



Heber 1 Parasitic Solar Project

Visual Resources Baseline & Sensitivity Report

Imperial County, CA

April 24, 2024

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SECTION 1

Introduction

This report has been prepared to characterize the existing visual and aesthetic resources and potential sensitive receptors¹ in the viewshed of the proposed Heber 1 Parasitic Solar Project (Project). A key objective of this report is to assess potential views of the proposed facilities from public areas (i.e., parks, schools) and potential sensitive receptors by performing viewshed modeling and collecting data (photographs, GIS points, field notes) on the line-of-sight and potential degree of contrast of the proposed facilities. This report adheres to the U.S. Bureau of Land Management's (BLM) protocols for assessing potential impacts on an existing visual landscape and identifying Key Observation Points (KOPs) for visual/aesthetic analysis (i.e., BLM Manual 8400, 1984; BLM Manual 8431, 1986).

Project Description

The Heber Field Company (Applicant; a wholly owned subsidiary of ORMAT Inc. [Ormat]), proposes to develop the Project at 604 Dogwood Road in Heber, Imperial County, California. The proposed project includes the following:

- A twenty (20) megawatt (MW) solar photovoltaic field dedicated to providing parasitic load to the existing Heber 1 geothermal plant approximately 10 feet tall.
- Medium voltage cable from solar facility to the Heber 1 geothermal plant. Three possible routes are proposed as alternatives from the solar facility to the geothermal plant.
- Demolition of a single-family home for solar development.

As provided in Table 1 below, the total project disturbance from the proposed development varies from 114.85 acres to 121.44 acres depending on the cable route/alternative. Figure 2 provides provide a site plan of the proposed facilities and brief descriptions of each facility are provided below.

Table 1 – Heber 1 Parasitic Solar Project Disturbance Estimate

<i>Facility</i>	<i>Disturbance (Acres)</i>
Parasitic Solar Field	106.19
Medium Voltage Cable	--
Route Option 1	11.03
Route Option 2	8.66
Route Option 3	15.25

¹ Sensitive receptors are those populations that are more susceptible to visual effects than the population at large. Sensitive receptors can include, for example, long-term health care facilities, religious centers, hospitals, retirement homes, schools, playgrounds, parks and recreations centers, and public athletic fields/facilities.

Parasitic Solar Energy Facility

The 20 MW solar photovoltaic energy field would be developed to provide parasitic load to the existing Heber 1 Plant. These solar facilities are considered as *behind-the-meter* and would provide supplemental energy directly to the Heber 1 geothermal units (OEC), this energy would not enter the transmission grid. The solar facility would effectively allow for the more efficient generation of geothermal energy.

XMD Switch and Medium Voltage Cable

The energy generated by the solar facility may be collected at an on-site XMD switch and transmitted along a medium voltage cable. There are three route options proposed to connect the solar facility to the Heber 1 Plant (**Attachment A – Figures; Proposed Project**). To minimize ground-disturbance, the cable would be attached via trays to existing pipelines as feasible, but the Applicant is also open to burying the cable, as feasible, to minimize impacts. The XMD switch would be located on either the northwest or northeast corner of the Project Site, depending on which cable route alternative is selected.

Route 1 – the medium voltage cable would exit the northeast corner of the solar site and travel north along an existing raised berm. The cable would either be directionally buried or strung on monopoles to cross the Central Main Canal and Willoughby Road. The cable would continue along Ware Road for approximately a third of a mile where it would meet an existing pipeline alignment that runs to the Heber 1 Plant. All road, canal, and rail crossings would be overhead via 30' monopoles or would be directionally buried underground if feasible.

Route 2 – the medium voltage cable would exit the northeast corner of the solar site and travel north along an existing raised berm. Before Willoughby Road, the cable would turn west for approximately 0.15 miles and then the cable would either be directionally buried or strung on monopoles to cross span Willoughby Road and the Central Main Canal to an existing geothermal well pad. The cable would run east along an existing pipeline alignment and then turn north along the same pipeline alignment along Ware Road for approximately a third of a mile where it would meet an existing pipeline alignment that runs to the Heber 1 Plant. All road, canal, and rail crossings would be overhead via 30' monopoles or would be directionally buried underground if feasible.

Route 3 – the medium voltage cable would cross Dogwood Road and be attached via trays to the existing pipeline that runs west before turning north to cross the Beech Drain and Main Canal at the existing above-ground pipeline crossing. The cable would continue to follow the existing pipeline alignment to the Heber Geothermal Energy Complex and travel along the northern boundary to exit the HGEC's northeast corner. The cable would not connect to any HGEC energy facilities, simply pass through the site. The cable would then cross back over Dogwood Road and continue down an existing pipeline alignment to the Heber 1 Plant. All road and rail crossings would be overhead via 30' monopoles or would be directionally buried underground if feasible.

Project Location

The proposed 20 MW solar energy facility would be located on APN 059-020-001 at 602 Dogwood Road, Heber, CA. There are three route options proposed, of which only one will be chosen, for the medium voltage cable to connect the new 1 solar facility to the existing Heber 1 geothermal power plant, located on APN 054-250-036, approximately 895 Pitzer Road (**Attachment A – Figures; Site Location**).

SECTION 2 Existing Conditions

The Project site is located approximately 1.4 miles south of the town of Heber on privately-owned land inclusive of approximately 106 acres of Assessor's Parcel No. (APN) 059-020-001 (**Figure 1**). The site zone General Agricultural within the Heber geothermal unit and Imperial County renewable energy overlay zone (A-2-GU). Existing land-use is primarily agricultural (alfalfa) cultivation but also includes a vacated residence, geothermal pipeline corridor, storage/laydown area, and IID irrigation canals. Surrounding land uses in the Project vicinity are primarily for industrial facilities, energy facilities, and agricultural cultivation. Agricultural operations are adjacent on all sides of the Project Site with geothermal pipelines and IID canals traversing the area.

Interstate 8 (I-8), located approximately 4.5 miles directly north, provides primary highway access to the Project Site. Dogwood Road stems from I-8 and provides immediate site access. From the south, Willoughby Road runs west-east approximately 1,700 feet from the site and connects to Dogwood Road, providing immediate site access. Dogwood Road is a regional arterial under the 2013 Imperial County Long Range Transportation Plan. Significant transmission lines and towers are present along Dogwood Road.

The area is characteristically flat with minimal elevation changes throughout the project area. The primary contributor to the otherwise flat project area would be the New River which runs to the south along the project area. Views in this area are characterized by sparse development and agricultural land with minimal topographic features. Residences, transmission lines, sparse vegetation such as trees, and transportation corridors such as roads are discernable throughout the Project area.

SECTION 3 Technical Approach

This report adheres to the U.S. Bureau of Land Management's (BLM) protocols for assessing potential impacts on an existing visual landscape and identifying KOPs for visual/aesthetic analysis (i.e., BLM Manual 8400, 1984; BLM Manual 8431, 1986). KOPs for this Project included public parks, schools, retirement communities, hospitals, cemeteries, and nearby residences, within the Project's viewshed (**Appendix A - Figures**).

The methodology used to characterize the Project site's existing conditions and the subsequent change to the aesthetic environment as result of the Project relied on aerial data and ground level imagery in conjunction with aerial topography data. Field surveys were conducted by Catalyst on October 13, 2023 to locate and document visually sensitive areas. During the survey field staff documented and photographed the existing conditions and visibility of the Project area from various potential KOPs (**Attachment A – Figures; Attachment B – Photo Log**). During the field survey, each KOP viewpoint was photographed using a 35mm full frame, mirrorless, fixed lens Sony A-II camera. Camera positioning was identified through field staff notes and subsequent aerial imagery mapping. The photos were taken at the eye level of a 5'8" field scientist.

Assessments of existing visual conditions were made based on professional judgment that considered sensitive receptors and sensitive viewing areas in the Project areas. A total of ten locations were identified as KOPs to represent areas most sensitive to the project's implementation and are described in Section 4. **Attachment B** contains a photolog that shows each KOPs existing view for reference. **Attachment C** contains the Visual Contrast rating forms which further support visual contrast conclusions. These KOPs serve as the primary data for this visual resource baseline report.

The KOP locations were then implemented in the viewshed report shown in **Attachment A**, which was developed using ArcGIS. The viewshed analysis accounted for the 10-foot-tall solar panels, 30-foot monopoles, and medium voltage cable. Because the XMD switch (less than 10-feet tall) would visually assimilate within the solar structure, these two Project components have been analyzed together as one visual feature. Additionally, all portions of the Medium Voltage Cable that are proposed to run along existing pipeline segments are not considered for analysis as the cables would assimilate in form, line, and figure and would be hidden from view within an existing tray along the pipeline. The extent of the model extends to 3 miles which is the maximum distance of human sight. The following analysis of the KOPs, with the projected view of the Project area, was conducted using best professional judgement referencing existing facilities, site photos, desktop analysis, and a viewshed model (**Attachment A**) to determine the degree of overall aesthetic change and contrast.

Figures generated for the viewshed model account for visibility based on ground elevation changes. The viewshed is broken into four separate figures to individually assess the visibility of the project components. Figure 1 depicts the viewshed analysis of the solar array and Figure 2 through Figure 4 assess the viewshed analysis of the three cable routes discussed in the project description. This was done to provide clarity in determining which project component was visible and from where. The viewshed analysis was able to estimate the number of monopoles visible based on the KOP location and the cable route option which provides quantitative value in assessing visibility significance. However, the model does not have the capability to determine precise visual screening of obstructions (e.g. existing

homes, facilities, existing transmission lines and monopoles, and certain vegetative features) which shows a conservative estimate of project visibility throughout the existing setting.

The Glint and Glare Report (submitted under separate cover) characterizes three locations (KOP 4, KOP 8, and KOP 15) that have the potential to experience some green ocular impact which is glare with low potential to cause an afterimage or flash blindness, when observed prior to a typical blink response time. These three locations are residential and are not considered sensitive receptors. KOP 4 of the report is greater than 3 miles from the solar facility and is not considered for analysis. KOP 8 of the report is a residency 2.5 miles away not considered sensitive receptor. KOP 15 of the report is also residence and not considered a sensitive receptor.

