

Glenn Broughton

From: Martinez, Javier, NMDOT <Javier.Martinez@dot.nm.gov>
Sent: Tuesday, October 25, 2022 3:01 PM
To: Carl Vermillion
Cc: Glenn Broughton; Bert Thomas
Subject: RE: [EXTERNAL] New Solar Site STA

Good Afternoon,
NMDOT will accept the form as submitted and the applicant will need to apply for an access permit.
Thank you,

Javier Martinez, P.E.
NMDOT District 5
Assistant District Engineer – Engineering
505-500-2360

From: Carl Vermillion <cvermillion@bhinc.com>
Sent: Monday, October 10, 2022 4:05 PM
To: Martinez, Javier, NMDOT <Javier.Martinez@dot.nm.gov>
Cc: Broughton, Glenn <gbroughton@bhinc.com>; Bert Thomas <Bthomas@bhinc.com>
Subject: RE: [EXTERNAL] New Solar Site STA

Hello Javier,

We clarified the location of the existing access point and the proposed access point on NM 14 and would like to provide you a revised version (attached).

Please let me know if you have any questions.

Thank you,

Carl Vermillion PE, PTOE, RSP1

Engineer Traffic & Transportation

Bohannan Huston

p. 505.823.1000 | d. 505.923.3318 | c. 505.608.0900

Connect: [bhinc.com](https://www.bhinc.com) | [Facebook](https://www.facebook.com/bhinc) | [LinkedIn](https://www.linkedin.com/company/bhinc) | [Twitter](https://twitter.com/bhinc)

Building great teams to support great communities. Want to be part of the team? Visit [bhinc.com/careers](https://www.bhinc.com/careers)

DISCLAIMER: This e-mail, including attachments, may include confidential and/or proprietary information and may be used only by the person or entity to which it is addressed. Any unauthorized review, use, disclosure, or dissemination is strictly prohibited. If you received this e-mail in error, please notify the sender by reply e-mail and delete this e-mail immediately.

From: Carl Vermillion
Sent: Monday, October 10, 2022 2:14 PM
To: Martinez, Javier, NMDOT <Javier.Martinez@state.nm.us>
Cc: Glenn Broughton <GBroughton@bhinc.com>
Subject: RE: [EXTERNAL] New Solar Site STA

Hello Javier,

I appreciate the confirmation on our approach for this development. We have completed the STH form and the memo for your review.

Please let me know if you have any questions or want to discuss anything for the development.

Thank you!

Carl Vermillion PE, PTOE, RSP1

Engineer Traffic & Transportation

Bohannon Huston

p. 505.823.1000 | d. 505.923.3318 | c. 505.608.0900

Connect: bhinc.com | [Facebook](#) | [LinkedIn](#) | [Twitter](#)

Building great teams to support great communities. Want to be part of the team? Visit bhinc.com/careers

DISCLAIMER: This e-mail, including attachments, may include confidential and/or proprietary information and may be used only by the person or entity to which it is addressed. Any unauthorized review, use, disclosure, or dissemination is strictly prohibited. If you received this e-mail in error, please notify the sender by reply e-mail and delete this e-mail immediately.

From: Martinez, Javier, NMDOT <Javier.Martinez@state.nm.us>

Sent: Monday, September 26, 2022 2:44 PM

To: Carl Vermillion <cvermillion@bhinc.com>

Subject: RE: [EXTERNAL] New Solar Site STA

Good Afternoon Carl,

Yes the form with a memo should be sufficient for this type of development. Depending on the location we have required a deceleration lane for the construction activities depending on the duration. We can discuss after you have submitted the memo and STH form for review.

Thank you,

Javier Martinez, P.E.

NMDOT District 5

Assistant District Engineer – Engineering

505-500-2360

From: Carl Vermillion <cvermillion@bhinc.com>

Sent: Friday, September 23, 2022 11:01 AM

To: Martinez, Javier, NMDOT <Javier.Martinez@state.nm.us>

Subject: [EXTERNAL] New Solar Site STA

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Hello Javier,

Hope you are doing well.

BHI is doing some work for a new 600 acre EV solar site just south of Santa Fe and I am preparing the STH form and a memo to go along with it justifying the generation traffic used for the construction activities at the site.

