



Traffic
UPDATE

October 15, 2015

Mr. James Shano
Public Works Director / Town Engineer
Assistant to the Town Manager for Strategic Planning
Town of Paradise Valley
6401 East Lincoln Drive
Paradise Valley, Arizona 85253-4328

RE: Ritz Carlton Traffic Impact Analysis Resubmittal Summary

Dear Mr. Shano:

CivTech is pleased to resubmit the traffic impact analysis (TIA) for the Ritz Carlton resort. Comments were collected from the Town of Paradise Valley as well as feedback during various meetings and communications from the Town and the City of Scottsdale. The report has been updated to address all comments and concerns.

At the request of Town staff, this letter provides a concise summary of changes made to the TIA from the previous submittal.

The primary concern of the Town was that of traffic signal operations and lane configurations at the intersection of Scottsdale Road and 6750 North. This intersection was proposed to provide dual northbound to westbound left-turn lanes on Scottsdale Road, requiring modification of the center median and restriping of the east half of the intersection. A related comment was made by the City of Scottsdale via email, in addition to the need for an updated traffic impact and mitigation analysis (TIMA) for the adjacent Palmeraie development.

The Palmeraie development plans to provide an updated TIMA, which will be required before the developer's currently planned site layout were accompanying driveways may be constructed. All intersections on Scottsdale Road within the Ritz Carlton TIA will be revisited within the Palmeraie TIMA and are subject to approval by the City of Scottsdale.

The updated Ritz Carlton TIA now includes an alternate analysis which considers a single northbound left-turn lane at the intersection of Scottsdale Road and 6750 North. An alternative access condition was prepared should the City of Scottsdale require this intersection to provide a single northbound left-turn lane. The inclusion of the alternative access option within the Ritz Carlton TIA allows the impacts of the proposed development to be considered in either case. Discussion of each option includes consideration of traffic volume differences, levels of service and a queue storage demand comparison at affected key intersections.

Should the City of Scottsdale determine that Indian Bend Road provide the primary access to the Palmeraie, traffic calming alternatives should be considered along Indian Bend Road between the traffic circle and Mockingbird Lane. Recommendations for alternative treatments have now been provided in the TIA.

The Town was also concerned about the intersection delays at individual movements. The updated TIA now considers an additional right turn deceleration lane for the southbound to westbound movement at Mockingbird Lane and Lincoln Drive. The extension of the westbound to northbound right turn deceleration lane at the Tatum Boulevard and Lincoln Drive intersection has also been included.

The above is a brief summary of the changes within the Ritz Carlton TIA. Other updates and edits related to comments provided by the Town of Paradise Valley and the City of Scottsdale are described within the comment response form included within Appendix A of the TIA and attached to the TIA excerpt.

We appreciate your time and assistance with the Ritz Carlton project. Please contact me with any questions you may have on this resubmittal.

Sincerely,



Dawn D. Cartier, P.E., PTOE
Project Manager

EXECUTIVE SUMMARY

This report documents a traffic impact analysis performed for a mixed use development consisting of a resort, residential and commercial land uses. The proposed Ritz Carlton Resort is located on ± 105.9 acres north of Lincoln Drive, south of Indian Bend Road, east of Mockingbird Lane and west of Scottsdale Road. The related Palmeraie development within the City of Scottsdale limits is located on ± 17 acres on the southwest corner of Scottsdale Road and Indian Bend Road and will compliment Parcel E of the proposed site.

CivTech Inc. has been retained by Five Star Development to perform the traffic impact analysis for the proposed Ritz Carlton Resort. The site was previously prepared and approved for a mixed use plan in 2007. This report represents the second submittal which addresses comments made on the previous submittal. The Towns comments and comment responses are provided in **Appendix A**.

The development is proposed with a 200 room resort hotel and 120 villas including a spa, lodge, meeting facilities, gardens, outdoor function space, and retail. The residential component of the plan consists of approximately 114 lots/units of low density single family residential and 100 units/lots of attached residences. The commercial component of the site is planned to consist of approximately 107,000 square feet of retail/restaurant use, 44,000 square feet of office and 230 attached residential dwelling units. The site is planned to provide four (4) access points along Indian Bend Road, three (3) along Scottsdale Road (in which one (1) of the three (3) access points will be a signalized shared driveway with the Spectrum development), and one (1) access point along Lincoln Drive aligning with the Quail Run intersection.

