

DOCKETED

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TECHNICAL MEMORANDUM

DATE June 28, 2024

TO Hydrostor

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SUMMARY OF THE LEVEL OF SERVICE (LOS)-BASED TRAFFIC STUDY METHODOLOGY TO BE IMPLEMENTED FOR THE WILLOW ROCK ENERGY STORAGE PROJECT

Provided below is a brief summary of the Level of Service (LOS) traffic study methodology to be deployed by WSP and their field count subcontractor, Counts Unlimited, to collect baseline traffic count information and evaluate LOS impacts at select intersections in the vicinity of the proposed Willow Rock Energy Storage Center (WRESC) proposed site. The scope of this effort has been based on consultation with Kern County as well as California Energy Commission (CEC) staff.

The assessment will focus on addressing potential traffic impacts only during the construction phase (per CEC staff recommendations) based on worker trip and truck trip generation reported in the SAFC. The LOS analysis will focus on impacts at the interchange of State Route (SR) 14 and Dawn Road in both northbound and southbound directions (per CEC staff recommendations) and at select intersections associated with the waste rock haul route for Holliday Rock in Kern County, including the northbound and southbound directions at the intersection of SR 14 and Backus Road, and other specific intersections along Backus Road requested by Kern County.

WSP has coordinated with Kern County to finalize the scope, methodology, and content of this traffic study and will incorporate Kern County review and comments on the study results to assure that the Level of Service (LOS) based analysis satisfies both the requirements of Appendix B of the CEC Siting Regulations as requested by CEC staff and Kern County.

The following scenarios will be evaluated for Holliday Rock in Kern County:

- Existing Conditions (2024)
- Near-term Future Conditions before Construction
- Near-term Future Conditions during Construction

Data Collection

It is based on both the haul routes proposed by Holliday Rock and Kern County. Attachment A presents a figure that shows the haul route options proposed by Kern County and Holliday Rock. Attachment B presents a list of route location intersections.

WSP will collect new two-hour AM (6:30-8:30 AM) and two-hour PM (4:00-6:00 PM) peak period turning movement counts at the study intersections, including pedestrian, bicycle, and truck classification counts. In addition, WSP will collect new 24-hour daily traffic counts in the study area to establish the existing traffic conditions. WSP will review all study segments and intersections to determine the existing geometric conditions including number and type of lanes.

Existing Conditions

WSP will evaluate existing traffic conditions at the study intersections using the methodologies specified in the latest Highway Capacity Manual, 6th Edition (HCM6), using Synchro version 11.

Future Traffic Conditions

WSP will develop the near-term peak construction year traffic volumes using the construction trip generation estimates prepared for the Supplemental AFC. WSP will assign all trip types such as construction worker trips, water truck trips, and haul truck trips to the roadway network based on the proposed haul routes. WSP will develop an ambient growth factor and research cumulative nearby projects, in coordination with the agencies to develop the near-term Construction Year traffic volumes.

WSP will evaluate traffic operations at the study intersections for the construction scenario using Synchro 11. WSP will summarize the resulting level of service (LOS) and delay at the study intersections for all study scenarios. WSP will propose temporary improvements if any of the study intersections have deficient traffic operations during construction conditions.

WSP will develop trip generation estimates for the project operations and include a qualitative discussion of traffic conditions during the operations phase of the project. It is anticipated that the project would generate minimal traffic during operations.

Documentation

WSP will prepare a draft traffic study report for initial review by Kern County. WSP will respond to Kern County comments and prepare a final traffic study report submittal to both Kern County and the CEC.

Attachments: Attachment A - Haul Routes to Holliday Rock Processing Facility
Attachment B - Proposed Traffic Count Survey Locations/Intersections