The initial information provided by the development team includes some assumptions of traffic to the site.

Construction Phase – Duration 12 months

- PV Solar install: assume 75 to 150 workers per day
- BESS install: assume 40 workers per day
- Deliveries: assume 10 material/equipment deliveries per day

Operations Phase

O&M: assume 4 workers per month

The specifics is that the construction traffic will generate the most traffic to the site so the memo I am creating speaks to that specifically.

Moving forward on this, I just am hoping for a clarification for how these types of “developments” are handled? Does the NMDOT typically require more than the STH form for an EV facility like this or is the STH with the memo sufficient?

Carl Vermillion PE, PTOE, RSP1

Engineer Traffic & Transportation

Bohannon Huston

p. 505.823.1000 | d. 505.923.3318 | c. 505.608.0900

Connect: bhinc.com | [Facebook](#) | [LinkedIn](#) | [Twitter](#)

Building great teams to support great communities. Want to be part of the team? Visit bhinc.com/careers

DISCLAIMER: This e-mail, including attachments, may include confidential and/or proprietary information and may be used only by the person or entity to which it is addressed. Any unauthorized review, use, disclosure, or dissemination is strictly prohibited. If you received this e-mail in error, please notify the sender by reply e-mail and delete this e-mail immediately.



Site Threshold Analysis (STA)

According to NMAC 18.31.6.16, a traffic engineering evaluation shall be required for all land development proposals that may directly or indirectly impact a state highway facility. A Site Threshold Analysis (STA) is required of all developing or re-developing properties that directly or indirectly access a state roadway. The STA examines existing roadway volumes and anticipated site trip generation for the purpose of determining if additional analyses are required as defined by the District Traffic Engineer or designee. If the site characteristics and the trip generation estimate for a proposed development are greater than 100 trips in a peak hour, then requirements for a Traffic Impact Analysis (TIA) may be required as determined by the District Traffic Engineer or designee. See TIA outline for that scope.

The STA shall warrant one or all of the following conditions:

- May or may not warrant an additional traffic analysis.
- May or may not warrant off-site improvements.
- May require a TIA, which may or may not require off-site improvements.

If additional analysis is required based on the results of the STA, the District Traffic Engineer or designee, should indicate to the applicant the level of analysis that is required.

Permit Applicant Information

Applicant Name: Bohannon Huston Inc

Business Name: Rancho Viejo Solar

Business Address: 4173 NM 14 Santa Fe NM 87508
Street Address: City: State: Zip Code:

Site Information (Attach Site Plan to include length of roadway frontage):

Site Description: 96 MegaWatt Solar Farm on ~800 acres

Site Address: 4173 NM 14 Santa Fe NM 87508
Street Address: City: State: Zip Code:

NMDOT Roadway: NM 14 Milepost: 41.5 Roadway ADT: 5,841

Site Information (commercial, retail, industrial, residential, etc):

Development of 800 acres of land to contain 96 MegaWatt solar farm.

Minimal traffic to site after construction (See attached Memo)

Building Size (SF): 0 Parcel Size (acre): ~800

Trip Generation:

ITE Trip Generation Land Use Category: See Attached Memo for Trip Generation

AM Peak Hour Trips Enter: 4 Exit: 0

PM Peak Hour Trips Enter: 0 Exit: 4

Exceeds Threshold for TIA (100 or more peak hour total trips):

Yes See Attached memo for additional details for STA and

No TIA determination

MEMORANDUM

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335

www.bhinc.com

voice: 505.823.1000

facsimile: 505.798.7988

toll free: 800.877.5332

TO: Javier Martinez, PE, NMDOT District 5 Assistant District Engineer
FROM: Carl Vermillion
DATE: October 5, 2022
SUBJECT: AES Rancho Viejo Solar Development – Traffic Assessment

Bohannon Huston has prepared a site threshold assessment for a proposed 800-acre solar farm to be developed by the AES corporation. This memorandum includes an assessment of the vehicle trip generation anticipated during typical operations after the project is build and traffic during project construction along with discussion on access points onto NM 14.

