Endo Engineering *Traffic Engineering* *Air Quality Studies* *Noise Assessments*

January 12, 2007

Mr. Jerry Herman
Trans West Housing
47-120 Dune Palms Road, Suite C
La Quinta, CA 92253

SUBJECT: ***Griffin Ranch SP 2004-074, Amendment No. 1 and TTM 34642 Traffic Impact Study - Response to Public Works Comments***

Dear Mr. Herman;

Endo Engineering has reviewed the comments dated January 5, 2007 on the *Griffin Ranch SP 2004-074, Amendment No. 1 and TTM 34642 Traffic Impact Study* (dated November 17, 2006) that were prepared by the City of La Quinta Department of Public Works. To facilitate your review, we have reiterated each comment below, followed by the corresponding response.

Comment 1: On the first page of the Cover Letter dated November 17, 2006. The Traffic Impact Study (TIS) should state in the second to last bullet the basis the two offsite key intersections were eliminated.

Response 1: It is our understanding that the established City policy is that roadways and intersections within a radius of 1/2 mile of the adjacent perimeter of the project site be evaluated in the traffic study for developments generating between 101 ADT and 5,000 ADT. The proposed project is the development of 90 single-family dwellings that represent an extension of the approved Griffin Ranch Specific Plan. The trip generation associated with the proposed project is estimated to be 940 vehicles per day. Both of the intersections eliminated are located more than one mile from the perimeter of the project site, well outside the required traffic study radius.

The two intersections were eliminated, based upon coordination with City staff by telephone, by electronic mail, and in writing. The key intersections addressed in the traffic study were determined through discussions with Mr. Nazir Lalani who confirmed them with Mr. Paul Goble. They were also confirmed via a letter drafted by Endo Engineering and addressed to Mr. Nazir Lalani (dated March 31, 2006) formally documenting the traffic study scope, key intersections, and assumptions agreed upon by telephone and electronic mail. This supplemental information was placed in Section 2.4 (page 2-2) under the heading "Study Area and Key Intersections." The cover letter of the traffic study was modified to eliminate the reference to these two intersections.

Comment 2: On Page 1-1, Item 4. Should traffic not redistribute as anticipated and a traffic signal is still warranted at the Jefferson Street and Avenue 54 intersection, fair share contributions by the project shall be addressed.

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Response 2: Item 4 on page 1-1 states that existing traffic volumes exceed traffic signal volume warrants at the intersection of Jefferson Street and Avenue 54 and that after Madison Street is extended northerly, the volumes may not exceed traffic signal warrants. However, the traffic study shows in Table 4-5 (page 4-14) and streets in paragraph 6 on page 4-13 that in the year 2008, the intersection of Jefferson Street and Avenue 54 is projected to serve traffic volumes sufficient to meet peak hour and/or daily traffic signal volume warrants with and without site traffic but provide acceptable levels of service in the peak hours without signalization. Mitigation measure 14 on page 1-4 (and measure 2 on page 5-3) states: "The project proponent may be required to participate in a traffic mitigation fee program to ensure that a fair-share contribution is made to the cost of future traffic signals and other future roadway infrastructure improvements of area-wide benefit."

Motorists utilizing the newly constructed extension of Madison Street are not projected to experience excessive control delay or unacceptable levels of service. Consequently, this roadway segment will attract traffic from the more heavily loaded intersection of Jefferson Street and Avenue 54. The extension of Madison Street will provide a more convenient and faster north-south route for traffic in the vicinity. Consequently, a portion of the existing traffic passing through the intersection of Jefferson Street and Avenue 54 will divert to Madison Street, north of Avenue 54, once this roadway segment is opened. The coordination letter dated March 31, 2006 indicated that 55 percent of the existing traffic volume on Avenue 54 (west of Madison Street) would be reassigned to Madison Street (north of Avenue 54) in the traffic study and invited the City to modify that assumption (if it was deemed inappropriate) and transmit any proposed change to Endo Engineering for inclusion in the traffic analysis.

Since the project is consistent with the General Plan, the traffic impact study was required to address year 2008+project conditions but not citywide buildout conditions. The future traffic projections in the traffic study assume the extension of Madison Street (between Avenue 54 and Avenue 52) and all cumulative development. The traffic impact study does not identify a need for signalization at the intersection of Jefferson Street and Avenue 54 upon project completion in the year 2008. However, the applicant will be required to pay the project's fair share of the cost of all required traffic improvements. The project's fair-share contribution to any citywide roadway or traffic signal improvements will be made through the payment of development impact fees, as outlined in the conditions of approval drafted by the City of La Quinta.

Comment 3: On Page 1-2, Item 3. With Avenue 52 west of Madison Street nearing capacity, the TIS should identify what will be needed to maintain the City's adopted level of service.

Response 3: As outlined in the assumption letter, Endo Engineering was directed by Mr. Nazir Lalani to perform a daily V/C link analysis similar to that included in the *La Quinta General Plan Update Traffic Study* and identify those links with a V/C from 0.81 up to 1.0 as "near capacity". As a result, the traffic study stated that the two-lane undivided segment of Avenue 52, west of Madison Street, is projected to operate with a daily volume-to-capacity ratio of 0.89 with year 2008+project traffic volumes. Although the adopted *2002 La Quinta General Plan* defines daily volume-to-capacity ratios of 0.80 to 1.00 as "near capacity," the current City policy, as set forth in Engineering Bulletin 06-13, identifies LOS D and a V/C of up to 0.90 as acceptable. Therefore, based upon the current City traffic study guidelines, no mitigation is necessary for projected year 2008+project traffic volumes on Avenue 52, west of Madison Street.

