



DOCKET 08-AFC-9
DATE OCT 08 2010
RECD. FEB 04 2011

MEMORANDUM

Date: October 8, 2010
To: David Flores, CEC
From: Steven J Brown, PE

Subject: *Transportation Review for the Palmdale Hybrid Project*

SD10-0015

Fehr & Peers is pleased to submit this review of specific transportation issues for the Palmdale Hybrid Project. We were tasked with reviewing the existing roadway conditions and signal locations, assessing the construction traffic routing, and evaluating the technical analysis and site access recommendations provided in the draft staff assessment.

SITE VISITS

We visited the project site in both June and October 2010 and made observations of the existing roadway conditions and traffic signal locations. Additionally, new traffic counts were taken by a sub-consultant at select locations to determine the reasonableness of the applicant's approach of applying historic growth rates.

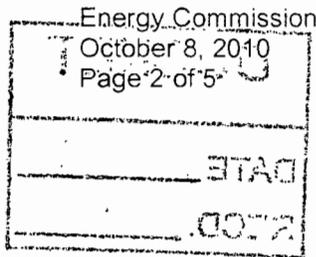
During our site visits, we observed high traffic volumes in the peak periods on Avenue L and Avenue M. As expected, the dominant movements were in the eastbound direction during the AM peak period and westbound direction during the PM peak period.

NEW DATA

The count data from the applicant's study was collected in 2006-2008. Their study then "escalated" this data to represent 2011 conditions by applying a historical annual growth factor of 5.9%. This factor was determined from Caltrans data for the area for the period 2000 through 2006. Given the economic downturn in 2008-2010, it is unlikely that this historical growth rate was applicable during recent years.

As part of our review, we obtained or collected the following new data:

- Daily counts on Avenue L (west of Sierra Hwy) - April 2010
- Daily counts on Avenue M (east of 7th St W) - April 2010
- Daily counts on Avenue M (east of 10th St E) - April 2010
- Peak period turning counts on Avenue L (at 10th St E intersection) - May 2009
- Peak period turning counts on Avenue M (at SR 14 SB ramps) - October 2010
- Peak period turning counts on Avenue M (at SR 14 NB ramps) - October 2010
- Peak period turning counts on Avenue M (at Sierra Hwy) - October 2010



STUDY REVIEW

We reviewed the applicant's study and responses from the Energy Commission staff. The following are some deficiencies:

- The annual growth of 5.9% assumed in the study (to estimate 2011 conditions based upon 2006-2008 data) is high based on the recent economic conditions and traffic counts taken in 2010. While not "wrong", this assumption is very conservative. We provided new technical analysis for critical locations based upon the more current traffic counts.
- The study fails to identify existing intersections operating at LOS E as deficient.
- During construction, employees will likely make some non-commute trips (lunch, errands, supplies) to and from project site. These trips would result in higher volume of construction-related trips than indicated in the study, but would not impact the peak hours.
- The study does not discuss potential improvements to Avenue M during construction, in-lieu of mandating the use of Avenue L
- The stop-controlled intersection LOS should be reported with critical turn movement delay and not approach delay.
- The intersection of Avenue L and 10th Street East is signalized, but is analyzed as unsignalized in the applicant's study. Our revised analysis is provided later in this document.

AVENUE L & 10TH STREET EAST INTERSECTION

We agree with the Preliminary Staff Assessment (PSA) that the applicant incorrectly notes the intersection of East Avenue L and 10 Street East is unsignalized. The intersection is signalized and includes the proposed improvements as stated in the application for certification document. The following analysis uses data provided by the City of Lancaster from May 2009 (more current than applicant's data) and assumes the intersection is signalized

Avenue L/10 th Street E	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Existing Conditions	11.7	B	11.5	B
Baseline (no project)	11.8	B	11.7	B
Baseline with Project	11.1	B	16.4	B

Based upon the newer data and correct traffic control (signal), this intersection would not be impacted by the project.

CONSTRUCTION TRAFFIC ROUTE

Applicant's Recommendation

The applicant's study proposes to route vehicles entering and exiting the project site via 10th Street East and Avenue L. Construction traffic would be required to access the site from SR 14 on Avenue L and 10th Street, avoiding Avenue M. The applicants study recommends Avenue L because it has greater capacity (particularly at the SR 14) and because their technical analysis

showed greater impacts at Avenue M than Avenue L. Our updated analysis, using more current data, suggests that Avenue M is a reasonable, and perhaps better, option for construction traffic. Minor improvements at the Avenue M/SR 14 interchange should be sufficient to mitigate any impacts.