ATTACHMENT A

Haul Routes to Holliday Rock Processing Facility

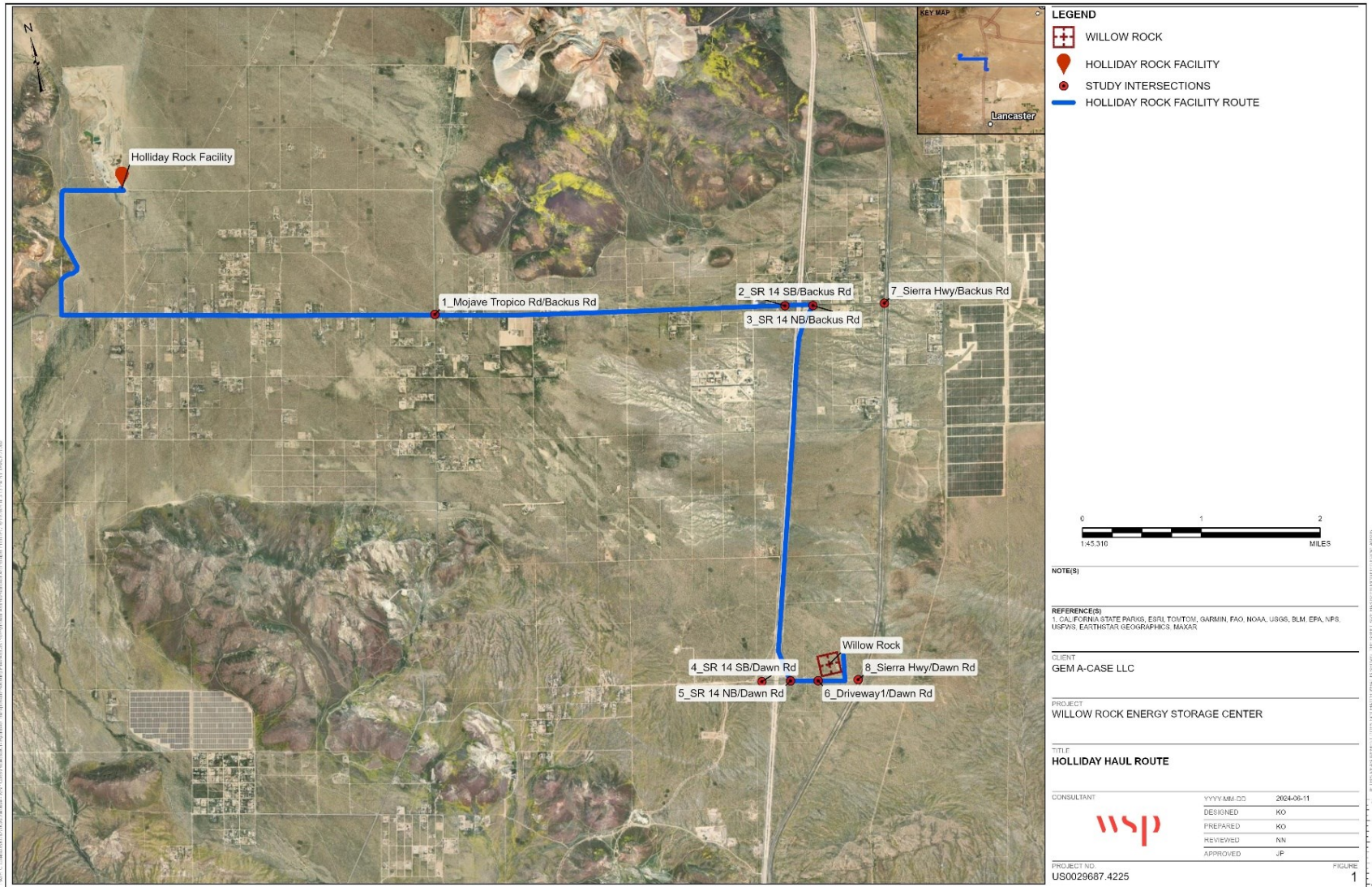


Figure 1 - Holliday Facility Haul Route

ATTACHMENT B

**Proposed Traffic Count Survey
Locations/Intersections**

Holliday Rock Facility Route Intersection Study Locations

Holliday Rock Facility Route				
Number	Intersection Study Locations	Type	Jurisdiction	Notes
1	Mojave Tropico Rd & Backus Rd	SSSC	Unincorporated Kern County	
2	SR 14 SB Ramps & Backus Rd	SSSC	Unincorporated Kern County	
3	SR 14 NB Ramps & Backus Rd	SSSC	Unincorporated Kern County	
4	SR 14 SB Ramps & Dawn Rd	SSSC	Unincorporated Kern County	
5	SR 14 NB Ramps & Dawn Rd	SSSC	Unincorporated Kern County	
6	Project Driveway & Dawn Rd	SSSC	Unincorporated Kern County	
7	Sierra Hwy & Backus Rd	SSSC	Unincorporated Kern County	
8	Sierra Hwy & Dawn Rd	SSSC	Unincorporated Kern County	

SSSC = Side Street Stop Control