Comment 4: On Page 1-2, Item 4 needs to specify where these two unsignalized site access intersections are and that signalization may be required in the future due to

anticipated traffic beyond that added by this project or per request to the City to install a traffic signal. Additionally, the TIS should state who shall pay for the signals if that eventually occurs.

Response 4: As discussed in the first paragraph of the project description (page 2-1, paragraph 3) two unsignalized site access intersections will serve the proposed Griffin Ranch Expansion area. These two intersections will include: the approved Eastern Griffin Ranch Specific Plan access on Avenue 54 (located 3,075 feet east of Madison Street) and a conventional gated site access proposed on Monroe Street 1,120 feet south of Avenue 54.

The potential for signalization at the two site access intersections is discussed at length in detail within Section 4.5 "Traffic Signal Warrants" on page 4-13 through 4-15. As noted therein, neither of the site access intersections is projected to meet traffic signal warrants with year 2008+project traffic volumes. The highest hourly eastbound approach volume at the site access proposed on Monroe Street (24 vehicles) will comprise less than one-third of the minimum volume required (75 vehicles) for a minor street with a single exit lane to warrant signalization. Consequently, the site access proposed on Monroe Street will never meet traffic signal volume warrants in the future, regardless of the future traffic volume on Monroe Street.

The eastern Griffin Ranch access on Avenue 54 is currently being constructed with 20 feet of paved roadway surface (and two entry lanes), a raised median, and an additional 20 feet of paved roadway surface on the northbound approach (the exit side). Since the northbound approach will provide sufficient pavement width for vehicles making right-turn movements onto Avenue 54 to queue beside those making left-turn movements, the projected future traffic volume upon project completion is not expected to ever be sufficient to justify the installation of a traffic control signal, regardless of the future traffic volume on Avenue 54.

As stated on page 4-15, the minor street approach volume required to warrant a signal is 850 vehicles per day (VPD) for a single-lane northbound approach or 1,120 VPD for an access configuration with two northbound approach lanes. The 910 vehicles per day projected to be leaving the Griffin Ranch by moving northbound through the eastern access on Avenue 54 would be sufficient to exceed the rural minor street approach warrant for a single exit lane. However, as stated above, the exit lane being constructed appears to be wide enough to accommodate sneak rights so that two vehicles may exiting simultaneously.

The future daily traffic volumes on Avenue 54 are expected to remain relatively low. The projected year 2008+project daily traffic volume on Avenue 54 at this location is projected to be 3,650 vehicles per day less than the minimum volume necessary to justify signalization. The *La Quinta General Plan Update Traffic Study* buildout traffic projection for Avenue 54, between Madison Street and Monroe Street, is also well below the minimum required to meet daily planning level signal warrants.

As discussed in Appendix C, all traffic control devices nationwide must conform to the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD). The MUTCD identifies the minimum conditions under which installing traffic control signals might be justified if an engineering study of traffic conditions is performed to determine whether installation of a traffic control signal is justified at a particular location. Although numerous warrants are provided therein as evidence of the need for right-of-way assignment, the MUTCD clearly states that the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic signal. The MUTCD states that a traffic control signal should not be installed unless an engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection.

A traffic signal is not recommended at the eastern Griffin Ranch access on Avenue 54 for the following reasons:

- Future traffic volumes are not expected to meet the minimum volume warrants identified in the MUTCD.

- The total stopped time delay experienced by northbound traffic during the peak hour (assuming a single northbound approach lane) is projected to remain relatively low (i.e., less than 19 vehicle-minutes of delay during the highest volume hour upon project completion). A minimum of four vehicle-hours of delay would be required for a single-lane northbound approach for signalization to be considered and five vehicle-hours of delay would be the minimum required with a two-lane approach. In order for the delay to northbound vehicles to reach four-vehicle hours in the highest volume hour with a single-lane approach, the future daily volume on Avenue 54 would need to exceed 32,000 vehicles per day.

- The total entering traffic volume serviced during the highest hour would be insufficient (550 VPH compared to the 650 VPH minimum criteria applicable to tee intersections).

- The MUTCD states that the highest hourly volume on the northbound approach would need to equal or exceed 75 VPH for one moving lane or 100 VPH for two moving lanes. The projected northbound approach volume upon project completion is projected to be 105 VPH, with 70 vehicles turning left and 35 vehicles turning right onto Avenue 54 in the highest volume hour. The northbound approach pavement would be a minimum of 20 feet wide at the gate and flare in proximity to the intersection of Avenue 54. The *Highway Capacity Manual* (2000 HCM) guidance for lane width factors (page 16-10) directs that for unstriped pavement widths wider than 16 feet, two narrow lanes be assumed rather than a single lane, if it reflects the way in which the pavement is expected to be used. If a resident is leaving the site and stopped awaiting a gap of adequate size in the cross traffic on Avenue 54 in which to turn left when another resident attempts to turn right onto Avenue 54, the second vehicle will take advantage of the 20-foot pavement width to pass the stopped motorist and make a "sneak right" (i.e., a right-turn maneuver from an unstriped lane facilitated by the provision of more than the standard pavement width of a typical 10 to 12-foot travel lane). It is common courtesy for motorists to pull to the left side of a wide lane and even move forward, when necessary, to permit their neighbors to pass them and make a right-turn maneuver if they perceive that they are causing excessive or unnecessary delay when turning left. Consequently, it is reasonable to either assume that the 20+ foot northbound approach pavement will function as a two-lane approach serving 105 VPH or, if it is considered a single-lane approach, to eliminate the 35 VPH turning right and consider only the 70 VPH projected to turn left onto Avenue 54.