SECTION 4

Description of Potential Visual Effects

This section describes views from each KOP from their existing condition and a view of the project based on Viewshed analysis and existing KOP locations. KOP locations are shown below in the viewshed analysis figure in **Attachment A**. Photos of KOPs and their existing settings are attached in **Attachment B**.

4.1 KOP 1: View from Heber Elementary School

4.1.1 Existing View

KOP 1 is Heber Elementary School located at 1052 Heber Ave., Heber, CA approximately 1.42 miles northeast of the project at the closest edge. The picture was taken from the corner of 14th St. and Heber Avenue, the major transportation corridor to Heber Elementary School, looking south/southwest down Heber Ave. The view of the Project area is characteristically flat. There is a mountain range present in the background but has low scenic quality. Transmission infrastructure from the Heber 2 energy facility are visible in the distance along the horizon. Residences are present in the foreground, and some vegetation provides screening of the Project areas. Existing gen-tie lines are present in the in the throughout the Project area. The Project site is visible is visible from KOP 1. See Figure 1 in **Attachment B** for further reference.

4.1.2 View with Project

The north side of the solar array, and potentially overhead cables on monopoles will be visible from KOP 1 in all cable route options looking south down Heber Avenue. These structures would be detectable against the current landscape but contribute an overall weak to moderate level of contrast. From a level elevation, the solar facilities would appear as a generally dark uniform rectangle in the background of the KOP. The monopoles and cables would create faint vertical and linear features in the midground adding to the existing density of existing monopoles and cables. Portions of the landscape obstructed by the solar facilities would be the bottom half of existing gen-tie lines, and the silhouettes of indistinguishable building structures in the background. The glare analysis determined the Project would not produce any glare that would impact KOP 1.

4.2 KOP 2: View from Residence to the North

4.2.1 Existing View

KOP 2 is a residence located at 20 E. Fawcett Road, Heber approximately 1.37 miles due north/northeast of the Project site. The existing view is characteristically flat in the foreground and middle ground, consisting primarily of tan and green agricultural land. Existing transmission lines heading southbound along Dogwood Road are present in front of the visible Heber 2 facility. The facility appears as dark low lying uniform squares and rectangles against the horizon. Sparse trees are present off to the west.

Existing transmission infrastructure and vegetative features provide minimal screening or obstruction of the view of the Project site (Figure 2 in **Attachment B**).

4.2.2 View with Project

The Project's north side and potentially overhead cables on monopoles would be visible from KOP 2 in all cable route options. The Project would contribute an overall weak to moderate level of visual contrast against the existing view. The Heber 1 Parasitic Solar Project would blend in against the background of dark space vegetative features and surrounding facilities as a dark metallic horizontal bar. The monopoles and cables would create faint linear features in the midground adding to the existing density of existing monopoles and cables. The Project would assimilate in shape, scale, and color with the surrounding features of the Heber 2 facility. The glare analysis determined the Project would not produce any glare that would impact KOP 2.

4.3 KOP 3: View from Heber Childrens Park

4.3.1 Existing View

KOP 3 is Heber Childrens Park located at 39 Crane Lane, Heber, CA approximately 1.9 miles north of the Project site. The area is characterized by a Childrens Park with a children's recreational structure, open space, and a comparatively medium density of trees. The area is also characterized by residential building structures, transparent fencing in the foreground, and solid white fencing in the background. Local transmission lines and streetlights are visible throughout the foreground. The view of the current project location or any of its associated facilities or transmission lines are completely obstructed by neighborhood residencies and surrounding vegetation in the foreground (Figure 3 in **Attachment B**).

4.3.2 View with Project

The view of the Project location including its associated facilities or potentially overhead monopoles and cables would remain completely obstructed by neighborhood residencies and surrounding vegetation. Therefore, the Project would not contrast with the existing landscape of KOP 3.

4.4 KOP 4: View from Closest Residence to the North

4.4.1 Existing View

KOP 4 is from the closest residence approximately .46 miles northeast of the existing project site located at 104 Jasper Road, Heber, CA. From the closest edge of KOP 4 looking to the southwest, the proposed solar site, monopoles, and cables would be visible throughout the middle ground in all cable route options. The landscape is characteristically flat and agricultural with vertical distribution line poles and visually soft lines to connect them. An IID water canal is present in the immediate foreground. Beyond the canal, low-lying vegetation that are shades of tan and green, a vertical water pump, and existing gen-tie powerlines are present. In the background along the horizon, dark sparse buildings and vegetative figures are present. The transmission lines would be buried below the ground and therefore not considered for analysis in section 4.4.2 (Figure 4 in **Attachment B**).

4.4.2 View with Project

The solar facilities and potentially overhead cables on monopoles would be visible from KOP 4 in all cable route options and have a moderate to strong contrast to the existing landscape. The solar field would be a prominent figure and be visually bold against the overall landscape character visible from KOP 4. The rectangular shape of solar panels would contribute a generally uniform and symmetrical rectangle form across the view of the foreground. The monopoles and cables would contribute to the density of existing monopoles and cables present throughout foreground. Portions of the sparse building and vegetative features in the background of the landscape would be obstructed. The bottom half of gen-tie structures in the background would be obstructed but the tops of the vertical poles would remain visible. The solar panels would not produce a source of glint or glare from this KOP.

4.5 KOP 5: View from Intersection of Dogwood Road and Willoughby Road

4.5.1 Existing View

KOP 5 is located at the Intersection of Dogwood Road and Willoughby Road approximately .35 miles north of the project site. The area is characteristically flat agricultural land with limited transmission and vegetative features in the foreground. An approximately 3-foot-tall pipeline is partially visible as a linear feature spanning across the proposed solar field area and proposed transmission cable area. Existing transmission lines, sparse buildings and thin, dense, vegetation is visible approximately 1 mile away and further. The transmission lines would be buried below the ground and therefore not considered for analysis in Section 4.5.2 (Figure 5 in **Attachment B**).

4.5.2 View with Project

The solar facilities and potentially overhead cables on monopoles would be visible from KOP 5 in all cable route options and would result in a moderate to strong contrast with the existing character of the surrounding landscape. The Project would add a prominent rectangular form with vertical features underneath to the foreground of an otherwise flat area. The Project would appear dark and metallic against an otherwise green and tan area. The cables intersecting Dogwood Road would add to the density of the existing gen-tie and transmission lines present but would absorb into the existing form and color of the existing landscape. The existing transmission lines, sparse buildings and thin, dense, vegetation in the background would mostly be obstructed by the solar facilities. The solar panels would not produce a source of glint or glare from this KOP.

4.6 KOP 6: View from Margarito Huerta Jr. Park

4.6.1 Existing view

KOP 6 is located at the furthest edge of Margarito Huerta Jr Park at the intersection of W. Hawk Street and Palm Avenue, approximately 2 miles north of the proposed geothermal facility. The area is characterized by dense residential buildings and some vegetative features with Palm Avenue serving as a viewing corridor to the Project area. Residential transmission lines can be seen in the middle ground. The Heber 2 geothermal units can be seen in background facing south down Palm Avenue however

residencies and vegetation completely obstruct visibility of the Project area KOP 6 (Figure 6 in **Attachment B**).

4.6.2 View with Project

The view of the Project location including its associated transmission lines would remain completely obstructed by neighborhood residencies and surrounding vegetation. Therefore, the Project would not contrast with the existing landscape of KOP 6.

4.7 KOP 7: View from Mountain View Cemetery

4.7.1 Existing View

KOP 7 is located at 895 Scaroni Road, Calexico, CA approximately 1.56 miles east of the Project site. Looking west from the back of the cemetery, the tops of the Heber 1 site are visible. The area is characterized by expansive and flat agricultural land with intermittent vegetative features such as trees present and small structured in the foreground and middleground. Some chain link fencing as well as westbound transmission lines on metallic monopoles creating a diffuse line are also present in the foreground. Existing structural features such as generation plants and buildings as well as sparse vegetative features such as trees are present along the horizon in the background (Figure 7 in **Attachment B**).

4.7.2 View with Project

The Project's northeast corner side and potentially overhead cables on monopoles would be partially visible from KOP 7. The Project would contribute an overall weak level of visual contrast against the existing view. The Heber 1 Parasitic Solar Project would be primarily obstructed by vegetative features in the foreground and midground. The sections of the solar field would blend in against the background of dark space vegetative features and surrounding facilities as a metallic horizontal bar. The monopoles and cables would create faint linear features in the background adding to the existing density of existing monopoles and cables. The Project would assimilate in shape, scale, and color with the surrounding features of the Heber 2 facility. The glare analysis determined the Project would not produce any glare that would impact KOP 2.

4.8 KOP 8: View from Las Casitas Park

4.8.1 Existing View

KOP 8 is located at 600 JM Ostrey St., Calexico, CA 1.32 miles southeast of the Project site. The area is characterized by vegetative features and a soccer field with multiple goals throughout the foreground and middle ground. An earthen berm in the background provides a level visual barrier, completely obstructing the view of the project area from the highest point in Las Casitas Park. Vertical transmission poles and the tops of vegetative features are visible behind the berm providing additional screening of the project area (Figure 8 in **Attachment B**).

4.8.2 View with Project

The Project would have no contrast with the existing characteristic landscape of KOP 8. The view of the project location or any of its associated facilities or transmission lines remains completely obstructed by the earthen berm, existing buildings, vegetative features, and transmission lines along the horizon.

4.9 KOP 9: View from Intersection of Dogwood Road and W Cole Boulevard

4.9.1 Existing View

KOP 9 is located at the Intersection of Dogwood Road and W Cole Boulevard approximately 200 feet south of the project site. The area is characteristically flat agricultural land with transmission infrastructure running along both Dogwood Road and W Cole Boulevard, a residential building immediately to the north east that has been identified for removal, vegetative features, and an open IID canal in the foreground. Additionally, chain-link fencing on the western side of dogwood road is present in the foreground. Existing sparse buildings and thin, dense, vegetation is visible approximately 1 mile away and further (Figure 9 in **Attachment B**).