Analysis

The amount of construction traffic is relatively small compared to the average daily traffic on the study roads. The following table provides some context to the amount of traffic the project would add if **all** the project construction trips were to use either Avenue L or M. Even during the peak construction month, the project would add less than 10% to either roadway.

Roadway	Existing (2010)	Project Construction Trips		Change Due to Project	
		Peak Month	Average	Peak Month	Average
Avenue L at 10th St W	26,000	1,600	750	6.1%	2.9%
Avenue M at 4 th St E	17,200	1,600	750	9.3%	4.4%

In the study area, Avenue M is a 4-lane roadway with center turn lanes, except at the SR 14 interchange, where it narrows to a 2-lane over-crossing with stop-controlled ramp intersections. Avenue L is a four to six lane roadway with center turn lanes. The SR 14 interchange at Avenue L consists of a 6-lane over-crossing and signal controlled ramp intersections.

Using the new traffic volume data (October 2010), we re-evaluated the critical intersections along Avenue M to determine the project's impact during construction :

Location	Scenario	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Avenue M & SR 14 SB ramps	Existing	102.6	F	28.8	D
	Existing with Project	144.3	F	34.7	D
Avenue M & SR 14 NB ramps	Existing	38.7	E	87.5	F
	Existing with Project	50.7	F	111.4	F
Avenue M & Sierra Highway	Existing	16.8	B	18.4	B
	Existing with Project	17.4	B	19.3	B

The above analysis shows better conditions at these locations based upon more recent count data. Avenue M and Sierra Highway operates adequately today and with the Project's construction traffic. However, SR-14 at the northbound and southbound off-ramps operates

worse than the City of Palmdale's desired service level of "C" or better, with or without the Project.

Signalizing the two off-ramp intersections at SR-14 and Avenue M would result in LOS A conditions, with and without the project. In addition, to signalizing the intersections, the 4-lane section of Avenue M should be extended approximately 100' to the west, such that the right turn from the northbound off-ramp can turn into its own lane and the second eastbound lane (curb lane) on Avenue M becomes a designated lane to the northbound on-ramp.

We recommend the use of Avenue M (not L) as the primary construction route for the following reasons:

- Avenue M is a more direct route, minimizing the amount of truck traffic on local roadways.
- With minor improvements (signalization), Avenue M at State Route 14, can function adequately during the construction period.
- Avenue L is within the City of Lancaster, while Avenue M is within Palmdale – where the project resides.
- It is uncertain that the applicant could successfully enforce the use of Avenue L for construction-related traffic.

SITE ACCESS ASSESSMENT

The proposed project will have the primary access located at the intersection of Avenue M and 10th Street East. This intersection consists of three approaches, with the project adding a fourth leg to the intersection. The applicant's study proposes the fourth leg to have an exclusive left-turn lane and a shared through-right lane.

We evaluated the service level at the Avenue M/10th Street intersection using the existing traffic volumes as shown in the applicant's study but without inflating them based upon historical growth rates. Our analysis indicates that the intersection currently operates deficiently during the PM peak hour. With the addition of construction trips, the intersection would operate deficiently during both the AM and PM peak hours. Although signalizing the intersection would improve operations and reduce impacts to less-than-significant levels, the intersection would not meet the City's desired LOS goal (C), but might be sufficient for their allowed short-term goal of LOS D. The intersection would operate at LOS C or better during on-going Project operations.

Avenue M/10 th Street E Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Existing	17.6	C	>180	F
Existing with Project	>180	F	>180	F
With Mitigation	21.6	B	40.0	D

The study does not address lengths of pockets needed to service the existing, project and construction traffic. The westbound left-turn lane is striped but not currently used. This existing westbound left-turn lane is an adequate length to serve the project. However, the eastbound left turn pocket is not adequate in its current form based upon the queuing analysis. While the eastbound left turn pocket will not be used or impacted by the project, the proper storage length should be provided if/when the intersection is signalized.