  The MUTCD guidance directs that engineering judgment be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic volume when evaluating the minor-street approach. The degree of conflict of right-turn traffic with traffic on the major street should be considered. For an approach with one through/left-turn lane and a right-turn lane, the right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. In this case, the approach should be evaluated as a one-lane approach with only the traffic in the through/left-turn lane considered. Based on a single-lane northbound approach with 70 VPH, the

eastern site access on Avenue 54 would never meet signal warrants, regardless of the volume on Avenue 54.

Comment 5: As Avenue 53 is mentioned throughout this report, it should be identified on exhibits when applicable.

Response 5: Avenue 53 is mentioned on Page 2-3 and 2-4 in relationship to the discussion of the Country Club of the Desert, a cumulative development. Figure 2-2 will be modified to show Avenue 53 and the Country Club of the Desert.

Comment 6: Figure 3-2 shall be revised to also show lane configuration at project access points.

Response 6: Figure 3-2 illustrates the existing lane geometrics at the existing key intersections. The proposed site access intersections do not exist today and therefore are not existing key intersections and should not be included on Figure 3-2. As shown in Figure 3-1, both Avenue 54 and Monroe Street are currently two-lane undivided roadways adjacent to the project site. As stated on page 3-1 (paragraph 5), Avenue 54 is a two-lane undivided roadway with 26 feet of pavement east of Madison Street. Page 3-2 (paragraph 5) states that Monroe Street is a 2-lane undivided roadway adjacent to the site.

Comment 7: Figures 4-2 through 4-5. The trips turning movements out of the driveway on Avenue 54 do not seem consistent with the information summarized in Table 4-1 and Figure 4-1. The TIS should recheck the calculations.

Response 7: The "proposed project" referred to in Figure 4-1, Figure 4-2, Figure 4-4, Figure 4-5, Table 4-1, and Table 4-2 is the Griffin Ranch Expansion (90 dwelling units in TM 34642). However, Figure 4-3 illustrates the redistribution of the traffic generated by the previously approved Griffin Ranch Specific Plan (305 single-family dwelling units on 199 acres to the west of the proposed project) which is addressed as a cumulative project in this traffic study, as stated on page 2-4 and on page 4-4 (paragraph 1). Since the previously approved traffic study for the Griffin Ranch Specific Plan addressed a circulation system without the extension of Madison Street (between Avenue 54 and Avenue 52) the traffic from the Griffin Ranch Specific Plan had to be redistributed to reflect conditions following the extension of Madison Street. This redistribution was discussed with City staff prior to the traffic study and included in Figure 4-3 for informational purposes

Figure 4-1 and Figure 4-2 relate to the proposed project, the 90 dwelling unit Griffin Ranch Expansion. Figure 4-4 provides year 2008 traffic volumes without the project and includes traffic from the cumulative Griffin Ranch Specific Plan, but not from the Griffin Ranch Expansion area. Figure 4-5 provides year 2008+project traffic volumes and is the sum of the traffic volume in Figure 4-2 and the "without project" traffic volumes in Figure 4-4.

A typographical error was noted on Figure 4-2. The peak hour northbound left-turn volumes were inadvertently switched with the northbound through volumes at the proposed site access on Monroe Street. The northbound left-turn volume entering the project site should have been shown as one vehicle in the morning peak hour and 4 vehicles in the evening peak hour. The northbound through volumes should have been shown as zero at this intersection. All other exhibits showed this volume correctly and the HCS calculations included it correctly in the study submitted.

Comment 8: Figure 4-2. The Project-Related trips at all Specific Plan access points consistent with Figure 4-3.

Response 8: Figure 4-2 provides only peak hour traffic volumes generated by the proposed project (i.e., 90 dwelling units in the Griffin Ranch Expansion area). As discussed on page 4-3 (paragraphs 3 & 4) internal connections will be made between the proposed project and the Saddle Club at Griffin Ranch as well as the neighboring Griffin Ranch Specific Plan to permit residents to walk, ride their horses, and drive golf carts from their homes without using the external street system.

Figure 4-3 identifies the reassignment of cumulative traffic generated by the development of 305 dwelling units on 199 acres located to the west in the approved Griffin Ranch Specific Plan). No project-related traffic was assigned to the Griffin Ranch Specific Plan access on Madison Street or to the Griffin Ranch Specific Plan western access on Avenue 54. Based upon coordination with the City of La Quinta, these two intersections were excluded from the list of key intersections to be addressed in this traffic study. Therefore, Figure 4-2 does not show traffic volumes at the access intersections to the original Griffin Ranch Specific Plan.

Comment 9: Figure 4-3 does not show any Reassignment for the Monroe Street entry.

Response 9: The rationale for the traffic assignment to the new access proposed on Monroe Street is discussed on page 4-3 (paragraph 3 & 4). The cumulative project traffic reassignment shown in Figure 4-3 reflects traffic generated by the 305 dwellings approved for the 199 acres located to the west. Figure 4-3 was provided because the original *Griffin Ranch Specific Plan Traffic Study* assumed, for a worst-case assessment, that Madison Street would not be extended between Avenue 54 and Avenue 52 before the 305 dwelling units were constructed. To address the 305 dwelling units in the approved Griffin Ranch SP as a cumulative project, the previously approved traffic assignment had to be modified to reflect conditions with the extension of Madison Street (as shown in Figure 4-3). The Griffin Ranch Specific Plan is an approved cumulative project and construction is currently in progress. Since the currently proposed Monroe Street access to the Griffin Ranch Expansion area is not closer to any of the 305 dwellings in the approved Griffin Ranch Specific Plan than the eastern access on Avenue 54, the potential for a significant number of residents from the 305 approved dwellings to divert from the eastern access on Avenue 54 to the currently proposed Monroe Street access was considered negligible.