4.9.2 View with Project

The solar facilities potentially overhead cables on monopoles would be visible from KOP 9 in all cable route options and would result in a moderate to strong contrast with the existing character of the surrounding landscape. The Project would add a prominent rectangular form with vertical features underneath to the foreground of an otherwise flat area. The Project would appear dark and metallic against an otherwise green and tan area. The sparse vegetation in the background would mostly be obstructed by the solar facilities. The solar panels would not produce a source of glint or glare from this KOP.

4.10 KOP 10: View from Heberwood Estates

4.10.1 Existing View

KOP 10 is located at the intersection of N Maple Ave and W Pheasant Street at the Heberwood estates residential area approximately 1.5 miles north of the project site. The area is characteristically flat agricultural land with transmission, residential, chain-link fencing, and vegetative features in the foreground. The silhouette of the Heber 2 facility, other buildings, and thin, dense, vegetation are visible approximately 1 mile away and further (Figure 10 in **Attachment B**).

4.10.2 View with Project

The north side of solar arrays and potentially overhead cables on monopoles will be visible from KOP 10 in all cable routes looking south across an agricultural field. The project would be faint but detectable against the current landscape, contributing an overall weak level of contrast. From a level elevation, the solar facilities would appear as a generally dark uniform rectangle in the background. The monopoles and cables would create faint linear features in the background adding to the existing density of existing

monopoles and cables. The projects would produce minimal screening of the background views. The solar panels would not produce a source of glint or glare from this KOP.

SECTION 5

CEQA Analysis

This section provides a preliminary technical assessment of the potential environmental effects outlined in the California Environmental Quality Act (CEQA) under Visual Resources/Aesthetics. Below are the questions asked to identify impact significance.

1. Would the Project have a substantial adverse effect on a scenic vista?

No Impact. Scenic vistas are typically expansive views from elevated areas that may or may not be designated scenic overlooks or areas providing a static vista view of a landscape. No scenic vistas have been identified within or near the project area and therefore the project would have no impact on a scenic vista.

2. Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impacts. No state scenic highway that runs within or near the project area and thus no damage to any potentially scenic resources would occur. Therefore, the project would have no impact on scenic resources within a state scenic highway.

3. Would the Project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant. The presence of other industrial facilities (i.e., solar, geothermal, materials storage) in the vicinity of the Project Site would allow for the proposed solar facilities to assimilate with the area's existing visual character. The solar fields would be visible but would add an overall weak-to-moderate contrast to the existing character of the landscape. Views from most of the KOPs indicate weak-to-no contrast with the existing setting. Therefore, the Project's impact on degrading the existing visual character or quality of public views would be less than significant.

4. Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant. The Glint and Glare Analysis (under separate cover) determined the proposed solar facilities would not produce a significant source of light or glare on the surrounding environment. It was analyzed that two residences within 3 miles of the solar array will potentially be exposed to green glare as a result of the project. These residences as discussed in Section 3, are not sensitive receptors and therefore would not result in a significant impact. Additionally, the Project would not introduce a new substantial source of light or glare, as numerous solar developments are present throughout the Project vicinity. Further, the area is considered to have the characteristics of a BLM Visual Resource Management (VRM) Class IV zone, which has the objective to....“provide for management activities which require major

modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. Projects/activities may dominate a local view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.” (BLM 1976). Based on the preliminary analysis all KOP locations are considered below or meet these classification objectives. Therefore, the project would result in a less than significant impact.

SECTION 6

Conclusions

The Project would result in the construction of a visually prominent solar field in the southern portion of Heber, California on lands currently used for cultivation. In views from publicly accessible locations, the proposed Project would be visible and identifiable, though it would not substantially alter the existing visual character of the area or introduce a significant new visual contrast. From the KOP views, much or all of the Project would be absorbed into the broader landscape. Most of this portion of the Imperial Valley is dedicated to agricultural, energy (solar and geothermal) generation, transmission infrastructure, and IID canals. The Project would appear consistent with existing patterns of croplands, geothermal facilities, solar fields, utility infrastructure, and other mechanized or industrial appearing facilities.

SECTION 7

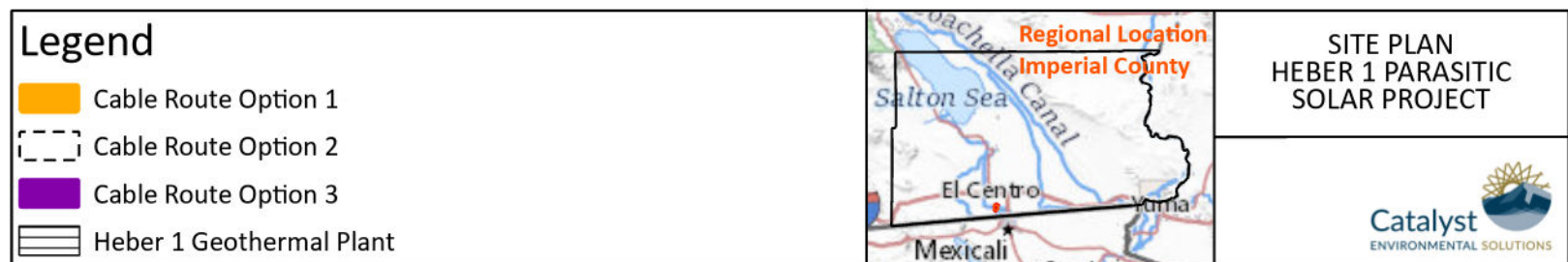
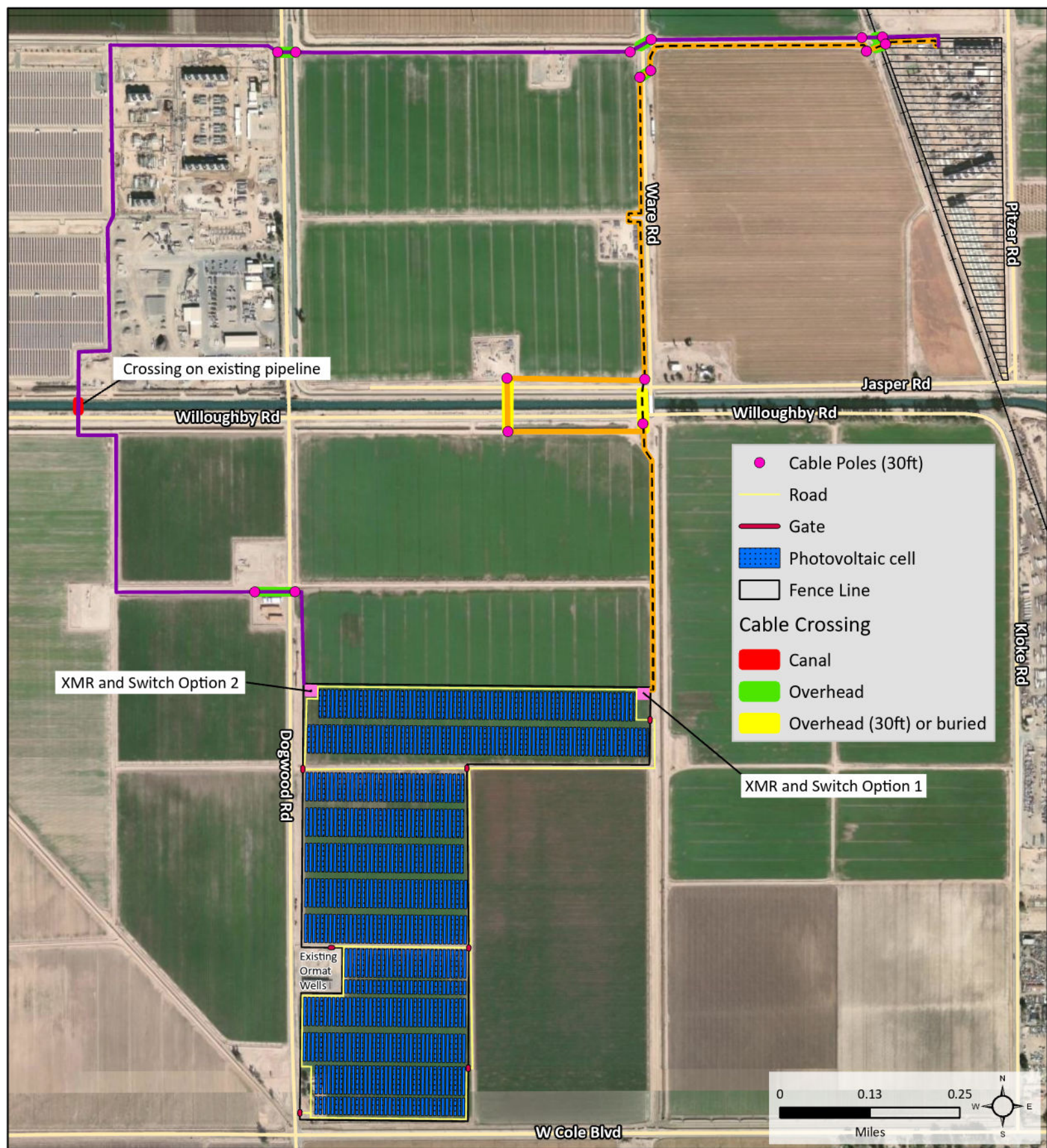
References

