

ITEM: Del Dios/Paseo Delicias Roundabouts

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Item #: 3

Submitted By: Assistant Manager Holler

INTRODUCTION

Several years ago, in response to numerous complaints about motorists using local streets to bypass lengthy queues on Del Dios Highway and Paseo Delicias (Del Dios), the Association began the process of looking for ways to improve traffic flow through the intersections on Del Dios. That process culminated in the County conducting a feasibility study on the use of roundabouts as intersection controls on the Del Dios corridor. Once roundabouts were determined to be a feasible solution, the Association and the County contributed funds towards the design of three roundabouts; at Camino Del Norte, La Valle Plateada/Montevideo, and Via de la Valle.

At the conclusion of the preliminary design phase, the County agreed to prepare an Environmental Impact Report (EIR) to analyze potential impacts (and benefits) associated with the use of roundabouts at the three intersections listed above. Although the proposed project did not need an EIR (a lesser form of environmental analysis would have been sufficient), an EIR was utilized in order to analyze alternative types of intersection controls as well, such as the use of traffic signals.

The County of San Diego has now completed work on the Draft (EIR) for the roundabouts, and is currently circulating it for final public comments. Comments on the EIR must be submitted to the County by February 28th, 2012.

The Final EIR will include responses to any new public comments received during the comment period. Ultimately, the Final EIR will be submitted to the Board of Supervisors. If the Board of Supervisors certifies the Final EIR, the roundabouts will be placed on the County's Capital Improvement Project list and be eligible to compete for future funding.

This report provides an overview of the EIR, which was recirculated to include an analysis of lighting at the roundabouts, construction-related impacts, and other smaller changes associated with responses to previous public comments. It also provides an overview of the history and the design of the roundabouts.

At this point in time, the possible actions for the Rancho Santa Fe Association's Board of Directors include; 1) providing additional comments on the EIR, 2) objecting, or having no objection to the certification of the EIR, or 3) recommending that one of the alternatives analyzed in the EIR be certified as the project. Notwithstanding inclusion on the County's Improvement Project list, none of these possible actions are directly related to project funding or construction.

RECOMMENDATION

Staff recommends that the Association Board submit the following two comments to the County:

1. Recommend that the diameter of the La Valle Plateada/Montevideo and Via de la Valle roundabouts be reduced by a minimum of ten feet (10'), to minimize impacts to adjacent property.
2. The Rancho Santa Fe Association does not object to the County Board of Supervisors certifying the Final EIR.

Staff further recommends that the Board of Directors direct the Association Manager to send a letter to the County with the Board's comments.

BACKGROUND

Roundabout History

Commuter traffic on Del Dios Highway has been an ongoing concern in Rancho Santa Fe for many years. When the City of Encinitas incorporated, it effectively prevented the completion of Highway 680 (a planned east-west route just to the North of the Covenant). When the Association's traffic counter was first installed in 2002, the average weekday traffic volume on Del Dios Highway was around 20,000 vehicles per day. Not only did this impact driving conditions on Del Dios Highway, but it also had major impacts on residential side streets that were used as cut-through routes. The streets of Lago Lindo, Mimulus, and La Valle Plateada were the major recipients of this cut-through traffic.

Starting in 2000, to combat the cut-through traffic problem, the Association first reviewed establishing right hand turn prohibitions at a number of intersections to reduce cut-through traffic. That review subsequently evolved into a study of a system of moveable barricades, later referred to as "Neighborhood Safety Devices" (NSD), to prevent commuter access to these side streets during rush hour. For a variety of reasons, not the least of which was the fact that the barricades would simply shift a traffic problem from one neighborhood to the next, the NSDs proved to be infeasible.

Around that same time, a formal request was submitted to the County to signalize the intersections of La Valle Plateada/El Montevideo and Via de la Valle on Paseo Delicias. The County was then obligated to respond to the signalization request by reviewing the operation of the intersection. A part of the County's analysis included a review of the "*Community Right-of-Way Development Standards*" for the San Dieguito Planning Area. Section 3.9 of those standards states:

“Traffic signals are highly destructive of the rural character of the area’s scenic roadways. They shall only be allowed where safety concerns cannot be otherwise mitigated.”

Concurrent with the County’s analysis, the Association hired the traffic engineering firm of Kimley Horn to prepare a study on traffic signals and after receiving the results, the Association Board concluded that traffic signals were an inappropriate form of intersection control for the Covenant.

As a result of the discussion of traffic signals on Del Dios, the Association learned in June 2002 that the County had considered using a roundabout at the intersection of Paseo Delicias and Via de la Valle. This introduced the concept of roundabouts as an alternative to signalization and as a possible solution to the ongoing concerns regarding cut through traffic.