Comment 10: Section 4.4. The discussion for traffic signal warrants should not be limited to only project related traffic and year 2008+project traffic volumes. The TIS should address the scenario that residents may request a traffic signal once the project is built-out and there is significant increase in volumes on Avenue 54 and Monroe Street.

Response 10: See Response 4. The discussion of traffic signal warrants was not limited to only project-related traffic and year 2008+project traffic volumes. The traffic study did recognize that traffic signal warrants may be met in the future if the eastern access on Avenue 54 is constructed with only one exit lane and the daily traffic volume on Avenue 54 increases to 10,080 vehicles per day at some future date. However, the existing daily traffic volume on Avenue 54 at the eastern access is only 3,240 vehicles per day (32 percent of the daily signal warrant). The traffic study shows that even with all cumulative traffic (including the development of both sides of Avenue 54 west of Monroe Street) and the application of a nine percent annual background growth rate, the daily volume on Avenue 54 is projected to reach 6,430 vehicles per day (still 3,650 vehicles per day less than the minimum daily warrant). The General Plan projection for Avenue 54, between Madison Street and Monroe Street, is 3,100 vehicles per day. The 2020 CVATS model shows only 100 ADT on this link, and the 2030 CVATS model has not been released. Based upon the available traffic projections, a traffic signal at the eastern site access on Avenue 54 is not warranted. Since the northbound exit lane onto Avenue 54 will be a minimum of 20 feet wide at the gate and flare as it approaches Avenue 54, it may ultimately operate as two exit lanes, in which case

this intersection will never warrant a signal because the northbound approach volume will never be sufficient to meet warrants.

Comment 11: The Traffic Impact Study shall follow guidelines from Engineering Bulletin #06-13 - Traffic Study General Specifications and in particular the TRAFFIC SIGNAL GUIDANCE Section. Additionally, the project shall be required to contribute on a "fair share" basis for future traffic signals at the Madison Street/Avenue 54 and Monroe Street/Avenue intersections if warrants are met within 5 years after the project build out date as well as interconnection adjacent to the Specific Plan boundary along Madison Street and Monroe Street.

Response 11: The approved traffic study for the 199-acre Griffin Ranch Specific Plan was completed on September 7, 2004. The coordination letter for the Griffin Ranch Expansion Area traffic impact study was submitted to the City on March 31, 2006. Although the current version of the Griffin Ranch Expansion Area traffic study is dated November 17, 2006, this study represents a minor revision of the traffic study submitted on July 17, 2006 for the Griffin Ranch Expansion Area (which had to be revised to address a change in the Monroe Street access requested by City staff).

The first draft of Engineering Bulletin #06-13 (dated June 19, 2006) was developed by the City of La Quinta after the scope of work, format, content, and key assumptions for the Expansion Area traffic study were approved by the City. Endo Engineering was instructed to exclude a buildout analysis because the 90-dwelling project is consistent with the General Plan. Although the current traffic study may not reflect each and every element and assumption specified in Engineering Bulletin #06-13, the scope of the analysis and the assumptions utilized for the traffic study are appropriate and adequate to identify the probable impacts and associated mitigation measures. The scope and assumptions were developed through extensive coordination with Mr. Nazir Lalani (who also coordinated with Mr. Paul Goble) via telephone and electronic mail. Furthermore, the traffic study scope and assumptions were formally submitted to the City of La Quinta for review and approval in a letter (dated March 31, 2006) eleven weeks prior to the issuance of the first draft of Engineering Bulletin #06-13. Since the first draft of Engineering Bulletin #06-013, the traffic study specifications in this bulletin have been revised several times, with the latest version dated December 19, 2006. The "Traffic Signal Guidance" section was not included in Engineering Bulletin #06-13 until the latest version was released, more than a month after the traffic study was submitted.

The traffic signal guidance section of Engineering Bulletin #06-13 requires a warrant analysis for opening day and ultimate buildout volumes with consideration given to minor street delay and LOS, intersection location within 0.5 mile of coordinated signal systems, 4-hour and 8-hour volume warrants, etc. The "worst case" eastbound left-turn movement from the project site at the proposed site access on Monroe Street is projected to operate at LOS B in the peak hours, with very low delay upon project completion. The traffic study shows that the proposed site access intersection on Monroe Street is expected to accommodate only 210 vehicles per day on the eastbound (minor street) approach, following buildout of the site and all cumulative developments. This is less than 25 percent of the minimum volume required (850 vehicles per day on the minor street approach) to justify the installation of a traffic signal. Regardless of the future traffic volume on Monroe Street, the eastbound traffic volumes at the proposed site access in the peak hour, the highest four hours, the highest eight hours, and over 24 hours will never be sufficient to justify the installation of a traffic signal at this location.

Although the City may consider Monroe Street a candidate for a coordinated signal system, current and projected traffic volumes indicate that Monroe Street will not be ready for signal synchronization for many years. There will not be a sufficient number of traffic signals

along Monroe Street within five years with sufficiently close spacing to achieve a significant benefit from signal coordination. North of Avenue 52, Monroe Street is controlled by the City of Indio, which may not be prepared to participate in an interconnected signal synchronization program within 5 years. Furthermore, even if Monroe Street had signal interconnection, the proposed site access location (on Monroe Street 1,120 feet south of Avenue 54) would result in less than desirable signal spacing for traffic progression.