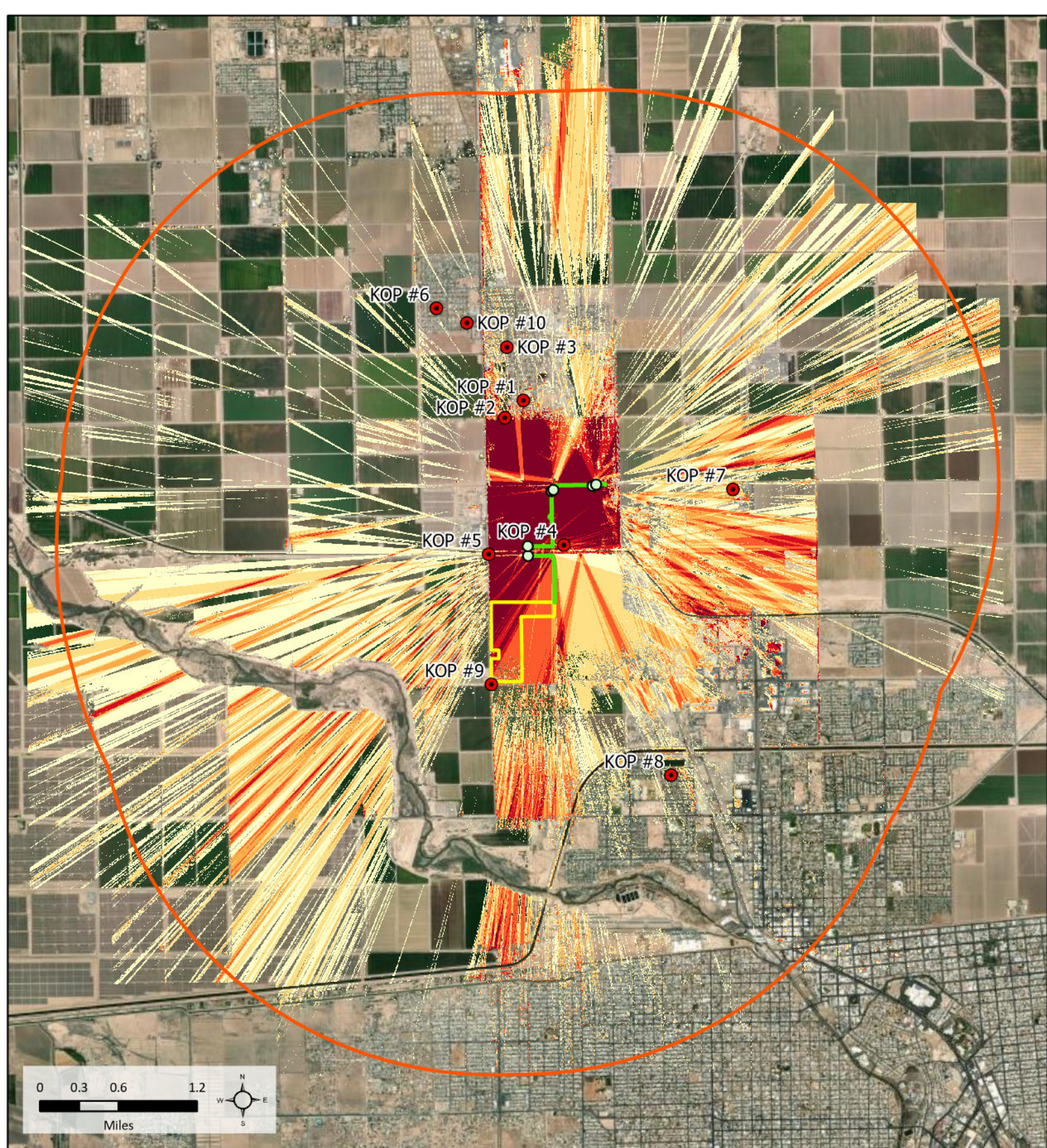
Bureau of Land Management. April 5, 1986. *Manual 8400 - Visual Resource Management*. Available online at:
https://www.blm.gov/sites/blm.gov/files/uploads/mediacenter_blmpolicymanual8400.pdf .
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Bureau of Land Management. January 17, 1986. *Manual 8431 - Visual Resource Contrast Rating*.
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Roland, J., May 2019. Healthline.com *How Far Can We See and Why?* Available online at:
[How Far Can the Human Eye See? \(healthline.com\)](https://www.healthline.com/health/how-far-can-we-see). Accessed April 9, 2023.

Attachment A: Figures





Legend

- Cable Poles (30ft)
- Cable Route Option 1
- Parasitic Solar Field and XMD Switch
- Range of human visibility (3mi)

Number of poles visible

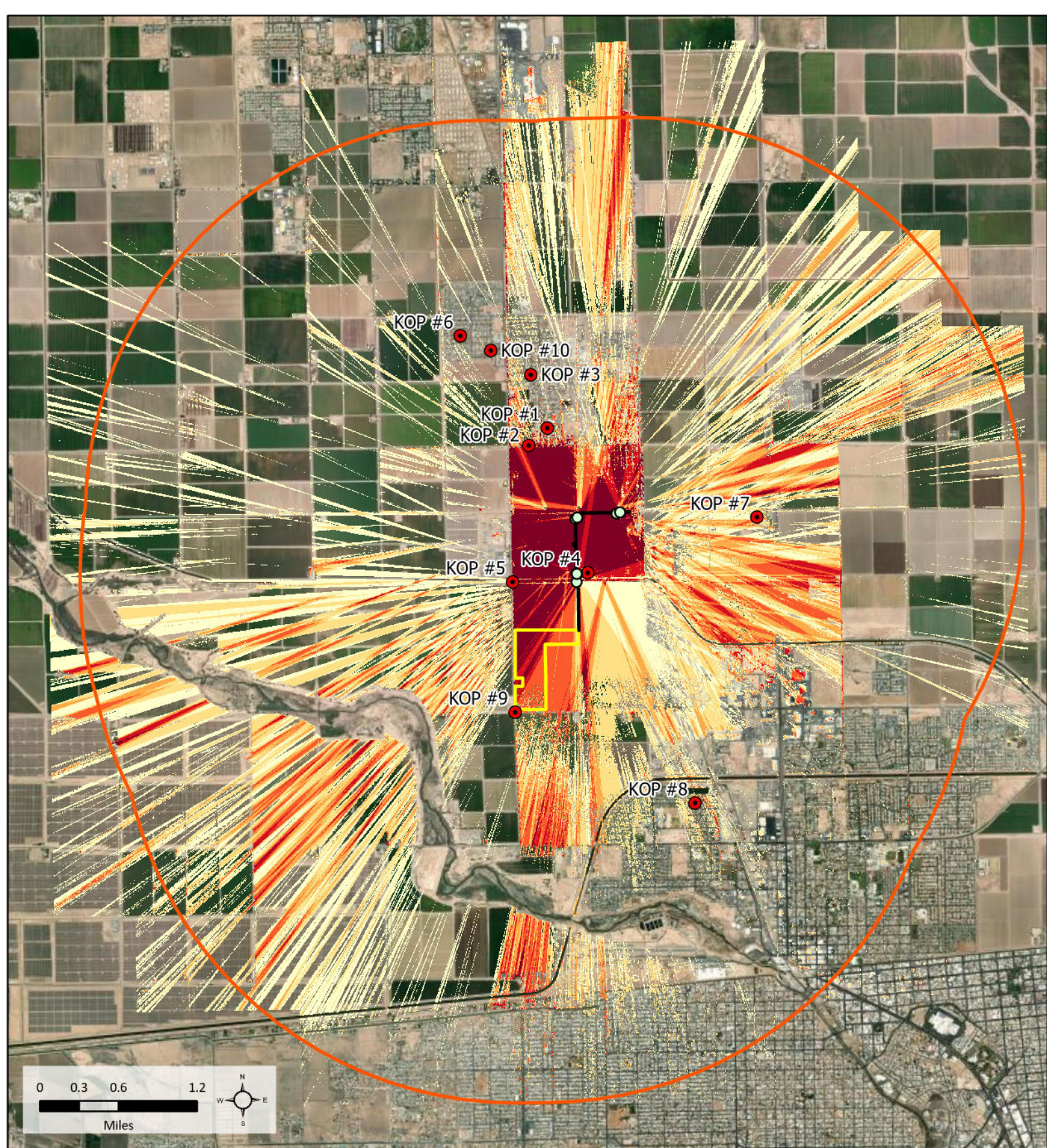
- 1
- 2
- 3
- 4
- 5
- 6



CABLE ROUTE OPTION ONE VISIBILITY ANALYSIS



HEBER 1
REPOWER PROJECT

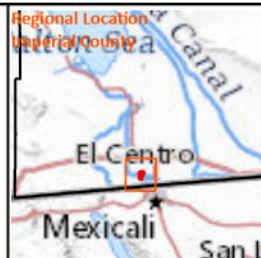


Legend

- Cable Poles (30ft)
- Cable Route Option 2
- Parasitic Solar Field and XMD Switch
- Range of human visibility (3mi)