The purpose of this study is to address traffic and transportation impacts of the proposed development on the surrounding streets and intersections. This traffic impact analysis was prepared based on criteria set forth during a scoping meeting with staff from the Town of Paradise Valley utilizing the original TIA, the Traffic Impact and Mitigation Measure guidelines from the City of Scottsdale and public input received during the planning effort in 2007, and comments received on the previous submittals. The specific objectives of the study are:

1. To evaluate lane requirements on all existing roadways and at all existing intersections within the study area.
2. To determine future level of service for all proposed major intersections within the study area and recommend any capacity related improvements.
3. To determine necessary lane configurations at all major intersections within the proposed development to provide acceptable future levels of service.
4. To evaluate the need for future traffic control changes within the proposed development.
5. To evaluate the need for auxiliary lanes at stop and signal controlled intersections.
6. To evaluate the need for deceleration lanes at each site access.

7. To assess any safety concerns on the existing roadways and provide options to ensure they are not intensified with an increase in traffic.

The following recommendations have been documented in this study:

General

- This study evaluates four (4) horizon years, opening year (2018), opening plus five (2023), opening plus ten (2028) and opening plus fifteen (2033). The future study horizon years were analyzed to ensure that future off-site impacts were constructed with the current plan.
- Per the collision data reviewed there are no major mitigation measures currently warranted within the vicinity of the site. It should be noted that the intersections of **Tatum Boulevard & Lincoln Drive** and **Scottsdale Road & Indian Bend Road** recorded a high number of rear-end crashes relative to crash type. Due to this occurrence, it is recommended that these intersections be further evaluated by the Town.
- The future lane configurations and traffic controls are depicted in **Figure 29** and **Figure 30**.
- The developer proposes signaling the intersection of Quail Run Road and Lincoln Drive. The intersection is anticipated to exceed the peak hour signal warrant criteria in the 2018 opening year.
- Projected ADT are presented in **Table 19**. All major roadways within the study area are anticipated to have traffic volumes below the maximum roadway capacity thresholds upon full buildout of the proposed site. The background, site and available volume capacity on several roadway segments are depicted on **Figure 32**.
- An intersection site distance analysis was performed to set guidelines for establishing line of sight for the proposed development at major internal intersections. Using the guidelines set forth by A Policy on Geometric Design of Highways and Streets, **Table 21** was generated for each intersection created by a new site access point.

Roadway Improvements

- The developer will construct half-street improvements to Indian Bend Road from Scottsdale Road to approximately 600 feet to the west. This improvement will provide a two-way left-turn lane (TWLTL) on Indian Bend Road along the improved length. The remainder of Indian Bend Road is currently constructed at its ultimate condition.

- It is likely that the City of Scottsdale will require the addition of a second westbound through lane along Indian Bend Road. This determination will be made by the City of Scottsdale during their review of the Palmeraie TIMA.
- The developer will improve the intersection of Scottsdale Road and 6750 North. The west leg after improvements will consist of two (2) dedicated left-turn lanes, a dedicated right-turn lane and two (2) ingress lanes. The median within the south leg of the intersection will be modified and the northbound lanes restriped to provide two dedicated left-turn lanes and three (3) through lanes. An alternative improvement condition is proposed should the City of Scottsdale not allow dual northbound left turn lanes. Final geometry and mitigation is subject to approval by the City of Scottsdale. Improvements at this intersection could require the relocation of overhead improvements and other utilities.
- The developer proposes to signalize the intersection of Quail Run Road and Lincoln Drive, which will serve as the main entrance to the proposed Ritz Carlton Resort, by opening year 2018. Based on the signal warrant section within this report 2010 MUTCD signal warrant criteria is met at the main Ritz Carlton entrance by opening year 2018. Signalization at this intersection will require removal of the nearest median (west of the intersection) and also require the developer to construct new medians.
- As part of the planned regional The developer has agreed to construct a westbound right-turn lane at the intersection of Lincoln Drive and Mockingbird Lane by opening year 2018. The installment of the westbound right-turn lane will improve the traffic characteristics of this intersection. This may require the relocation of the traffic signal and red light camera on the affected corner.
- If right-of-way is available, the developer should construct a southbound right-turn lane at the intersection of Lincoln Drive and Mockingbird Lane. The installment of the southbound right-turn lane will improve the delay for southbound vehicles with the likely growth in traffic along Lincoln Drive. This will require relocation of the traffic signal on the affected corner.
- The Town of Paradise Valley plans to install a raised median on Mockingbird Lane between Lincoln Drive and Northern Avenue between the financial years of 2018 and 2029. This improvement is not anticipated to cause major changes to current traffic patterns.
- The intersection of Mockingbird Lane and Indian Bend Road was evaluated as a two-way stop controlled intersection which continues to meet acceptable levels of service during the study horizon. Input from neighbors indicates a concern for increased delay at this intersection and a possible need to keep traffic flowing in all directions. Optional intersection treatments should be considered in the future.
- Indian Bend Road may require traffic calming elements to be installed between the traffic circle (intersection K) and Mockingbird Lane if traffic from Palmeraie is

prioritized to use Indian Bend Road. The determination to prioritize Indian Bend could be made by the City of Scottsdale during their review of the Palmeraie TIMA. Options for traffic calming that can be applied in areas with high pedestrian and bicycle volumes have been discussed within the TIA.