Numerous studies have demonstrated that fewer signals at uniform signal spacing improve traffic flow and reduce delay. Long and uniform signal spacing allows timing plans that can efficiently accommodate varying traffic conditions during both peak and off-peak periods. Each traffic signal per mile added to a roadway reduces the speed by 2 to 3 mph. As shown in Table A below, a 60-second cycle and a 1/4-mile spacing results in a progression speed of 30 mph whereas a 1/2-mile spacing results in a progression speed of 60 mph. For the site access with a 60-second cycle and 1,120 foot spacing, the progression speed with would be 25 mph, much lower than the current speed of traffic on Monroe Street.

Table A
Progression Speed as a Function of
Signal Spacing and Cycle Length[a]

Cycle Length (Seconds)	Signal Spacing			
	1/8 Mile (660 Ft.)	1/4 Mile (1,320 Ft.)	1/3 Mile (1,760 Ft.)	1/2 Mile (2,640 Ft.)
60	15 mph	30 mph	40 mph	60 mph
70	13 mph	26 mph	34 mph	51 mph
80	11 mph	22 mph	30 mph	45 mph
90	10 mph	20 mph	27 mph	40 mph
100	9 mph	18 mph	24 mph	36 mph
110	8 mph	16 mph	22 mph	33 mph
120	7.5 mph	15 mph	20 mph	30 mph

a. Source: Transportation Research Board, Washington, D.C., "Access Management Manual", 2003.

Closely spaced or irregularly spaced traffic signals on arterial roadways result in frequent stops, unnecessary delay, poor fuel efficiency, excessive air pollutant emissions and high crash rates. Half-mile signal spacing and access control have been shown to result in substantial savings in delay (60%) and travel time (50%) compared to 1/4-mile signal spacing with full median openings between signals. A four-lane divided arterial with 1/2-mile signalized intersection spacing can carry the same traffic volume as a six-lane divided roadway with 1/4-mile signal spacing.

Paragraph 6 and 7 on page 4-13 and Table 4-5 indicate that the intersection of Monroe Street with Avenue 54 and the intersection of Madison Street with Avenue 54 are projected to meet rural peak hour traffic signal volume warrants in the year 2008 with and without site traffic. The former intersection is projected to continue to provide acceptable levels of service upon project completion, whereas the latter is not. Consequently, mitigation measure 13 (on page 1-3) states that the project proponent may be required to contribute on a fair-share basis to the cost of installing traffic signals at the intersection of Madison Street and Avenue 54. Mitigation measure 14 (on page 1-4) states that the project proponent may be required to participate in a traffic mitigation fee program to ensure that a fair-share contribution is made to the cost of future traffic signals and other future roadway infrastructure improvements of area-wide benefit.

Once the City has established a program to ensure that fair-share contributions are made to the cost of future traffic signals and other future signal interconnection improvements, then the conditions of approval will include a statement to the effect that if warrants are met within 5 years after the project build-out date, the project developer shall be required to contribute on a "fair share" basis to the cost of future traffic signals at the intersections of Madison Street/Avenue 54 and Monroe Street/Avenue 54 as well as interconnection adjacent to the Specific Plan boundary along Madison Street and Monroe Street. We concur that when any warranted traffic signals are installed along Madison Street and Monroe Street in the future, provisions should be made to ultimately allow interconnection to occur.

Comment 12: The applicant shall resubmit a Final Traffic Impact Study addressing all concerns for approval by the City Traffic Engineer.

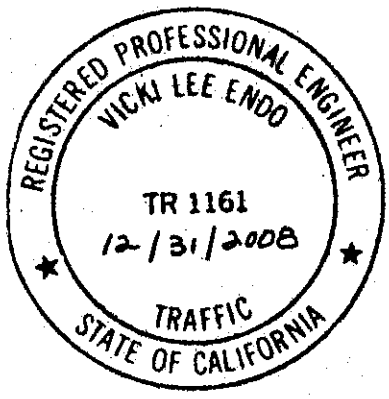
Response 12: A Final Traffic Impact Study addressing the Griffin Ranch Specific Plan Expansion Area will be submitted in electronic format and shall include the changes outlined above as well as incorporate this response to the City's comments as an attachment.

We trust that this adequately responds to the comments dated January 5, 2007 made by the City of La Quinta. If additional questions or comments arise, please do not hesitate to contact our offices by telephone at (949) 362-0020, by facsimile at (949) 362-0015, or via electronic mail at endoengr@cox.net.

Sincerely,
ENDO ENGINEERING

Gregory Endo
Principal

Vicki Lee Endo, P.E.
Registered Professional
Traffic Engineer TR 1161



City of La Quinta

January 8, 2007

Jerry Herman,
Trans West Housing
47-120 Dune Palms Rd. Suite C
La Quinta, CA 92253

RE: APPLICATION REVISIONS FOR ENVIRONMENTAL ASSESSMENT 2006-577, TENTATIVE TRACT MAP 34642, AND SPECIFIC PLAN 2004-074 AMENDMENT NO 1.

Dear Mr. Herman,

We are in receipt of the above revised applications and have again reviewed them for completeness, as required by Government Code Section 65943 and the City Municipal Code. In our review of your revised application, we have found the following items to be necessary for revision or clarification in order for you to achieve a complete application:

1. Public Works has submitted an attachment to this letter listing necessary revisions and items for re-submittal in regards to the Draft Traffic Impact Study, the Amended Specific Plan, and Tentative Tract Map 34642. Please address those items accordingly and contact Public Works at (760) 777-7078 if you have any questions.