In February of 2003, the County retained a consultant to conduct a feasibility study on the use of roundabouts as intersection controls in the Del Dios corridor. The results of the study were presented at a noticed Covenant-wide meeting in September of 2003. Shortly thereafter, the Association Board voted to accept the Road and Traffic Committee’s recommendation for roundabouts and sent a letter to the Board of Supervisors in March of 2004 requesting that:

“...the County accept the County-commissioned ‘roundabout study’ as recommended by your Traffic Advisory Committee (TAC) and endorse the establishment of roundabouts at the three Paseo Delicias intersections...”

In September of 2004, the Association Board voted to approve an expenditure of \$125,000 for the design of the roundabouts. At the request of Supervisor Horn, in October 2004, the Board of Supervisors allocated an additional \$125,000 towards the design of the roundabouts for a total of \$250,000.

Throughout 2005 and 2006, meetings were held between the County staff, the roundabout consultants, the Association, representatives from the equestrian community and adjacent property owners. These meetings included a special meeting held in April of 2005 specifically for adjacent property owners to express their specific concerns prior to completion of the first design of the roundabouts. Then in June of 2005, the first iteration of the design was presented at a noticed Covenant-wide meeting. All comments from these meetings, as well as written letters received by the Association regarding the roundabouts were provided to the County and the consultant team. The County addressed as many concerns as possible within the constraints of engineering, traffic and environmental standards. Revised engineering drawings were presented at a third noticed Covenant-wide meeting on March 16, 2006.

Once the preliminary engineering and designs were completed for the roundabouts, the Association asked the County to prepare an EIR in order to better

evaluate the roundabout designs related to equestrian crossings, driveway access and impacts of the roundabouts on adjacent properties. But just as importantly, an EIR must include an alternatives section. In this case, one of the project alternatives analyzed, was signalization of the three intersections. The first draft of the EIR was completed in late 2008 and circulated for public comment.

For most of 2009, the County modified the EIR in response to public comments. One of the deficiencies identified in the Draft EIR related to lighting for the roundabouts. So in 2010, the Association and the County retained a lighting consultant to prepare a specialized lighting plan that would meet local Dark Sky Policies. Roundabout lighting required additional analysis in the EIR.

Roundabout Location and Design

Roundabouts are proposed for three intersections on the Del Dios / Paseo Delicias corridor (Attachment A):

- Del Dios and El Camino del Norte (Attachment B)
- Paseo Delicias and El Montevideo / La Valle Plateada (Attachment C)
- Paseo Delicias and Via de la Valle (Attachment D)

The roundabouts are designed to function together as a system by requiring vehicles to slow, but not stop, as they move through the intersection. The roundabouts at El Camino Del Norte and Via de la Valle are designed as three-way intersections, while the roundabout at La Valle Plateada/El Montevideo is designed as a four-way intersection.

Due to the irregular shape of the Paseo Delicias and Via de la Valle intersection, it is the most complex of the three roundabouts. On the north side of this intersection, the western end of La Fremontia would be closed and would become a cul-de-sac. (Signalizing this intersection would also require that the western end of La Fremontia be closed.) The intersection of Las Colinas with Via de la Valle would also be relocated approximately 120' to the south, so as not to interfere with the roundabout.

Each of the roundabouts shares the same components:

- Splitter islands – to slow approaching traffic and align the vehicles to enter the circular flow of traffic in the roundabout
- Pedestrian / Equestrian crosswalks
- Roundabout
- Center landscaped island

The diameter of the proposed roundabouts is approximately 111' to 114' depending on the specific intersection. Because Del Dios is a Mobility Element roadway, the County has based the minimum diameter on Federal Highway Administration

(FHWA) Guidelines for Rural Roundabouts. It is important to note however, that these are guidelines, not standards. Therefore, it may be possible to further reduce the overall diameter of the roundabout at El Montevideo / La Valle Plateada and still comply with FHWA guidelines. The roundabouts will still need to be able to accommodate large trucks and vehicles with trailers.

Rural Single-Lane Roundabouts have a minimum recommended diameter in the FHWA Guidelines of 115', while Urban Single-Lane Roundabouts have minimum recommended diameter of 100'. The roundabout at El Camino Del Norte would appear to meet the criteria of a Rural Roundabout because of the higher approach speeds. However the roundabouts at Via de la Valle and especially at La Valle Plateada/El Montevideo, appear to fall somewhere in between the design parameters for Urban and Rural. This is because slower approach speeds would be a benefit at each of those intersections due to existing development patterns, closer proximity to the Village, and increased likelihood of pedestrians. Any reduction in the overall size of the roundabouts would also reduce encroachment into adjacent private property.