Number of poles visible

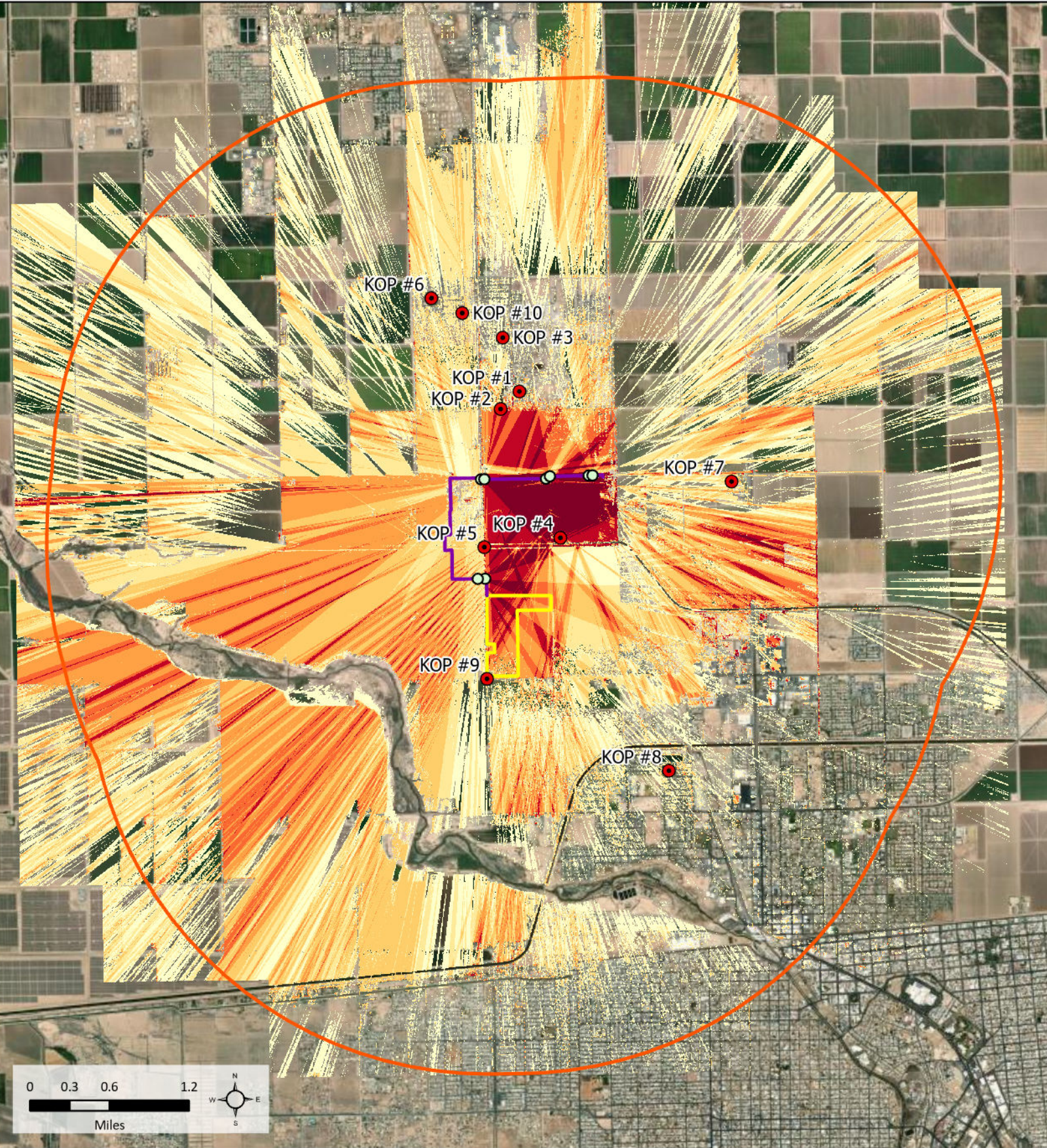
- 1
- 2
- 3
- 4
- 5
- 6



CABLE ROUTE OPTION TWO VISIBILITY ANALYSIS



HEBER 1
REPOWER PROJECT



Legend

- Cable Poles (30ft)
- Key Observation Points
- ▬ Cable Route Option 3
- ▭ Parasitic Solar Field and XMD Switch
- Range of human visibility (3mi)

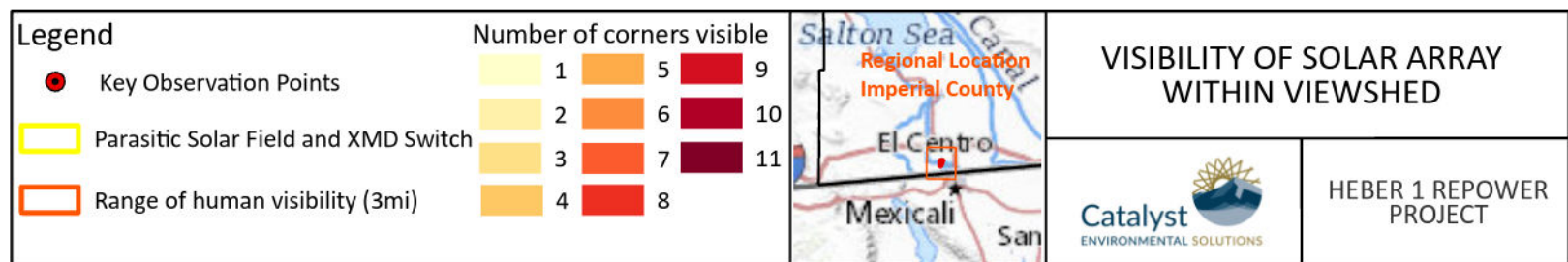
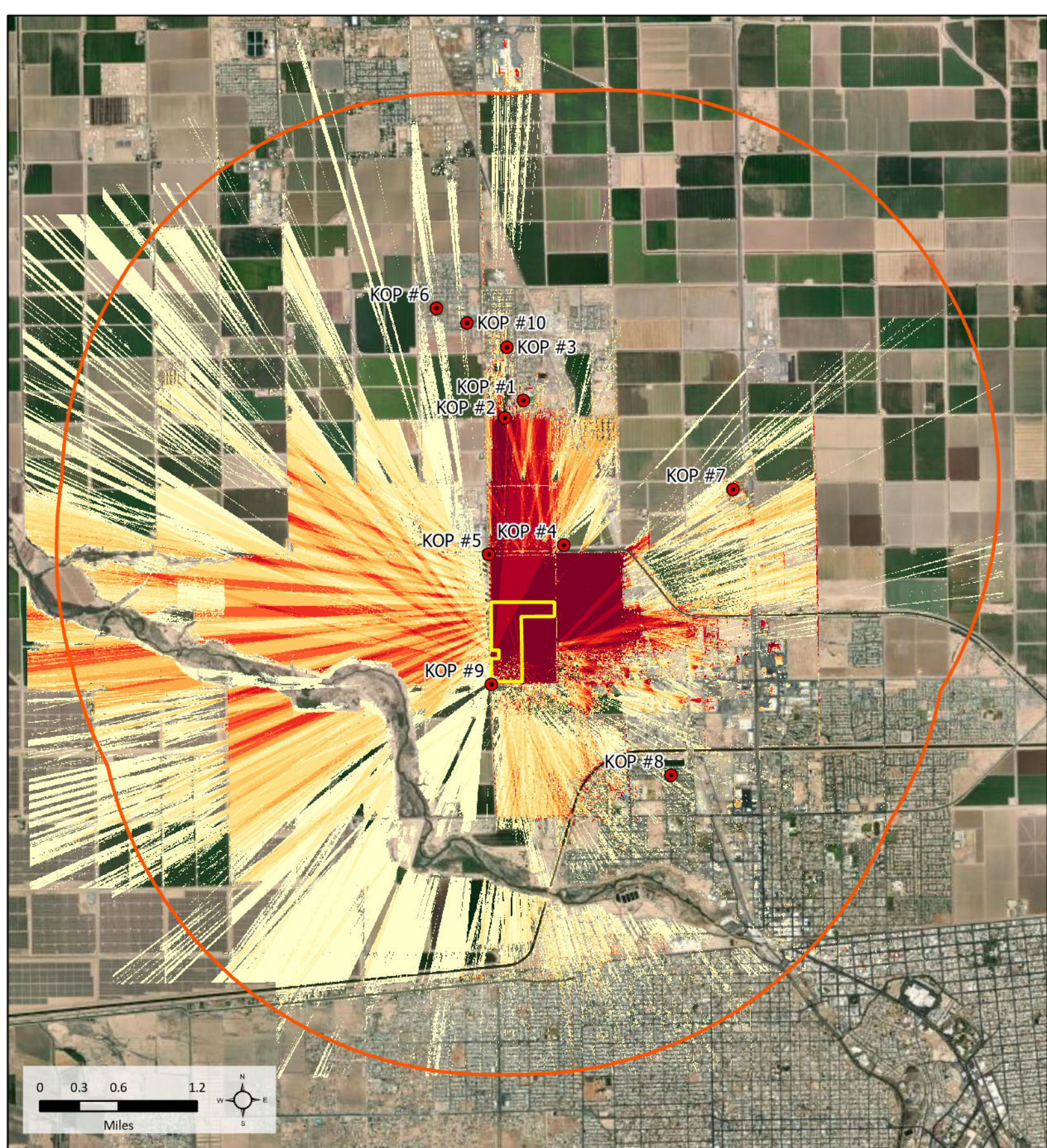
Number of poles visible		
1	6	
2	7	
3	8	
4		
5		

Regional Location

Imperial County

CABLE ROUTE OPTION THREE VISIBILITY ANALYSIS

HEBER 1 REPOWER PROJECT



Attachment B: Photo Log

Figure 1. KOP 1: View from Heber Elementary School (photo facing south).



Figure 2. KOP 2: View from Residence in the North (photo facing south).



Figure 3. KOP 3: View from Heber Childrens Park (photo facing south).



Figure 4. KOP 4A: View from Closest Residence to the North (photo facing south).



Figure 5. KOP 5A: View from Intersection of Dogwood Road and Willoughby Road (photo facing south).



Figure 6. KOP 6: View from Margarito Huerta Jr. Park (photo facing south).



Figure 7. KOP 7: View from Mountain View Cemetery (photo facing west).



Figure 8. KOP 8: View from Las Casitas Park (photo facing northwest).



Figure 9. KOP 9: View from Cole Road and Dogwood Road intersection (photo facing northeast).



Figure 10. KOP 10: View from Heberwood Estates (photo facing south).