Project Description

The proposed project is a new solar farm installation located in Santa Fe County east of NM 14 in the vicinity of the existing Turquoise Trail Charter school. Construction of the site will consist of a 96 Megawatt (MW) installation within an area of approximately 800 acres of land (see attached figure for location). This installation may incorporate a Battery energy storage system (BESS) on the property. The main assessment of traffic will result from the operational activities of the site after construction and the second traffic assessment will focus on traffic impacts related to the construction of the proposed facility including the BESS system.

Once operational, the site will be primarily self-sustaining with no permanent employees on-site; however, employees will visit the site monthly to conduct operations and maintenance activities. No more than 4 workers will be on-site at any given time. As a result, the number of employee vehicle trips generated by the site during typical operations is considered negligible. The information provided will result in the following peak hour traffic generation distribution:

AM Peak Hour: Entering – 4 vehicles; Exiting – 0 vehicles

PM Peak Hour: Entering – 0 vehicles; Exiting – 4 vehicles

Based on the State Access Management Manual (SAMM) a TIA is required for developments that generate 100 or more peak hour total trips. As the worst case trip generation results in 4 vehicles per hour for either peak hour, a TIA for this development is not required.

However, the primary traffic concern for the proposed project is associated with the potential temporary construction traffic impacts. The construction of the site is anticipated to last approximately 12 months beginning at the end of 2023. Construction is anticipated to require a maximum of 190 workers on-site per day. The personnel will be local workforce and they will be encouraged to carpool to the site each day. Construction staff will be on-site between 7 AM to 4 PM Monday through Friday.

Similar to the construction of solar facilities in other locations, the number of employees for the first 2 months and the last 2 months of construction will be lower with peak on-site employment occurring for the eight months in the middle of the project schedule. The traffic generation values incorporate both the solar farm and the BESS. This estimate is considered conservative for this site since the BESS system may or may not be constructed as part of the solar facility.

The number and type of vehicles planned to be involved during peak construction are described as follows:

- 10 heavy haul trucks (ex: 18 wheeler deliveries, water trucks, garbage trucks) per day
- 75 to 150 work trucks (ex: crew, foreman, superintendents) per day
- 40 work trucks specifically for the BESS install per day

As construction activities will be a much higher generator than the day-to-day activities of the site, the NMDOT may want to consider traffic impacts based on the traffic during the construction phase. It is anticipated that 190 work trucks will arrive between 6:30 and 7AM and will depart the site at 4PM. The 10 heavy trucks will arrive on the site outside of the anticipated peak hours. At the adjacent intersection of NM 14 and NM 599 the peak hours are 7:30 to 8:30AM and 4:30 to 5:30PM. It is anticipated that some of the traffic associated with this site may arrive during the peak hour but the majority will travel prior to the AM and PM peak hours.

With the information provided above, peak hour trips were generated. This will result in the following traffic generation distribution:

AM Peak Hour: Entering – 190 vehicles; Exiting – 0 vehicles

PM Peak Hour: Entering – 0 vehicles; Exiting – 190 vehicles

It is Bohannon Huston's professional opinion that this is a conservative approach to account for all trips during the peak hour associated with the construction activities for the development site.

Vehicle Access

An existing access point for the property has a gated entry on NM 14 1,300 feet to the north of the existing Turquoise Trail Charter School. This entry serves the development property today, but the development wants to improve and realign this access point to facilitate traffic for the construction of the solar farm. As part of this realignment, the access point will be moved to the north approximately 450 feet to align with the existing on site travel pattern. This new location will be located approximately 100 feet to the north of the existing driveway on the west side of NM 14. It is understood that this will require a new driveway permit with the NMDOT and this process will begin soon after this STH process is discussed and approved.

An analysis of the State Access Management Manual (SAMM) was done to determine if any criteria would be met based on requirements by the NMDOT. Criteria for deceleration lanes was validated with a design speed of 55 mph as is posted in the project area. Table 17.B-3 indicates that on a rural two-lane highway such as NM 14 in the project area, a left turn volume of 20 vehicles per hour requires a left turn deceleration lane.