Roundabout Location	Diameter ¹
Del Dios and El Camino Del Norte	114'
Paseo Delicias and La Valle Plateada/El Montevideo	111'
Paseo Delicias and Via de la Valle	113'

Each roundabout would have a 16' wide travel lane, a 12' to 15' wide mountable truck apron, and a 48' to 54' diameter center island. The truck apron is designed to allow the rear portion of the trailer on large semi-trucks to roll over the apron if needed, in order to successfully navigate the roundabout. The three center islands will also be landscaped in a manner consistent with other Covenant roadways.

Drivers would be required to maneuver around the splitter islands and the center island at speeds of approximately 15–27 miles per hour. Vehicles entering the roundabouts will merge into the counter-clockwise flow of a single lane of traffic.

Combination equestrian / pedestrian crossings would be delineated by crosswalk markings on the pavement and include push-button activated in-pavement flashing lights. The push-button for equestrians would be mounted at an approximate height of 70", to enable activation from horseback. In addition to the in-pavement lighting, the equestrian push-button would also activate flashing warning signs approximately 400' to 500' feet in advance of each side of the intersection.

Lighting

None of the three intersections are presently illuminated. However, the introduction of roundabouts (or traffic signals) would require illumination for safety

¹ The diameter shown in the table is for the curb-to-curb dimension of the roundabout. In most areas, there is a 7' to 10' wide disintegrated granite walkway/trail surrounding the roundabout.

purposes. At the request of the Rancho Santa Fe Association, the County prepared an Alternative Illumination Study and lighting plan for each intersection.

Roadway lighting is restricted in the San Dieguito Community Right of Way Development Standards as follows:

“Where street lighting is otherwise mandated and safety concerns cannot otherwise be mitigated, the size and intensity of the lighting shall be kept to an absolute minimum in order to preserve the rural character of the area and in keeping with the San Dieguito Community Plan’s policy of adhering to a dark sky policy. Further, any lighting shall be directed downward with the light source shielded.”

In keeping with the intent of the Community Plan and the Dark Sky Policy, intersection lighting would be limited to a maximum of one 15’ high light fixture at each end of the proposed crosswalks. In addition, as described in the previous section, in-pavement lighting for pedestrians and equestrians would be located at each of the crosswalks. The in-pavement lighting would be push button activated. Passive reflectors would also be installed along the curb lines of the splitter islands and at the edge of the center mountable apron.

Intersection Traffic Operation Analysis

The following tables show the Level of Service (LOS) at each of the three intersections using the existing configuration, roundabouts, or traffic signals. The first table shows the LOS for the current year, while the second table shows the LOS for the year 2030. Each table further breaks down the peak hour traffic into AM and PM, with AM traffic coming from the east, and PM traffic coming from the west.

The ‘Existing’ and ‘2030 w/ Current Configuration’ columns represent the current intersection configurations (e.g., stop signs or no intersection control). The two remaining columns compare the function of roundabouts and signals respectively, both in the current year and in 2030. LOS is used just like a letter grading system, with ‘A’ being the best (no delays) and ‘F’ being the worst (significant delays).

Current Year Intersection Traffic Operations

Intersection	Peak Hour	Existing	Existing w/ Roundabouts	Existing w/ Signals
		LOS	LOS	LOS
Del Dios and El Camino Del Norte	AM	F	A	B
	PM	F	A	B
Paseo Delicias and La Valle Plateada/El Montevideo	AM	E	A	B
	PM	F	A	B
Paseo Delicias and Via de la Valle	AM	C	A	B
	PM	C	A	C

Year 2030 Intersection Traffic Operations

Intersection	Peak Hour	2030 w/ Current Configuration	2030 w/ Roundabouts	2030 w/ Signals
		LOS	LOS	LOS
Del Dios and El Camino Del Norte	AM	F	C	C
	PM	F	D	C
Paseo Delicias and La Valle Plateada/El Montevideo	AM	F	B	B
	PM	F	A	B
Paseo Delicias and Via de la Valle	AM	F	B	B
	PM	F	B	C

As can be seen from the tables, the installation of either roundabouts or traffic signals would greatly improve the function of the intersections over the current configuration. Roundabouts perform slightly better than traffic signals in both the current year and over the long term. However, the difference is not dramatic, especially over the long term.²

Both roundabouts and traffic signals would also result in reductions in cut-through traffic as well.³ Because the full list of AM/PM traffic counts and turning movements for all of the involved intersections would be lengthy and potentially confusing, the following turning movements and traffic reductions are for two major intersections:

Current Year

- El Camino Del Norte in the AM would see a 45% reduction in right hand turns from westbound traffic on Del Dios in the **current year** (from 330 turns to 180 turns – peak hour)
- El Montevideo in the AM would see a 21% reduction in right hand turns from westbound traffic on Paseo Delicias in the **current year** (from 87 turns to 69 turns – peak hour)
- La Valle Plateada in the PM would see a 55% reduction in right hand turns from northbound traffic onto eastbound Paseo Delicias in the **current year** (from 86 turns to 39 turns – peak hour)

2030

- El Camino Del Norte in the AM would see a 41% reduction in right hand turns from westbound traffic on Del Dios in **2030** (from 630 turns to 370 turns – peak hour)
- El Montevideo in the AM would see a 27% reduction in right hand turns from westbound traffic on Paseo Delicias in **2030** (from 110 turns to 80 turns – peak hour)

² The information in the tables is from Tables 3-1 and 3-2 of the Traffic Impact Analysis section of the EIR.

³ Information on turning movements and traffic volume reductions are from Figures 2-2, 3-1, 3-2 and 3-3 of the Traffic Impact Analysis section of the EIR.

- La Valle Plateada in the PM would see a 60% reduction in right hand turns from northbound traffic onto eastbound Paseo Delicias in **2030** (from 150 turns to 60 turns – peak hour)

Significant Project Issues

Roundabouts

One question that frequently comes up with roundabouts is whether vehicles will be able to exit or enter driveways which front onto Paseo Delicias during peak traffic times. According to the EIR, the design of the roundabouts would require vehicles to slow down at the yield sign prior to entering a roundabout. Drivers would have to slow enough, so as to make sure that there is no oncoming traffic already in the roundabout. This slowing, coupled with the need to maneuver around the splitter islands and the roundabout at speeds between 15-27 miles per hour, will create gaps in the traffic flow. These gaps would then allow vehicles to exit or enter from driveways along the corridor.

The potentially significant issues associated with roundabouts include:

- The County will need to acquire additional right-of-way to construct the roundabouts through the use of eminent domain.
- The roundabouts will directly impact a few adjacent property owners. In some cases, this will mean a reduction in the size of their front or side yard, removal of some existing trees, or relocation of existing driveways.
- Traffic disruptions during construction.
- Roundabouts are expensive to build with an estimated cost of around \$6 million dollars. However, funding for the roundabouts would be the County's responsibility, except for the cost of any enhanced landscaping, which would be borne by the Association.
- Cul-de-sac the west end of La Fremontia.

Benefits of roundabouts include:

- Reduction in cut-through traffic on local roads.
- Improved traffic flow and substantially reduced queues on the Del Dios corridor.
- Left turns are not allowed, so left turn conflicts (accidents) are not present in a roundabout.

Traffic Signals

The potentially significant issues associated with traffic signals include:

- The County will likely need to acquire some additional right-of-way to construct the traffic signals (although much less than for the roundabouts), through the use of eminent domain.
- Negative impacts on the rural community character of the Covenant, as traffic signals are generally prohibited in the “*Community Right-of-Way Development Standards*” and previous Committees and Boards have determined that traffic signals were an inappropriate form of intersection control for the Covenant.
- If traffic signals are used on Paseo Delicias, they may likely be installed at other intersections in the Covenant including El Camino Del Norte and Lago Lindo; Linea Del Cielo and Rambla de Las Flores; Linea Del Cielo and El Camino Real; La Bajada and La Noria, and; La Granada and San Elijo.
- Traffic speed on Paseo Delicias may increase where the traffic signals rest on green. Traffic signals would generally rest on green for the Del Dios corridor, and would only change when triggered by vehicles from a side street or turn lane.
- Substantial queuing may still occur during peak AM or PM commute times not unlike PM queues at the intersection of Del Dios and Via Rancho Parkway, which is signalized.
- Cul-de-sac the west end of La Fremontia.
- Street lights are typically required on top of signal arms to adequately light the intersection. Such lighting is higher than 15’.

Benefits of traffic signals include:

- Reduction in cut-through traffic on local roads.
- Improved traffic flow on the Del Dios corridor.
- Lower cost of construction. Funding for traffic signals would be the County’s responsibility, except for the costs associated with upgraded poles and fixtures, which would be borne by the Association.
- Shortened time frame for installation.

Aesthetics

Either roundabouts or traffic signals will fundamentally change the character of the Del Dios corridor from an aesthetic standpoint. In light of that, perhaps an appropriate question is, which type of intersection control best fits with the character of the Ranch, or has the fewest negative impacts?