Table 1: Photolog for Dogwood Visual Baseline/KOP Survey

Date	Time	KOP No.	KOP Name	Location/Address	Feature/From	Ground Elevation	Observer Height	Project Visible from KOP?
October 13, 2023	11:06am	KOP 1	Heber Elementary School	1052 Heber Ave., Heber, CA	Picture taken from corner of 14 th St. and Heber Ave., looking south/southwest towards Heber 2 complex.	0 to 5 Feet Above Sea Level (ASL)	5'8"	Yes, tops of Solar facilities would be visible in distance/background
October 13, 2023	11:02am	KOP 2	Residence to the north	20 E. Fawcett Road, Heber	Taken from Fawcett Road looking towards existing Heber 2 facility.	0 to 5 Feet ASL	5'8"	Yes, Solar facilities visible in distance/background.
October 13, 2023	11:13am	KOP 3	Heber Childrens Park	39 Crane Lane, Heber, CA	Taken from park looking towards Heber 2 facility.	0 to 5 Feet ASL	5'8"	No. Residences and vegetation obstructing view.
October 13, 2023	10:03am	KOP 4	Closest residence to the south/southeast	104 Jasper Road, Heber, CA	Taken from road shoulder looking south/southwest towards proposed solar farm.	0 to 5 Feet ASL	5'8"	Yes, proposed solar site visible from residence.
October 13, 2023	10:08am	KOP 5	Intersection of Dogwood Road and Willoughby Road	Intersection of Dogwood Road and Willoughby Road. Proposed solar fields immediately across Willoughby Road.	Taken from the road shoulder looking south towards proposed solar fields.	0 to 5 Feet ASL	5'8"	Yes, proposed solar site is directly visible from intersection.
October 13, 2023	11:20pm	KOP 6	Margarito Huerta Jr. Park	Intersection of W. Hawk Street and Palm Ave.	Taken from park corner looking south towards geothermal facility.	0 to 5 Feet ASL	5'8"	No. Residences and vegetation obstructing view.
October 13, 2023	10:39am	KOP 7	Mountain View Cemetery	895 Scaroni Road, Calexico, CA	Taken from back of cemetery looking west towards Heber 2 facility.	0 to 5 Feet ASL	5'8"	No, Heber 1 facilities are visible in background but not Heber 2 facilities.
October 13, 2023	10:26am	KOP 8	Las Casitas Park	600 JM Ostrey St., Calexico, CA	Taken from highest point in park looking north/northwest towards Heber 2 complex.	0 to 5 Feet ASL	5'8"	No, earthen berm and trees/vegetation screen facilities from views at the park.
October 13, 2023	10:55am	KOP 9	Intersection of Dogwood Road and Cole Road	Solar Field 200 feet north	Taken from road shoulder looking north toward Heber 1 Parasitic solar site	0 to 5 Feet ASL	5'8"	Yes, proposed solar site is directly visible from intersection.
October 13, 2023	11:26am	KOP 10	Heberwood estates	Intersection of W Maple Ave. and Pheasant St. 1.5 miles north of site	Taken from road shoulder looking south toward Heber 1 Parasitic solar site	0 to 5 Feet ASL	5'8"	Yes, transmission lines and fencing present in foreground and Solar facility area barely visible in background.

Attachment C: Visual Contrast Rating Forms

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 10/13/2023

District Office: California Desert District Office

Field Office: El Centro Field Office

Land Use Planning Area: Geothermal

SECTION A. PROJECT INFORMATION

1. Project Name Haber 1 Parasitic Solar Project	4. KOP Location (T.R.S) 16S 14E 28E 1052 Heber Ave, Heber CA	5. Location Sketch Flat suburban area. The Project Site is characterized by flat open land low lying vegetation, exposed soils, and existing geothermal facilities.
2. Key Observation Point (KOP) Name KOP-1: View from Heber Elementary School	(Lat. Long) 32.724419; -115.529886	
3. VRM Class at Project Location Class IV		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat simple terrain of paved roads and open grassy land. Indistinct rolling mountain range in background	Sparse density of shrubs, trees, and grass land.	Overhead distribution lines on wood and metal monopoles and solid rectangular residences.
LINE	Banded diffuse linear form in the foreground. Simple horizontal butt edge from paved road to grass land.	Banded, broken linear form from vegetation.	Horizontal linear form from the existing distribution lines. Moderate Silhouette-line from residences.
COLOR	Gray, light brown, tan, and light green from a combination of paved roads, grassy land, and exposed soils.	Present residential trees, shrub, and grass are light to dark green, and light brown, depending on the time of year	The monopoles are dark brown with metallic components; the distribution line is black. Residences light to dark brown
TEXTURE	Fine and even/ordered texture. The road and grass texture are fine with some color transition.	Medium density residential vegetation with uneven/random texture.	The medium density of distribution line poles and residences creates a medium contrast and texture.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	The primary form of the paved roads, open grass land, and indistinct rolling mountain range would not be altered	The primary vegetation forms would not be altered.	Facilities would create indistinct solid forms and new flat linear forms
LINE	The primary linear forms of land/water would not be altered.	Facilities would have weak contrast with surrounding vegetative communities.	Facilities will create indistinct horizontal and intermittent linear forms against horizon.
COLOR	The metallic solar array would have a weak to moderate overall contrast to existing land.	The metallic solar array would have a weak to moderate overall contrast to existing vegetative features	Solar facilities may have moderate color contrast depending on time of day, cloud cover, and direction.
TEXTURE	Facilities would add even, solid, and medium texture against the existing environment.	Facilities would add a smooth and medium density and overall medium contrast and texture to vegetation.	Facilities would add dense and solid texture creating overall medium contrast with the existing environment.

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side)
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
ELEMENTS	FORM				✓				✓				✓	3. Additional mitigating measures recommended <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverses side) Evaluator's Names _____ Date _____ Emily Merickel Hannah Donaghe
	LINE				✓			✓				✓		
	COLOR		✓				✓				✓			
	TEXTURE		✓				✓				✓			

SECTION D. (Continued)

Comments from item 2.

The proposed project would result in a weak to moderate visual contrast from the current landscape, resulting in some change to the baseline scenic environment. Installing new solar facilities, monopoles, and cables would not represent a significant change to the existing scenic environment given the presence of the existing low-lying solar arrays. Therefore, the Project would result in minor impacts to the scenic environment and would meet the standards for VRM Class IV.

Impacts to visual resources would be long term, but there are no sensitive receptors in the vicinity of the Project Area. The primary visual impacts for this KOP would be the limited school traffic along E 14th street and Heber Ave. Given the remote and undeveloped nature of the Project Area and distance from KOP 1, the proposed solar would have a minor impact on the scenic environment.

Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 10/13/2023

District Office: California Desert District

Field Office: El Centro Field Office

Land Use Planning Area: Solar

SECTION A. PROJECT INFORMATION

1. Project Name Heber 1 Parasitic Solar Project	4. KOP Location (T.R.S) 16S 14E 28 20 E. Fawcett Road, Heber, CA	5. Location Sketch The Project Site is characterized by flat open land, low lying vegetation, exposed soils, and existing geothermal facilities.
2. Key Observation Point (KOP) Name KOP-2: View from Residence to the North	(Lat. Long) 32.723628; -115.531731	
3. VRM Class at Project Location Class IV		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat simple terrain of paved roads and open grassy land. Indistinct rolling mountain range in background	Simple rectangular form of low-lying shrub and grass land. Few irregular trees	Distribution lines on metal monopoles and solid rectangular structures with small symmetrical cylindrical features
LINE	Simple linear forms. Simple weak silhouette-line created by mountain in background against sky.	Simple broken silhouette-line forms from irregular vegetation.	Horizontal diffuse linear forms from the existing distribution lines. Simple Silhouette-line forms from facilities.
COLOR	Gray, light brown, and light green from a combination of paved roads, grassy land and exposed soils. moderate internal contrast	Present trees, shrub, and grass are light to dark green, and light brown.	The monopoles and residencies are dark brown or gray and metallic. Light to dark brown facilities.
TEXTURE	Fine and even/ordered texture. Primarily fine grass texture with minimal color transition.	Sparsely dense vegetative features with uneven/random texture.	Medium density of distribution line poles and weak density structures creates a weak to medium contrast and texture.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	The primary form of the flat simple terrain and indistinct rolling mountain range would not be altered	Vegetative forms would not be altered or obstructed.	Facilities would create additional continuous flat rectangular forms
LINE	The primary linear forms of land/water would not be altered.	Facilities would have weak contrast with surrounding vegetative communities.	Facilities will create horizontal linear forms against horizon.
COLOR	The metallic solar array, poles and cables would have a weak to moderate overall contrast to existing land.	The metallic solar array would have a weak to moderate overall contrast to existing vegetative colors	Solar facilities may have moderate color contrast depending on time of day, cloud cover, and direction.
TEXTURE	Facilities would add even, solid, and medium texture with overall medium contrast to the existing environment.	Facilities would add a smooth and medium density and overall medium contrast and texture to vegetation.	Facilities would add a medium even density and medium overall contrast to existing structures.

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side)
		LAND/WATER BODY				VEGETATION				STRUCTURES				
		(1)				(2)				(3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverses side) Evaluator's Names _____ Date _____ Emily Merickel _____ 10/13/2023 Hannah Donaghe _____
ELEMENTS	FORM				✓				✓				✓	
	LINE				✓			✓				✓		
	COLOR		✓				✓				✓			
	TEXTURE		✓				✓				✓			

SECTION D. (Continued)

Comments from item 2.

The proposed project would result in weak to moderate visual contrast from the current landscape, resulting in minimal change to the baseline scenic environment. Installing new facilities would not represent a significant change to the existing scenic environment given the presence of the existing solar arrays and distribution lines. Therefore, the Project would result in minor impacts to the scenic environment and would meet the standards for VRM Class IV

Impacts to visual resources would be long term, but there are no sensitive receptors in the vicinity of the Project Area. The primary visual impacts for this KOP would be residences along Heber Ave. Given the remote and undeveloped nature of the Project Area and distance from KOP 2, the proposed solar facilities would have a minor to moderate impact on the scenic environment.

Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 10/13/2023

District Office: California Desert District Office

Field Office: El Centro Field Office

Land Use Planning Area: Geothermal

SECTION A. PROJECT INFORMATION

1. Project Name Heber 1 Parasitic Solar Project	4. KOP Location (T.R.S) 16S; 14E 28 39 Crane Lane, Heber CA	5. Location Sketch KOP 3 is characterized by residencies, irregular vegetation, and overhead distribution lines.
2. Key Observation Point (KOP) Name KOP-3: View from Heber Childrens Park	(Lat. Long) 32.730806; - 115.531003	
3. VRM Class at Project Location Class IV		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat simple terrain of paved roads and residencies.	Numerous irregular trees and other vegetative forms. Rectangular patches of park and residential grass.	Distribution lines on wood monopoles, vertical streetlights and solid rectangular residencies and play structures.
LINE	Various banded and diffuse linear forms from roads and walkways.	Simple broken forms from irregular vegetation.	Horizontal linear forms from the existing distribution lines. Simple Silhouette-line forms from facilities.
COLOR	Gray, light brown, and light green from a combination of paved roads, walkways, grassy patches and exposed soils.	Present trees, shrub, and grass are light to dark green, and light brown.	The monopoles and residencies are dark brown or gray and metallic. Light to dark brown residencies and a primary color children's play structure
TEXTURE	Fine and even/ordered texture. Primarily fine grass texture with minimal color transition.	Strong density medium coarse vegetative features creates an medium uneven/random texture and contrast	Medium density of distribution line poles and coarse and dense structures creates a strong contrast and texture.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	The flat simple terrain visible would not be altered by the Project	The vegetative forms would not be altered by the Project	Facilities cannot be seen from KOP 3 and do not contribute additional forms
LINE	The primary linear forms of land/water would not be altered by the Project	Vegetative lines would be altered by the Project.	Facilities cannot be seen from KOP 3 and do not contribute additional lines.
COLOR	The characteristic colors would not be altered by the Project.	Colors of vegetative features would not be altered by the project	Facilities cannot be seen from KOP 3 and do not contribute additional colors.
TEXTURE	Characteristic land/water textures would not be altered by the Project	Textures from vegetation would not be altered.	Facilities cannot be seen from KOP 3 and do not contribute additional textures.