The assessment for the operations of the site indicated a left turn deceleration lane is not warranted due to the small volume that will be traveling to the site. This assessment was also conducted for the site during construction, where a left turn deceleration lane is warranted due to the high volume of construction vehicles accessing the site. Since these traffic volumes will only be applicable during construction the project team believes that these deceleration lanes should not be implemented.

Assessment

Based on our initial traffic evaluation and STA, Bohannon Huston has determined that additional traffic impact studies are not warranted per the SAMM, as the site is expected to generate 4 peak hour total trips during operations. Alternatively, during construction the site is expected to generate 190 peak hour total trips. Based on the SAMM a TIA is required for developments that generate 100 or more peak hour total trips. As this is a temporary condition due to the construction activity at the site, we believe a TIA should not be required for this development.

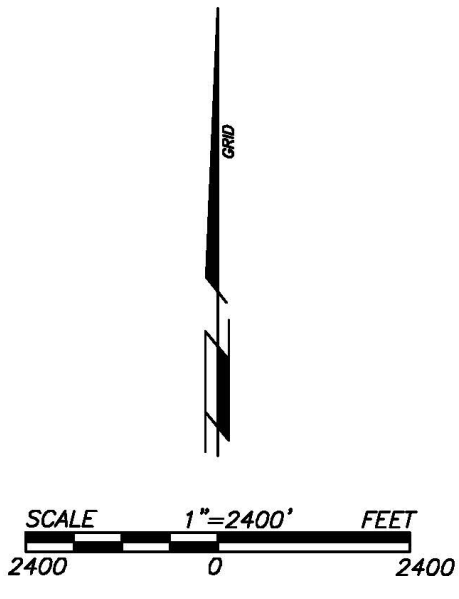
Javier Martinez, PE, Assistant District Engineer
NMDOT District 5
AES Rancho Viejo Solar Development – Traffic Assessment
October 5, 2022
Page 3 of 3

Additionally, a driveway permit will be required to move the access point to the north by 350 feet. Should future development activities propagate additional traffic evaluations, these will be conducted to assess those project-specific needs and traffic generation.

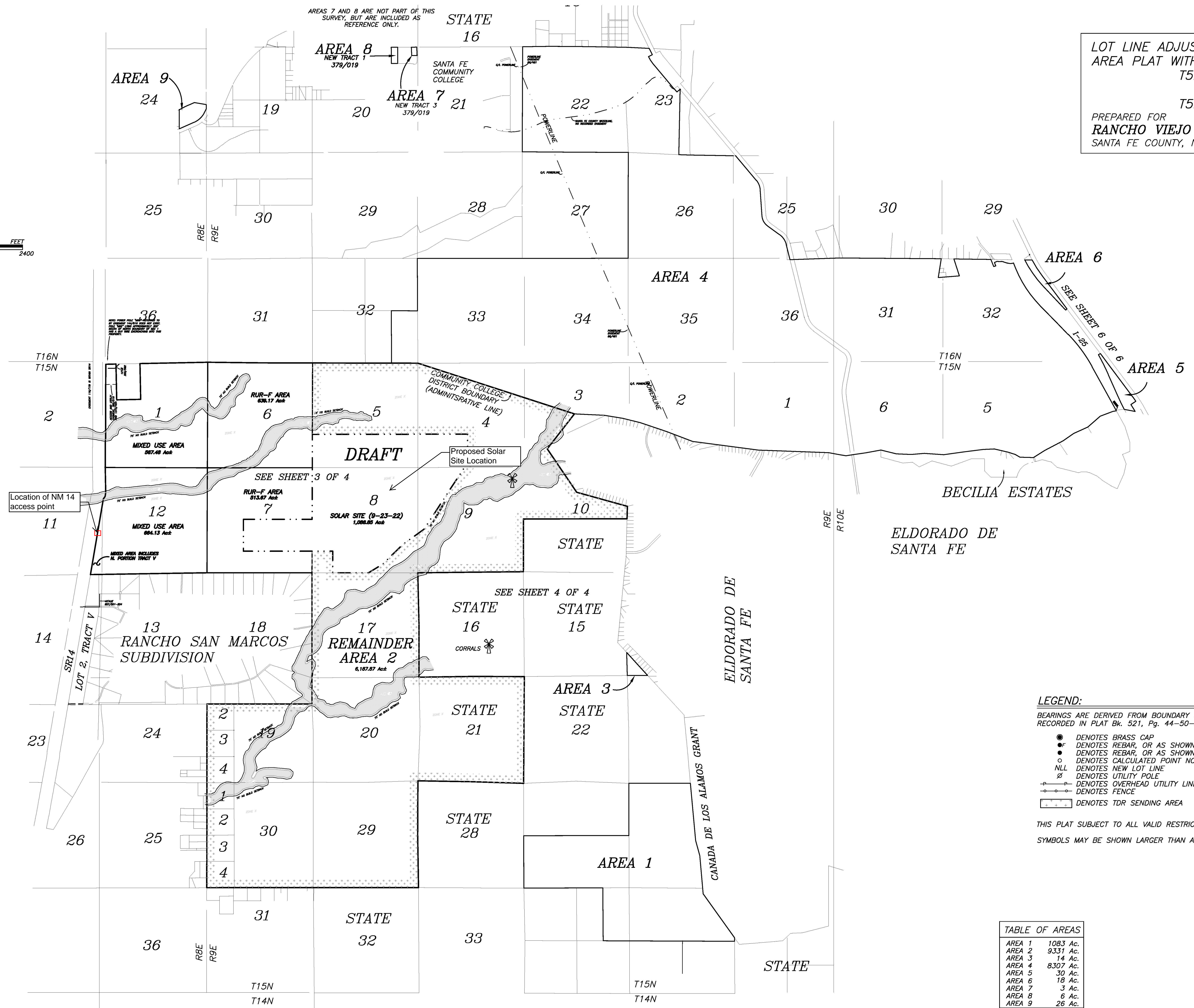
We kindly request formal concurrence that based on our traffic findings, NMDOT does not have any concerns related to traffic and new driveway access off NM 14. Please feel free to contact me at cvermillion@bhinc.com ; 505-923-3318 to discuss. Thank you for your consideration.