The EIR identifies roundabouts as being more in keeping with the community character, in part because of the general prohibition on traffic signals in other policy documents such as the “*Community Right-of-Way Development Standards*”. The EIR also cites the extensive landscaping proposed as a part of the roundabout design, and the reduced lighting as specified in the Alternative Illumination Study as reasons for the determination of consistency with community character.

On the other hand, some residents have expressed concerns about the scale of the roundabouts. Those residents either favored no change in the aesthetic for as long as possible, or preferred the look of traffic signals over roundabouts.

Construction Impacts

If the roundabouts are ultimately approved by the County's Board of Supervisors, construction of the roundabouts is anticipated to take from 12 to 18 months. During that time, there would be intermittent, short-duration closures of one of the travel lanes. In addition, the eastbound travel lane at the La Valle Plateada/EI Montevideo intersection would be closed for up to two weeks, to allow for an elevation change at that intersection.

During an intermittent lane closure, traffic would be temporarily detoured onto local streets. According to the EIR, these closures, although temporary, would result in significant traffic impacts on the local roads used in the detour. Eastbound traffic in particular will be subject to greater construction related delays of up to 14 additional minutes during the time when one travel lane is closed. These impacts cannot be adequately mitigated.

Village Church

The proposed roundabout at the Paseo Delicias/Via de la Valle intersection will require additional right of way from the Village Church. This issue first came up in 2008 during the Environmental Initial Study for the Church's Major Use Permit.

At that time, the Village Church was required by the County to grant an Irrevocable Offer to Dedicate (IOD) for real property for the planned roundabout. This requirement is contained as Condition of Approval B-1 in the Final Conditions letter from the County to the Village Church dated August 7, 2008.

In addition, the village Church entered into a Memorandum of Understanding (MOU) with the Association regarding the roundabout in August, 2008. In the MOU, the Association agreed to provide a portion of the Association owned land at APN 266-310-53 for Church parking, and to "...facilitate the redesign of the Village Church parking lot..." (Attachment E)

Traffic Volumes on Del Dios Corridor

Although not a part of the EIR, traffic volumes on Del Dios have a direct relationship to intersection performance and cut-through traffic. Higher traffic volumes are typically associated with increased cut-through traffic.

In 2003, traffic volumes averaged around 21,000 Average Daily Trips (ADT), with peak months over 22,000 ADT. In 2007, traffic volumes decreased to around 18,500 ADT, with peak months around 19,500 ADT. However by 2011 and

through the first nine months of 2012, traffic volumes have further decreased to around 16,000 ADT, with peak months around 16,500. From 2007 through the first nine months of 2012, traffic on the Del Dios corridor has decreased by approximately 24%. (Attachment F)

Previous Committee Actions

In April of 2010, the Roads and Planning Committee sent a memo to the Board of Directors recommending that the Board continue to support the Roundabout Project.

In October of 2010, Trails Committee sent an e-mail to the Association Manager endorsing the Equestrian Safety features of the Roundabouts as presented by County staff. (The safety features are those described in this report.)

Basis for Staff Recommendation

The following reasons provide the basis for staff's recommendation that the Association does not object to the Board of Supervisors certifying the EIR for the roundabouts.

First, the County has addressed most all of the Association's stated concerns regarding the roundabouts including special accommodation for the equestrian crossings and reduced lighting at the intersections.

Second, the EIR appears to adequately address the impacts related to the project.

Third, and perhaps most importantly, currently there is not adequate funding for the roundabout project, so construction is not imminent. If the Board of Supervisors certifies the Final EIR, the project would be placed on the County's Capital Improvement Project list, where it would compete for funds with other projects on the same list. In the intervening time between when the project is placed on the CIP list and prior to when funding could be secured (which could take several years), the Association would have an opportunity to request that a less impactful alternative be implemented (e.g., traffic signals). Such a request would be based on a change in circumstances or if desired by a majority of the community.

Finally, the option to reject all of the alternatives in the EIR is very likely to result in the installation of traffic signals on an accelerated timetable. Under such a scenario, if the County were to receive another formal request to signalize the intersections, the county's Traffic Advisory Committee would evaluate the request and recommend traffic signals.

ATTACHMENTS

Attachment A – Proposed Roundabout Locations

- Attachment B – Proposed Roundabout at Del Dios and El Camino del Norte
- Attachment C – Proposed Roundabout at Paseo Delicias and El Montevideo / La Valle Plateada
- Attachment D – Proposed Roundabout at Paseo Delicias and Via de la Valle
- Attachment E – MOU between the Association and the Village Church
- Attachment F – Del Dios Traffic Volumes
- Attachment G – Correspondence