2. In order to achieve consistency along Monroe Street and shift the wall further from the street, an additional five feet of landscaped area shall be placed adjacent to the deceleration/right turn lane along Monroe Street at the east entry. Lots 1, 2, and 3 shall be adjusted accordingly.

3. The following pages and exhibits in the proposed Amended Specific Plan shall be replaced with corrections or revisions:

P.O. Box 1504 • La Quinta, California 92247-1504
78-495 Calle Tampico • La Quinta, California 92253
(760) 777-7000 •FAX (760) 777-7101

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A. Typo, page 1 of 72, 1st paragraph, line 6, *Specific Plan 2004-074*.

B. Math error, page 5 of 72, 3rd paragraph, line 3, *244 x 2 = 488*.

C. Reference updated letter from IID dated 12-12-06, that the developer shall coordinate with other developers in the vicinity to provide a substation on the bottom of page 7 of 72.

D. Exhibit 8, page 17 shall be revised accordingly.

E. Addendum/notation, page 34 of 72 (or other location as deemed appropriate), to include a reference that overflow parking for the clubhouse shall be along Secretariat Drive, the clubhouse perimeter street.

F. Remove Oleander from the plant list on Page 48 of 72, as it is poisonous to horses.

4. The revised Tentative Tract Map 34642 does not identify or distinguish the narrow lot adjacent to Well Site AR and lot 20. This parcel is identified in the Amended Specific Plan as retention/open space, rather than a portion of Well Site AR, in Exhibit 4 of page 11.

5. It is our understanding that the ownership detail is to be revised on Tentative Tract Map 34642.

6. The mandatory 90 day SB-18 consultations have concluded without comment from tribal agencies.

Please address the above items in order to achieve a completed and finalized application. Attached with this letter is a copy of Public Works comments regarding items for revision. If you have any questions regarding these items, please contact either Public Works at (760) 777-7075 or Community Development at (760) 777-7125.

Sincerely,

Andrew J. Mogensen
Associate Planner

C: PW, PM, TWH, File
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Paul Goble

From: Gregory Endo [endoengr@cox.net]
Sent: Thursday, July 20, 2006 3:06 PM
To: Paul Goble
Subject: Madison/Avenue 62 Circulation Element Amendment

Madison GPA.pdf
(380 KB)

Paul,

Per your request, we have attached the traffic letter requested by Mr. Steve Speer in downgrading Madison Street from a 6-lane divided major arterial to a 4-lane divided primary arterial. In the letter submitted to Mr. Steve Speer, the traffic volumes and trip generation were based upon the "La Quinta General Plan Update Traffic Study" by RKJK.

For the upcoming analysis of the traffic impacts associated with the "Travertine Specific Plan Circulation Element Amendment Traffic Impact Study", we plan to use ITE "Trip Generation" (Seventh Edition, 2003) rates (to be consistent with the approved traffic study for the Travertine and Green Specific Plan). If you prefer, we can use the rates from the "La Quinta General Plan Update Traffic Study."

Since the Travertine Specific Plan site is located at the terminus of Jefferson Street, Madison Street and Avenue 62, the projected traffic volumes will be based upon the traffic from known development and anticipated future development in those areas directly adjacent to those streets (primarily west of the levee). If you have traffic projections for future development east of the City, we would include those in our analysis. Otherwise, we will qualitatively discuss the potential for future through traffic in the study area that may result from development in the area between La Quinta and Thermal. We will also contact CVAG regarding the potential development of the South Valley Corridor.

We would appreciate any further guidance you may have regarding the scope of work for this analysis. However, we have been asked to submit the scope of work to the applicant by Monday.

Gregory Endo
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Endo Engineering *Traffic Engineering* *Air Quality Studies* *Noise Assessments*

November 12, 2004

Mr. Steve Speer
Assistant City Engineer
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

Subject: Evaluation of the Madison Street Master Planned Classification

Dear Mr. Speer;

Endo Engineering recently prepared a traffic study that addressed the impacts associated with the Griffin Ranch development proposed adjacent to Madison Street in the City of La Quinta. Madison Street is currently classified as a 6-lane divided major arterial highway with a capacity of 57,000 vehicles per day adjacent to the project site. Between Avenue 54 and Avenue 58, Madison Street was upgraded from a 4-lane divided primary arterial highway to a 6-lane divided major arterial highway as a result of the last La Quinta General Plan update. However, most of Madison Street between Avenue 54 and Avenue 58 was improved as a 4-lane primary arterial in conjunction with adjacent development.

Subsequent to the *La Quinta General Plan Update Traffic Study*, by RKJK & Associates (March 21, 2000) development occurring in the southeastern portion of the City of La Quinta appears to be less intense than that envisioned by the General Plan. In particular, there are two square-mile areas that have recently been approved for development that will generate substantially fewer trips than assumed in the General Plan traffic model. Consequently, it appears that Madison Street may provide sufficient capacity to serve General Plan buildout traffic volumes as a 4-lane primary arterial highway.

In an effort to evaluate the appropriate master planned classification of Madison Street, adjacent to the Griffin Ranch project (between Avenue 54 and Avenue 58) Endo Engineering has reviewed the City of La Quinta General Plan Update Traffic Model trip generation and land use assumptions and compared them to the ITE trip generation rates and the existing entitlements (primarily Andalusia and Trilogy) in the two square-mile area served by this segment of Madison Street. Our analysis and findings are summarized below.

Andalusia Area

The Andalusia project occupies the square mile bounded by Madison Street, Avenue 58, Monroe Street, and Avenue 60, with the exception of a parcel occupying approximately 77 acres in the northeast corner. The Andalusia project currently has approvals for 472 dwelling units on 548 acres and a ±10-acre commercial site.