/jma

Enclosures: Overall Map
Traffic Signal Counts – NM 14 and NM 599



LOT LINE ADJUSTMENT AND TDR SENDING
 AREA PLAT WITHIN AREA 2
 T5N, R8E, NMPM,
 AND
 T5N, R9E, NMPM,
 PREPARED FOR
RANCHO VIEJO LIMITED PARTNERSHIP
 SANTA FE COUNTY, NEW MEXICO



- LEGEND:**
- DENOTES BRASS CAP
 - DENOTES REBAR, OR AS SHOWN FOUND
 - DENOTES REBAR, OR AS SHOWN TO BE SET UPON RECORDING
 - DENOTES CALCULATED POINT NOT SET
 - DENOTES NEW LOT LINE
 - ⊕ DENOTES UTILITY POLE
 - +— DENOTES OVERHEAD UTILITY LINE
 - DENOTES FENCE
 - ▨ DENOTES TDR SENDING AREA

THIS PLAT SUBJECT TO ALL VALID RESTRICTIONS, COVENANTS AND EASEMENTS OF RECORD
 SYMBOLS MAY BE SHOWN LARGER THAN ACTUAL SIZE FOR VIEWING PURPOSES.

TABLE OF AREAS	
AREA 1	1083 Ac.
AREA 2	9331 Ac.
AREA 3	14 Ac.
AREA 4	8307 Ac.
AREA 5	30 Ac.
AREA 6	18 Ac.
AREA 7	3 Ac.
AREA 8	6 Ac.
AREA 9	26 Ac.
TOTAL	18818 Ac.

