle Tag-Line	0.051
	<i>F-4 Subtotal</i>	<i>0.126</i>
G-1	Blade Overhang	0.059
	Nacelle Tag-Line	0.050
	<i>G-1 Subtotal</i>	<i>0.109</i>
G-2	Blade Overhang	0.100
	<i>G-2 Subtotal</i>	<i>0.100</i>
G-3	Blade Overhang	0.055
	<i>G-3 Subtotal</i>	<i>0.055</i>
G-4	Blade Overhang	0.140
	<i>G-4 Subtotal</i>	<i>0.140</i>
G-5	Blade Overhang	0.068
	Nacelle Tag-Line	0.022
	<i>G-5 Subtotal</i>	<i>0.089</i>
G-6	Blade Overhang	0.152
	<i>G-6 Subtotal</i>	<i>0.152</i>
G-7	Blade Overhang	0.099
	<i>G-7 Subtotal</i>	<i>0.099</i>
G-8	Blade Overhang	0.077
	<i>G-8 Subtotal</i>	<i>0.077</i>
G-9	Blade Overhang	0.140
	<i>G-9 Subtotal</i>	<i>0.140</i>
G-10	Blade Overhang	0.111
	Nacelle Tag-Line	0.030
	<i>G-10 Subtotal</i>	<i>0.141</i>
G-11	Blade Overhang	0.031
	Nacelle Tag-Line	0.033
	<i>G-11 Subtotal</i>	<i>0.064</i>
G-12	Blade Overhang	0.079

Site	Variance Activity	Temporary Impacts (acres)
	<i>G-12 Subtotal</i>	<i>0.079</i>
G-13	Blade Overhang	0.076
	<i>G-13 Subtotal</i>	<i>0.076</i>
G-14	Blade Overhang	0.171
	<i>G-14 Subtotal</i>	<i>0.171</i>
G-15	Blade Overhang	0.067
	Nacelle Tag-Line	0.049
	<i>G-15 Subtotal</i>	<i>0.116</i>
TOTAL	Blade Overhang	4.601
	Nacelle Tag-Line	1.313
	Top Section Staging	0.097
	<i>Grand Total</i>	<i>6.011</i>