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It was assumed for the analysis herein that the 10.51-acre commercial area included in the land use assumptions for Traffic Analysis Zone (TAZ) 1000 in the General Plan Update Traffic Model would be developed in conjunction with the Andalusia project. The remaining 77-acre parcel that is not a part of the Andalusia project is designated in the General Plan for low density residential land uses.

La Quinta General Plan Modeling of Andalusia Area

The square block surrounded by Madison Street, Avenue 58, Monroe Street, and Avenue 60 was represented in the La Quinta General Plan Update Traffic Model as TAZ 1000 and TAZ 1005. As shown in Table 1, the land use for TAZ 1000 and 1005 included 545.74 acres of low density residential use, 1.23 acres of medium density residential use, and 50.5 acres of general commercial use. Based upon the trip generation rates in Table 3-3 of the *La Quinta General Plan Update Traffic Study,* the trip generation associated with the residential and commercial land uses within this square mile would ultimately be 25,910 daily trips. The commercial trip generation (17,680 daily trips) would comprise 68 percent of that total.

Table 1
General Plan Update Model Trip Generation

Development Area/Land Use	Land Use Quantity[a]	Trip Generation Rate[b]	Daily Trip Generation[c]
Andalusia Area			
- Low Density Residential	545.74 Acres	15 TE/Acre	8,190
- Medium Density Residential	1.23 Acres	37 TE/Acre	50
- General Commercial	50.50 Acres	350 TE/Acre	17,670
Subtotal			25,910
Trilogy Area			
- Low Density Residential	49.84 Acres	15 TE/Acre	750
- Medium Density Residential	314.30 Acres	37 TE/Acre	11,630
Subtotal			12,380
Total Both Areas			38,290

a. The Andalusia area included TAZ 1000 (with 406.22 acres of Low Density Residential use and 10.51 acres of General Commercial use) and TAZ 1005 (with 139.52 acres of Low Density Residential use, 1.23 acres of Medium Density Residential use and 39.99 acres of General Commercial use). The Trilogy area included TAZ 1016 (with 35.65 acres of Low Density Residential use and 236.8 acres of Medium Density Residential use) and TAZ 1021 (with 14.19 acres of Low Density Residential use and 77.5 acres of Medium Density Residential use).
b. Source: *La Quinta General Plan Update Traffic Study,* RKJK & Associates; March 21, 2000; Table 3-3.
c. All daily trip-end projections were rounded to the nearest 10 cars.

Trilogy Area

The Trilogy project occupies the square mile bounded by Madison Street, Avenue 60, Monroe Street, and Avenue 62, except for the southwest side and a small (28.7-acre) parcel located adjacent to Monroe Street, at Avenue 61. The Trilogy project currently has entitlements for 1,204 dwelling units on 474 acres. The 28.7-acre parcel is designated in the General Plan for low density residential land uses.

La Quinta General Plan Modeling of Trilogy Area

The Trilogy project appears to be located in TAZ 1016 and TAZ 1021. However, TAZ 1016 also includes the 28.7-acre parcel located on Monroe Street that is not a part of the Trilogy development. As shown in Table 1, the La Quinta General Plan Update Traffic Model land use assumed for TAZ 1016 and TAZ 1021 includes: 49.84 acres of low density residential development and 314.3 acres of medium density residential development. Based upon the trip generation rates in the *La Quinta General Plan Update Traffic Study,* the trip generation associated with buildout of the residential land uses within TAZ 1016 and TAZ 1021 would ultimately be 12,380 daily trips.

Evaluation of Trip Generation Rates

As the project planning and approval process occurs, the generalized trip generation rates assumed in the La Quinta General Plan Update Traffic Model can be replaced with more accurate trip generation projections, based upon detailed development plans. The analysis herein identifies the General Plan trip generation rates for the areas covered by the Andalusia and Trilogy projects, and replaces the General Plan residential trip generation rates (based upon acres of residential uses) with the ITE trip generation rates based upon number and type of dwelling units in each specific development.

The La Quinta General Plan Update Traffic Model utilized trip generation rates based on the number of acres of development by land use category, rather than the number of residential dwelling units or square footage of commercial land uses. As shown in Table 3-3 of the *La Quinta General Plan Update Traffic Study*, low density residential uses were assumed to generate 15 daily trips per acre. Medium density residential land uses were assumed to generate 37 daily trips per acre. General commercial development was assumed to generate 350 daily trips per acre for both the General Plan model trip generation and the trip generation for the Andalusia project for consistency with the General Plan model.

Based upon coordination with the City of La Quinta staff, the Trilogy project was assumed to have a residential daily trip generation rate based upon the senior adult housing-detached age restricted category (ITE Code 251). To insure a conservative analysis, the senior adult housing-detached average rate of 3.71 daily trip-ends per dwelling unit was increased by one standard deviation (2.04 daily trip-ends per dwelling unit) to 5.75 daily trip-ends per dwelling unit. Since the Andalusia project is not age restricted, City of La Quinta staff concluded that 7.50 daily trip-ends per dwelling unit applicable to the residential planned unit development category (ITE Code 270) would be an appropriate trip generation rate for the Andalusia project.