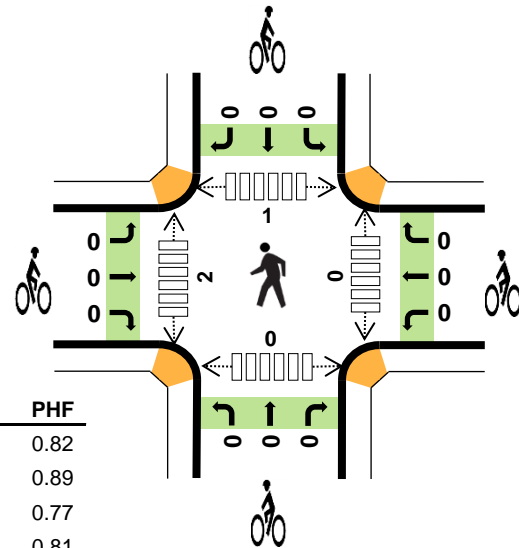
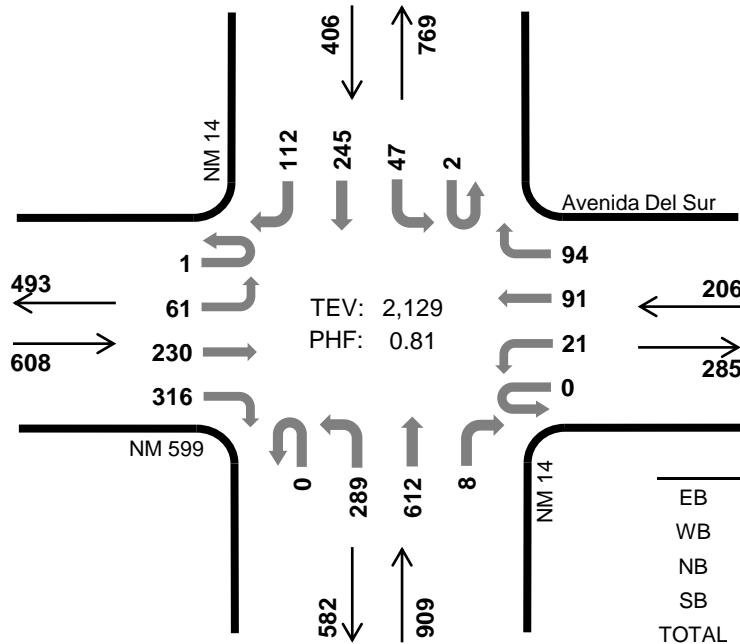
DRAFT
 SHEET 2 of 4
 DAWSON SURVEYS INC.
 PROFESSIONAL LAND SURVEYORS
 7505 MALLARD WAY, SUITE A
 SANTA FE, N.M. 87507
 FILE#10762\TDR DATE:09/26/2022

**NM 14
NM 599**



Peak Hour

Date: 09/28/2022
Count Period: 6:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	3.5%	0.82
WB	4.4%	0.89
NB	3.0%	0.77
SB	5.7%	0.81
TOTAL	3.8%	0.81

Three-Hour Count Summaries

Interval Start	NM 599				Avenida Del Sur				NM 14				NM 14				15-min Total	Rolling One Hour	
	Eastbound		Westbound		Westbound		Northbound		Southbound		Southbound		Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:30 AM	0	9	65	111	0	7	25	26	0	86	169	0	0	8	70	25	601	0	
7:45 AM	0	18	69	99	0	5	23	24	0	98	193	5	0	10	85	31	660	0	
8:00 AM	0	13	56	68	0	4	24	26	0	60	133	3	0	17	52	27	483	0	
8:15 AM	1	21	40	38	0	5	19	18	0	45	117	0	2	12	38	29	385	2,129	
Peak Hour	All	1	61	230	316	0	21	91	94	0	289	612	8	2	47	245	112	2,129	0
	HV	0	3	7	11	0	1	6	2	0	14	12	1	0	2	4	17	80	0
	HV%	0%	5%	3%	3%	-	5%	7%	2%	-	5%	2%	13%	0%	4%	2%	15%	4%	0

Note: For all three-hour count summary, see next page.