Turn Lane	Approximate Turn Pocket Needed	
	AM Peak Hour	PM Peak Hour
Eastbound Left Turn	170'	300'



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION
For the *PALMDALE HYBRID*
POWER PROJECT

Docket No. 08-AFC-9

PROOF OF SERVICE

(Revised 1/14/2011)

APPLICANT

Thomas M. Barnett
Executive Vice President
Inland Energy, Inc.
3501 Jamboree Road
South Tower, Suite 606
Newport Beach, CA 92660
tbarnett@inlandenergy.com

Antonio D. Penna Jr.
Vice President
Inland Energy, Inc.
18570 Kamana Road
Apple Valley, CA 92307
tonypenna@inlandenergy.com

Laurie Lile
Assistant City Manager
City of Palmdale
38300 North Sierra Highway, Suite A
Palmdale, CA 93550
llile@cityofpalmdale.org

APPLICANT'S CONSULTANTS

Sara J. Head, QEP
Vice President
AECOM Environment
1220 Avenida Acaso
Camarillo, CA 93012
sara.head@aecom.com

COUNSEL FOR APPLICANT

Michael J. Carroll
Marc Campopiano
Latham & Watkins, LLP
650 Town Center Drive, Ste. 2000
Costa Mesa, CA 92626
michael.carroll@lw.com
marc.campopiano@lw.com

INTERESTED AGENCIES

Ronald E. Cleaves, Lt. Col, USAF
Commander ASC Det 1 Air Force
Plant 42
2503 East Avenue P
Palmdale, CA 93550
Ronald.Cleaves@edwards.af.mil

Erinn Wilson
Staff Environmental Scientist
Department of Fish & Game
18627 Brookhurst Street, #559
Fountain Valley, CA 92708
E-mail Service Preferred
ewilson@dfg.ca.gov

Richard W. Booth, Sr. Geologist
Lahontan Regional
Water Quality Control Board
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150-2306
rbooth@waterboards.ca.gov

Rick Buckingham
3310 El Camino Avenue, LL-90
State Water Project
Power & Risk Office
Sacramento, CA 95821
E-mail Service Preferred
rbucking@water.ca.gov

Manuel Alvarez
Southern California Edison
1201 K Street
Sacramento, CA 95814
Manuel.Alvarez@sce.com

Robert C. Neal, P.E.
Public Works Director
City of Lancaster
44933 Fern Avenue
Lancaster, CA 93534-2461
rneal@cityoflancasterca.org

California ISO
E-mail Service Preferred
e-recipient@caiso.com

Robert J. Tucker
Southern California Edison
1 Innovation Drive
Pomona, CA 91768
Robert.Tucker@sce.com

Christian Anderson
Air Quality Engineer
Antelope Valley AQMD
43301 Division St, Suite 206
Lancaster, CA 93535
E-mail Service Preferred
canderson@avaqmd.ca.gov

Keith Roderick
Air Resources Engineer
Energy Section/Stationary Sources
California Air Resources Board
P.O. Box 2815
Sacramento, California 95812
E-mail Service Preferred
kroderic@arb.ca.gov

INTERVENORS

Lisa T. Belenky, Senior Attorney
***John Buse, Senior Attorney**
Center for Biological Diversity
351 California St., Suite 600
San Francisco, CA 94104
E-mail Service Preferred
lbelenky@biologicaldiversity.org
jbuse@biologicaldiversity.org

Jane Williams
Desert Citizens Against Pollution
Post Office Box 845
Rosamond, CA 93560
dcapjane@aol.com

ENERGY COMMISSION

JEFFREY D. BYRON
Commissioner and Presiding Member
jbyron@energy.state.ca.us

ANTHONY EGGERT
Commissioner and Associate Member
aeggert@energy.state.ca.us

Ken Celli
Hearing Officer
kcelli@energy.state.ca.us

Kristy Chew
Adviser to Commissioner Byron
E-mail Service Preferred
kchew@energy.state.ca.us

Lorraine White
Adviser to Commissioner Eggert
E-mail Service Preferred
lwhite@energy.state.ca.us

Felicia Miller
Project Manager
fmiller@energy.state.ca.us

Lisa DeCarlo
Staff Counsel
ldecarlo@energy.state.ca.us

Jennifer Jennings
Public Adviser
E-mail Service Preferred
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Teraja` Golston, declare that on, February 04, 2011, I served and filed copies of the attached (08-AFC-9) Palmdale – Transportation Study 10-10, dated February 04, 2011. The original document filed with the Docket Unit is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [<http://www.energy.ca.gov/sitingcases/palmdale/index.html>]. The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

FOR SERVICE TO ALL OTHER PARTIES:

- sent electronically to all email addresses on the Proof of Service list;
- by personal delivery;
- by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses NOT marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

- sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (*preferred method*);

OR

- depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 08-AFC-9
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Originally Signed by _____
Teraja` Golston