Refinement of the General Plan Model Projections

The total residential and commercial trip generation assumed in the La Quinta General Plan Update Traffic Model for TAZs 1000, 1005, 1016, and 1021 was 38,290 daily trips, as shown in Table 1. Based on the refined land use data and the ITE trip generation rates discussed above for residential dwelling units, a refined trip generation forecast was developed. Assuming that TAZs 1000 and 1005 will be developed with 472 single-family dwelling units generating 7.50 daily trips per unit, and a 10.51-acre commercial parcel generating 350 daily trips per acre (with an additional 77 acres of low density residential development generating 15 trip-ends per acre), the Andalusia area will generate 8,380 daily trip-ends, as shown in Table 2. Assuming that TAZs 1016 and 1021 will be developed with 1,204 dwelling units generating 5.75 daily trips per unit (with an additional 28.7 acres of low density residential development generating 15 trip-ends per acre) the Trilogy area will generate 7,350 daily trip-ends.

Table 2
Refined Trip Generation Forecast

Development Area	Land Use Quantity[a]	Trip Generation Rate[b]	Daily Trip Generation
Andalusia Area	472 DU (SFD) 10.51 Acres Commercial 77 Acres LD Residential	7.5 TE/DU 350 TE/Acre 15 TE/Acre	3,540 3,680 1,160 8,380
Trilogy Area	1,204 DU (Active Seniors) 28.7 Acres LD Residential	5.75 TE/DU 15 TE/Acre	6,920 430 7,350
Total Both Areas			15,730

a. DU=dwelling units. SFD=single family detached. LD=Low Density.
b. Based upon trip generation rates published by the ITE *Trip Generation* (7th Edition December, 2003) for residential dwelling units, as discussed above. TE/DU=Trip-Ends per Dwelling Unit. TE/Acre=Trip-Ends per Acre.

Based on the existing entitlements, the total resulting trip generation for both the Andalusia and Trilogy areas would be 15,730 daily trips. Based on the existing entitlements compared to the General Plan Model projection, the refined trip generation forecast provided in Table 2 indicates a reduction of approximately 22,560 daily trip-ends associated with the development of TAZs 1000, 1005, 1016, and 1021.

A reduction in trip generation from the Andalusia site and the Trilogy site would reduce the traffic volumes on the surrounding streets. Most of the traffic generated in the southeastern part of La Quinta will travel to the north along Madison Street and Monroe Street. As evidenced by existing traffic volumes, Madison Street provides a more direct route to the City of La Quinta and will carry the majority of the northbound traffic. Approximately one-half of the reduction in trip generation will result in lower future traffic volumes on Madison Street. The remaining reduction in future traffic volumes will occur on Monroe Street to the north and other streets providing access to the south.

Exhibit 4-A of the *La Quinta General Plan Update Traffic Study,* shows that the post year 2020 peak season weekday traffic projection for Madison Street is 43,700 daily trips (south of Avenue 54) and 41,300 daily trips (south of Airport Boulevard). Given the reduction in land use intensity associated with the Andalusia and Trilogy projects, the post year 2020 traffic projections for Madison Street are expected to be reduced by approximately 11,280 daily trips. This will reduce the projected post year 2020 traffic volumes on Madison Street to 32,420 daily trips (south of Avenue 54) and 30,020 daily trips (south of Airport Boulevard).

Arterial Capacity Considerations

Table 2-1 of the *La Quinta General Plan Update Traffic Study* identifies the daily capacity associated with different roadway classifications. As shown therein, a six-lane divided major arterial has a capacity of 57,000 daily trips. By comparison, a four-lane divided primary arterial highway has a capacity of 38,000 daily trips.

With the General Plan Update Traffic Model trip generation assumptions, Madison Street had a projected traffic volume of 43,700 daily trips (south of Avenue 54) to 41,300 daily trips (south of Airport Boulevard). Both of these projected traffic volumes exceeded the daily capacity of a four-lane divided primary arterial highway utilized by the City of La Quinta (by 15 percent and 9 percent, respectively). This led to a major arterial highway classification for Madison Street south of Avenue 54 and south of Airport Boulevard during the General Plan Update process.

Given the reduction in land use intensity associated with the Andalusia and Trilogy projects, the post year 2020 traffic projections for Madison Street are expected to be 32,420 daily trips (south of Avenue 54) and 30,020 daily trips (south of Airport Boulevard). Both of these projected traffic volumes will be substantially below the daily capacity (38,000 vehicles per day) of a four-lane divided primary arterial highway utilized by the City of La Quinta.

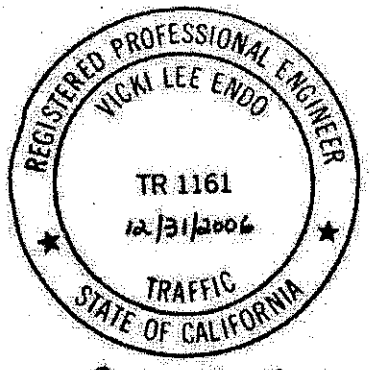
Finding and Recommendation

Based upon the refineed trip generation associated with the entitlements and development intensity being realized by the Andalusia and Trilogy projects, the post year 2020 peak season weekday traffic projections for Madison Street south of Avenue 54 and south of Airport Boulevard will be 15 percent to 21 percent less than the capacity of a four-lane divided primary arterial highway. Therefore, Madison Street, between Avenue 54 and Avenue 58 can be downgraded in the City of La Quinta General Plan Circulation Element from its current six-lane divided major arterial highway classification to a four-lane divided primary arterial highway classification, consistent with the existing improvements adjacent to the PGA West development.

We trust that the information provided herein will be of value to the City of La Quinta in their review of the potential impacts associated with a reclassification and downgrading of Madison Street. Should questions or comments arise regarding the findings and conclusions herein, please do not hesitate to contact our offices at (949) 362-0020 to discuss this matter further.

Sincerely,
ENDO ENGINEERING

Gregory Endo
Principal



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