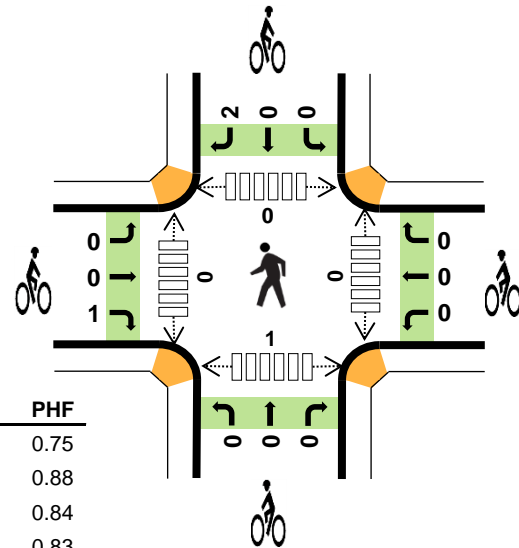
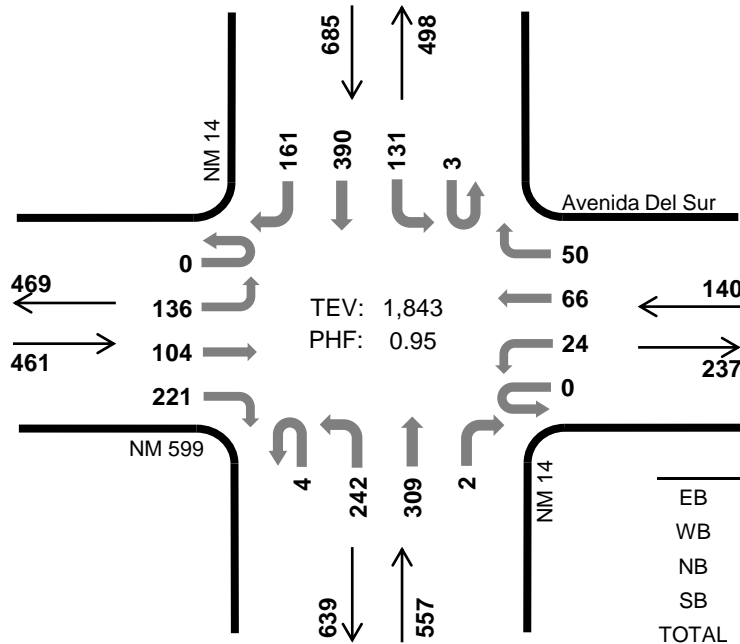
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:30 AM	8	5	5	10	28	0	0	0	0	0	0	0	0	0	0
7:45 AM	3	0	11	6	20	0	0	0	0	0	0	2	1	0	3
8:00 AM	5	3	7	2	17	0	0	0	0	0	0	0	0	0	0
8:15 AM	5	1	4	5	15	0	0	0	0	0	0	0	0	0	0
Peak Hour	21	9	27	23	80	0	0	0	0	0	0	2	1	0	3

**NM 14
NM 599**



Peak Hour

Date: 09/28/2022
Count Period: 3:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	3.9%	0.75
WB	1.4%	0.88
NB	2.9%	0.84
SB	2.0%	0.83
TOTAL	2.7%	0.95

Three-Hour Count Summaries

Interval Start	NM 599				Avenida Del Sur				NM 14				NM 14				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:30 PM	0	35	16	46	0	9	16	15	2	74	90	0	2	34	91	37	467	0	
4:45 PM	0	31	25	49	0	6	21	10	0	56	77	0	0	28	82	26	411	0	
5:00 PM	0	28	26	51	0	4	17	15	1	58	102	1	0	26	94	58	481	0	
5:15 PM	0	42	37	75	0	5	12	10	1	54	40	1	1	43	123	40	484	1,843	
Peak Hour	All	0	136	104	221	0	24	66	50	4	242	309	2	3	131	390	161	1,843	0
	HV	0	9	0	9	0	0	2	0	0	9	7	0	0	5	3	6	50	0
	HV%	-	7%	0%	4%	-	0%	3%	0%	0%	4%	2%	0%	0%	4%	1%	4%	3%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:30 PM	7	1	5	5	18	0	0	0	0	0	0	0	0	0	0
4:45 PM	7	1	5	4	17	0	0	0	0	0	0	0	0	0	0
5:00 PM	2	0	3	3	8	0	0	0	1	1	0	0	0	1	1
5:15 PM	2	0	3	2	7	1	0	0	1	2	0	0	0	0	0
Peak Hour	18	2	16	14	50	1	0	0	2	3	0	0	0	1	1