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side)
		LAND/WATER BODY				VEGETATION				STRUCTURES				
		(1)				(2)				(3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
ELEMENTS	FORM				✓				✓				✓	3. Additional mitigating measures recommended? ____Yes <input checked="" type="checkbox"/> No (Explain on reverses side)
	LINE				✓				✓				✓	
	COLOR				✓				✓				✓	
	TEXTURE				✓				✓				✓	
<div style="display: flex; justify-content: space-between;"> Evaluator's Names Emily Merickel Hannah Donaghe Date 10/13/2023 </div>														

SECTION D. (Continued)

Comments from item 2.

The proposed project would result in no visual contrast from the current landscape, resulting in no change to the baseline scenic environment. New facilities would not be visible from the existing scenic environment given the presence of residencies and vegetation. Therefore, the Project would result in no impacts to the scenic environment and would meet the standards for **VRM Class IV**

Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 10/13/2023

District Office: California Desert District Office

Field Office: El Centro Field Office

Land Use Planning Area: Solar

SECTION A. PROJECT INFORMATION

1. Project Name Heber 1 Parasitic Solar Project	4. KOP Location (T.R.S) 16S 14E 33 17S 14E 03 Intersection of Ware Road/Pitzer Road/Willoughby Road (Lat. Long) 32.709269; - 115.524325	5. Location Sketch The Project Site is characterized by flat open land, low lying vegetation, exposed soils, and existing geothermal facilities.
2. Key Observation Point (KOP) Name KOP-4: View from Closest Residence to the North/Northeast		
3. VRM Class at Project Location Class IV		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
FORM	Flat simple terrain of paved and unpaved roads, an open canal, and undeveloped land. Indistinct rolling mountain range in the background	Simple rectangular form of low-lying shrub and grass land. Few irregular trees in the foreground and background.	Distribution lines on monopoles, long low-lying piping and few solid rectangular structures in the background.
LINE	Diffuse banded line between grass and canal. A weak straight line from mountain range visible.	Continuous diffuse silhouette-line of vegetation along bank of canal. Broken irregular vegetation in background.	Horizontal diffuse linear forms from the existing distribution lines and simple Silhouette-line forms of low-lying piping.
COLOR	Gray, light brown, and light green from paved roads, grassy land, exposed soil, and mountain range.	Present trees, shrub, and grass are light to dark green, and light to dark brown.	The monopoles are dark brown, and piping is pastel blue.
TEXTURE	Fine and even/ordered texture. Primarily fine grass / granular soil texture	Sparse to medium density vegetative features with uneven/random texture and some internal contrast.	Sparse density of distribution line poles and structures creates a weak contrast and texture.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
FORM	The primary form of the flat terrain would not be altered. The mountain form would be partially obstructed	Solar facilities would dominate visible open grass form and background tree forms	Prominent rectangular forms of solar facilities
LINE	The new linear forms from the facility would present some contrast to the existing flat and linear landscape.	Facilities would create bold horizontal and intermittent contrast with broken surrounding vegetation	Facilities would create bold horizontal and intermittent linear forms against horizon.
COLOR	The metallic solar panel would produce moderate contrast in colors from land/ water	New metallic facilities would have a dominant contrast with existing vegetative colors.	New metallic/dark facilities would have some contrast with existing facilities..
TEXTURE	Facilities would add even, solid, and dense texture against the existing environment.	Texture from new facilities would be dominant against sparse surrounding vegetation	Facilities would add a medium even density and moderate overall contrast to existing structures.

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side) 3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverses side)	
		LAND/WATER BODY				VEGETATION				STRUCTURES					
		(1)				(2)				(3)					
ELEMENTS	FORM			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				Evaluuator's Names Emily Merickel Hannah Doneghe	
	LINE			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					
	COLOR		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>				

Date
10/13/2023

	TEXTURE	✓				✓					✓		
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SECTION D. (Continued)

Comments from item 2.

The proposed project would result in moderate to strong visual contrast from the current landscape, resulting in strong change to the baseline scenic environment. Installing new facilities would represent a significant change to the existing scenic environment given the presence of new solar facilities, however similar existing facilities are present in the Project area. Therefore, the Project would result in moderate impacts to the scenic environment and would meet the standards for VRM Class IV

Impacts to visual resources would be long term, but there are no sensitive receptors in the vicinity of the Project Area. The primary visual impact for this KOP would be a single resident along Jasper Rd. However, given the existing nature of the Project Area with existing solar facilities and the location of KOP 4, the proposed Project would have a moderate impact on the overall scenic environment.

Additional Mitigating Measures (See item 3)

	TEXTURE	✓				✓					✓		
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SECTION D. (Continued)

Comments from item 2.

The proposed project would result in moderate to strong visual contrast from the current landscape, resulting in strong change to the baseline scenic environment. Installing new facilities would represent a significant change to the existing scenic environment given the proximity of a new solar facility, however similar existing facilities are present in the Project area. Therefore, the Project would result in moderate impacts to the scenic environment and would meet the standards for **VRM Class IV**

Impacts to visual resources would be long term, but there are no sensitive receptors in the vicinity of the Project Area. The project would primarily be visible to travelers along Dogwood and Willoughby Road which lack significant traffic. Given the existing nature of the Project Area with existing geothermal and solar facilities and the location of KOP 5, the proposed Project would have a moderate impact on the overall scenic environment.

Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 10/13/2023

District Office: California Desert District Office

Field Office: El Centro Field Office

Land Use Planning Area: Solar

SECTION A. PROJECT INFORMATION

1. Project Name Heber 1 Parasitic Solar Project	4. KOP Location (T.R.S) 16S 14E 29 Intersection of W. Hawk Street and Palm Ave.	5. Location Sketch Flat suburban area. The Project Site is characterized by flat open land low lying vegetation, exposed soils, residencies, and existing geothermal facilities.
2. Key Observation Point (KOP) Name KOP-6: View from Margarito Huerta Jr. Park	(Lat. Long) 32.734933; - 115.53915	
3. VRM Class at Project Location Class IV		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat simple terrain of paved roads. Indistinct rolling mountain range in background	Sparse density of shrub, trees and patches of residential grass.	Solid rectangular residences. Rectangular building forms and distribution lines on wood and metal monopoles in background.
LINE	Banded diffuse linear form from road in the foreground. Straight line from mountain ridge	Banded transitional edge of residential linear forms to grass land.	Horizontal linear form from the existing distribution lines. Broken horizontal linear forms from the tops of buildings.
COLOR	Gray, light brown, tan, and light green from a combination of paved roads, grass patches and exposed soils.	Present residential trees, shrub, and grass are light to dark green, and light brown.	The monopoles and residencies are dark brown with metallic components atop of the poles; the distribution line is black.
TEX- TURE	The road and grass texture are fine with some color transition creating an even/ordered texture	Sparce density residential vegetation creates uneven/random texture.	The medium to strong density of residencies and creates a medium to strong contrast and texture.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	The primary form of the paved roads, open grass land, and indistinct rolling mountain range would not be altered	The primary vegetation forms would not be altered.	Facilities cannot be seen from KOP 6 and do not contribute additional forms
LINE	There would be no overall change in linear land/water features.	Vegetative lines would not be altered by the Project.	Facilities cannot be seen from KOP 6 and do not contribute additional lines.
COLOR	The characteristic colors would not be altered by the Project.	Colors of vegetative features would not be altered by the project	Facilities cannot be seen from KOP 6 and do not contribute additional colors.
TEX- TURE	Characteristic land/water textures would not be altered by the Project	Textures from vegetation would not be altered.	Facilities cannot be seen from KOP 6 and do not contribute additional textures.

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes ___No (Explain on reverses side) 3. Additional mitigating measures recommended ___Yes <input checked="" type="checkbox"/> No (Explain on reverses side) Evaluator's Names _____ Date _____ Emily Merickel _____ 10/13/2023 Hannah Donaghe _____
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
ELEMENTS	FORM				✓				✓				✓	
	LINE				✓				✓				✓	
	COLOR				✓				✓				✓	
	TEXTURE				✓				✓				✓	

SECTION D. (Continued)

Comments from item 2.

The proposed project would result in no visual contrast from the current landscape, resulting in no change to the baseline scenic environment. New facilities would not be visible from the existing scenic environment given the presence of vegetation and existing building forms obstructing the view. Therefore, the Project would result in no impacts to the scenic environment and would meet the standards for VRM Class IV.

Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 10/13/2023

District Office: California Desert District Office

Field Office: El Centro Field Office

Land Use Planning Area: Solar

SECTION A. PROJECT INFORMATION

1. Project Name Haber 1 Parasitic Solar Project	4. KOP Location (T.R.S) 16S 14 E 35 895 Scaroni Road, Calexico	5. Location Sketch The area is characterized by flat land, irregular vegetation, and overhead distribution lines.
2. Key Observation Point (KOP) Name KOP-7: View from Mountain View Cemetery	(Lat. Long) 32.715353; - 115.5032	
3. VRM Class at Project Location Class IV		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
FORM	Flat simple terrain of exposed soils and grass lands. Indistinct mountain form in background	Rectangular patches of trees in background. Few irregular tree and shrub forms.	Distribution lines on metal monopoles and rectangular fence form with metal posts. Visible square indistinct building structures.
LINE	Distinct butt edge between flat exposed soil and grass land. Long smooth line on mountain ridge.	Simple silhouette-lines from irregular vegetation.	Diffuse linear forms from the existing distribution lines. Simple Silhouette-line forms from facilities.
COLOR	Brown and light green from grassy patches and exposed soils.	Present trees, shrub, and grass are light to dark green, and brown.	The monopoles and residencies are dark brown or gray and metallic. Light to dark brown building structures
TEXTURE	Fine grass texture with some color transition creates a weak even/ordered texture and contrast	Medium density vegetative features in background creates weak even/regular contrast and texture	Sparse density of distribution line poles and weak density structures creates a weak to medium contrast and texture.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
FORM	The flat simple terrain visible would not be altered by the Project	The vegetative forms would not be altered by the Project	Facilities would create indistinct solid forms and broken flat linear forms
LINE	The primary linear forms of land/water would not be altered by the Project	Vegetative lines would not be altered by the Project.	Facilities will create indistinct horizontal and intermittent linear forms against horizon.
COLOR	The characteristic colors of the surrounding landscape would not be altered by the Project.	Colors of vegetative features would not be altered by the project	Solar facilities may have moderate color contrast depending on time of day, cloud cover, and direction.
TEXTURE	Facilities would add fine and sparse texture against the existing environment.	Textures from vegetation would not be altered.	Facilities would add even and sparse texture against the existing environment.

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST		FEATURES													
		LAND/WATER BODY				VEGETATION				STRUCTURES					
		(1)				(2)				(3)					
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE		
ELEMENTS	FORM				✓				✓			✓		2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side) 3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverses side) Evaluator's Names _____ Date _____ Emily Merickel _____ 10/13/2023 Hannah Donaghe _____	
	LINE				✓				✓			✓			
	COLOR			✓					✓			✓			
	TEXTURE			✓					✓			✓			

SECTION D. (Continued)

Comments from item 2.

The proposed project would result in a weak to moderate visual contrast from the current landscape, resulting in some change to the baseline scenic environment. Installing new solar facilities, monopoles, and cables would not represent a significant change to the existing scenic environment given the presence of the existing low-lying solar arrays. Therefore, the Project would result in minor impacts to the scenic environment and would meet the standards for **VRM Class IV.**

Impacts to visual resources would be long term, but there are no sensitive receptors in the vicinity of the Project Area. The primary visual impacts for this KOP would be the limited visitors at the edge of the cemetery property. Given the remote and undeveloped nature of the Project Area and distance from KOP 7, the proposed solar would have a minor impact on the scenic environment.

Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 10/13/2023

District Office: California Desert District Office

Field Office: El Centro Field Office

Land Use Planning Area: Solar

SECTION A. PROJECT INFORMATION

1. Project Name Heber 1 Parasitic Solar Project	4. KOP Location (T.R.S) 17S 14E 11 600 J M Ostrey Street, Calexico	5. Location Sketch The area is characterized by flat land, irregular medium vegetation, and distribution lines.
2. Key Observation Point (KOP) Name KOP-8: View from Las Casitas Park	(Lat. Long) 32.715353; - 115.5032	
3. VRM Class at Project Location Class IV		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat simple terrain of exposed soils, paved roads, and grass lands. An earthen berm is present in background	Broken patches of trees in background. Few irregular trees and shrub forms in foreground.	Distribution lines on wood monopoles and rectangular fence form with metal posts. Geometric goal frames and few square building forms.
LINE	Distinct butt edge between flat grass land and horizontal / straight earthen berm.	Simple silhouette-lines from irregular vegetation.	Diffuse linear forms from the existing distribution lines. Simple Silhouette-line forms from fencing and geometric goal frames.
COLOR	Brown and light green from grassy patches and exposed soils. Paved roads are dark to light gray.	Present trees, shrub, and grass are light to dark green, and brown.	The monopoles and residencies are dark brown or gray and metallic. Light to dark brown buildings and white goal frames.
TEXTURE	Fine grass texture with weak color transition creates a weak even/ordered texture and contrast	Medium density vegetative features in background creates weak even/regular contrast and texture	Sparse density of distribution line poles and weak density structures creates a weak / medium contrast and texture.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	The flat simple terrain visible would not be altered by the Project	The vegetative forms would not be altered by the Project	Facilities cannot be seen from KOP 8 and do not contribute additional forms
LINE	The primary linear forms of land/water would not be altered by the Project	Vegetative lines would be altered by the Project.	Facilities cannot be seen from KOP 8 and do not contribute additional lines.
COLOR	The characteristic colors would not be altered by the Project.	Colors of vegetative features would not be altered by the project	Facilities cannot be seen from KOP 8 and do not contribute additional colors.
TEXTURE	Characteristic land/water textures would not be altered by the Project	Textures from vegetation would not be altered.	Facilities cannot be seen from KOP 8 and do not contribute additional textures.

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side)
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	
ELEMENTS	FORM				✓				✓				✓	3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverses side)
	LINE				✓				✓				✓	
	COLOR				✓				✓				✓	
	TEXTURE				✓				✓				✓	
														Evaluators' Names _____ Date _____ Emily Merickel _____ 10/13/2023 Hannah Doneghe _____

SECTION D. (Continued)

Comments from item 2.

The proposed project would result in no visual contrast from the current landscape, resulting in no change to the baseline scenic environment. New facilities would not be visible from the existing scenic environment given the presence of vegetation and existing building forms obstructing the view. Therefore, the Project would result in no impacts to the scenic environment and would meet the standards for VRM Class IV

Additional Mitigating Measures (See item 3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 10/13/2023

District Office: California Desert District Office

Field Office: El Centro Field Office

Land Use Planning Area: Solar

SECTION A. PROJECT INFORMATION

1. Project Name Heber 1 Parasitic Project	4. KOP Location (T.R.S) 16S 14E 33 17S 14E 03 Intersection of Ware Road/Pitzer Road/Willoughby Road (Lat. Long) 32.709269; - 115.524325	5. Location Sketch The Project Site is characterized by flat open land, low lying vegetation, exposed soils, and existing geothermal facilities.
2. Key Observation Point (KOP) Name KOP-9: View from Dogwood Road and Cole Road		
3. VRM Class at Project Location Class IV		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
FORM	Flat simple terrain of paved and unpaved roads, an open canal, and undeveloped land. Indistinct rolling mountain range in the background	Simple rectangular form of low-lying shrub and grass land. Few irregular trees in the foreground and background.	Distribution lines on monopoles, land single solid square structure in the foreground.
LINE	Diffuse banded line between grass and canal.	Simple silhouette-line forms from irregular vegetation in foreground. Broken irregular vegetation in background.	Horizontal diffuse linear forms from the existing distribution lines and simple silhouette of building.
COLOR	Gray, light brown, and light green from paved roads, grassy land, exposed soil, and mountain range.	Present trees, shrub, and grass are light to dark green, and light to dark brown.	The monopoles are dark brown, and building is tan blue.
TEXTURE	Fine and even/ordered texture. Primarily fine grass / granular soil texture	Sparse to medium density vegetative features with uneven/random texture and some internal contrast.	Sparce density of distribution line poles and structures creates a weak contrast and texture.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

1. LAND/WATER		2. VEGETATION	3. STRUCTURES
FORM	The primary form of the flat terrain would not be altered. The mountain form would be partially obstructed	Solar facilities would dominate visible open grass form and background tree forms	Prominent rectangular forms of solar facilities. Square building removed.
LINE	Facilities would have primarily flat linear forms parallel to flat land/water	Facilities would create bold horizontal and intermittent contrast with minima broken surrounding vegetation	Facilities would create bold horizontal and intermittent linear forms against horizon.
COLOR	The metallic solar panel would produce some moderate contrast in colors from land/water	New metallic facilities would have a dominant contrast with existing vegetative colors.	New metallic facilities would produce some moderate contrast in colors from surrounding buildings
TEXTURE	Facilities would add even, solid, and dense texture against the existing environment.	Texture from new facilities would be dominant against sparce surrounding vegetation	Facilities would add a medium even density and moderate overall contrast to existing structures.

SECTION D. CONTRAST RATING ☐ SHORT TERM ☒ LONG TERM

1. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverses side) 3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverses side)	
		LAND/WATER BODY				VEGETATION				STRUCTURES					
		(1)				(2)				(3)					
ELEMENTS	FORM			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				Evaluators' Names Emily Merickel Hannah Doneghe	
	LINE			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					
	COLOR		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>					

Date
10/13/2023

	TEXTURE	✓				✓					✓			
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SECTION D. (Continued)

Comments from item 2.

The proposed project would result in moderate to strong visual contrast from the current landscape, resulting in strong change to the baseline scenic environment. Installing new facilities would represent a significant change to the existing scenic environment given the proximity of the project, however similar existing facilities are present in the Project area. Therefore, the Project would result in moderate impacts to the scenic environment and would meet the standards for VRM Class IV

Impacts to visual resources would be long term, but there are no sensitive receptors in the vicinity of the Project Area. Given the existing nature of the Project Area with existing solar facilities and the location of KOP 9, the proposed Project would have a moderate impact on the overall scenic environment.

Additional Mitigating Measures (See item 3)

SECTION D. (Continued)

Comments from item 2.

The proposed project would result in a weak to moderate visual contrast from the current landscape, resulting in some change to the baseline scenic environment. Installing new solar facilities would not represent a significant change to the existing scenic environment given the presence of the existing low-lying solar arrays. Therefore, the Project would result in minor impacts to the scenic environment and would meet the standards for **VRM Class IV**.

Impacts to visual resources would be long term, but there are no sensitive receptors in the vicinity of the Project Area. The primary visual impacts for this KOP would be the limited school traffic along E 14th street and Heber Ave. Given the remote and undeveloped nature of the Project Area and distance from KOP 1, the proposed solar would have a minor impact on the scenic environment.

Additional Mitigating Measures (See item 3)