- The traffic circle located at intersection K should be evaluated for alternate pavement treatment. The existing pavers are difficult for a bicycle to negotiate.

Trip Generation

- Phase 1 (opening 2018) of the development is anticipated to generate 3,794 daily trips, of which 384 trips are during the AM peak hour and 353 trips are during the PM peak hour.
- Phase 2 (Buildout horizon year 2023) of the development is anticipated to generate a total of 14,710 daily trips, of which 729 trips are during the AM peak hour and 1,303 trips are during the PM peak hour. It was calculated that approximately 20% of total trips are expected to remain internal to the site. Considering the 20% internal capture reduction, 11,768 new daily trips are anticipated with 583 AM peak hour trips and 1,042 PM peak hour trips.

Intersection Capacity Analysis

- The results of the existing analysis summarized in **Table 4** indicate that all study intersections should operate at overall acceptable level of service (LOS D or better) with the exception of Scottsdale Road/Joshua Tree Road. The signalized intersections of Scottsdale Road/Indian Bend Road, Scottsdale Road/Joshua Tree Road, Scottsdale Road/6750 North, Tatum Boulevard/Lincoln Drive, Mockingbird Lane/Lincoln Drive, Scottsdale Road/Lincoln Drive, Scottsdale Road/McDonald Drive operate at acceptable LOS overall but have one or more movements that experience elevated delay during AM and/or PM peak hour.
 - The southbound left and westbound shared movements at the intersection of **Scottsdale Road and Joshua Tree Road** experience elevated delays during the peak hours. Elevated movement delays at stop controlled intersections with major roadways is not uncommon.
- The results of the future analyses summarized in **Table 15** indicate that all study intersections within the Town of Paradise Valley operate acceptably except for the intersection of Tatum Boulevard/Lincoln Drive. Within the City of Scottsdale, most study intersections along Scottsdale Road are anticipated to experience elevated delays in one or more movements during the AM and/or PM peak hour. These intersections are discussed along with recommended mitigation strategies below. Final mitigation and operating conditions of intersections within the jurisdiction of the city of Scottsdale will be subject to approval by the City of Scottsdale.

- The signalized intersection of site **Tatum Boulevard and Lincoln Drive** continues to experience elevated delays in some of its individual movements. Due to the general high traffic volumes using the intersection, right-of-way (ROW) acquisition would be required to mitigate the delay by installing additional through lanes. Lengthening the westbound right-turn lane is recommended if right-of-way can be acquired.
- A southbound right-turn lane at the intersection of Mockingbird Lane and Lincoln Drive is recommended to reduce southbound delays if right of way can be acquired.
- All other study intersections within the Town of Paradise Valley are anticipated to operate acceptably. It may be noted that a couple movements at the intersections of Mockingbird Lane/Lincoln Drive and Quail Run Road/Lincoln Drive are anticipated to experience elevated delays during the peak hours; however, elevated delays for a few individual movements at are not uncommon at signalized intersections of major roadways.
- Without mitigation, the signalized intersection of site **Scottsdale Road and Indian Bend Road** continues to experience elevated delays in some of its individual movements. Mitigation could include signal timing adjustments and reconfiguring the eastbound approach to provide two left turn lanes, one through lane and a shared through-right turn lane. The reconfiguration will not require additional pavement width at the intersection and may be completed with the half-street improvements on Indian Bend Road. After the recommended mitigation, the intersection is anticipated to operate at acceptable LOS.
- The improved condition of the intersection of **Scottsdale Road and 6750 North** is anticipated to operate acceptably overall. The improvements include constructing the north half of 6750 North, restriping the approach, modifying the Scottsdale Road median and striping to provide a second northbound left turn lane, add a northbound left-turn protected phase with an eastbound right-turn overlap, and appropriate signal phase timing adjustments. While the intersection improvements allow the intersection to operate acceptably overall, the eastbound left turn movement is anticipated to continue to operate with elevated delays during the peak hours. Final mitigation at this intersection will be determined by the City of Scottsdale.
 - The peak hour analyses of the alternative access conditions (only a single northbound left turn lane on Scottsdale Road approaching 6750 North) indicate that both the intersection of Scottsdale Road and Indian Bend Road and the intersection of Scottsdale Road and 6750 North are anticipated to operate with fairly similar LOS compared to the LOS anticipated with the proposed conditions.
- The two way stop controlled intersection of site **Scottsdale Road and Joshua Tree Road** continues to experience elevated delays. Poor LOS is not uncommon

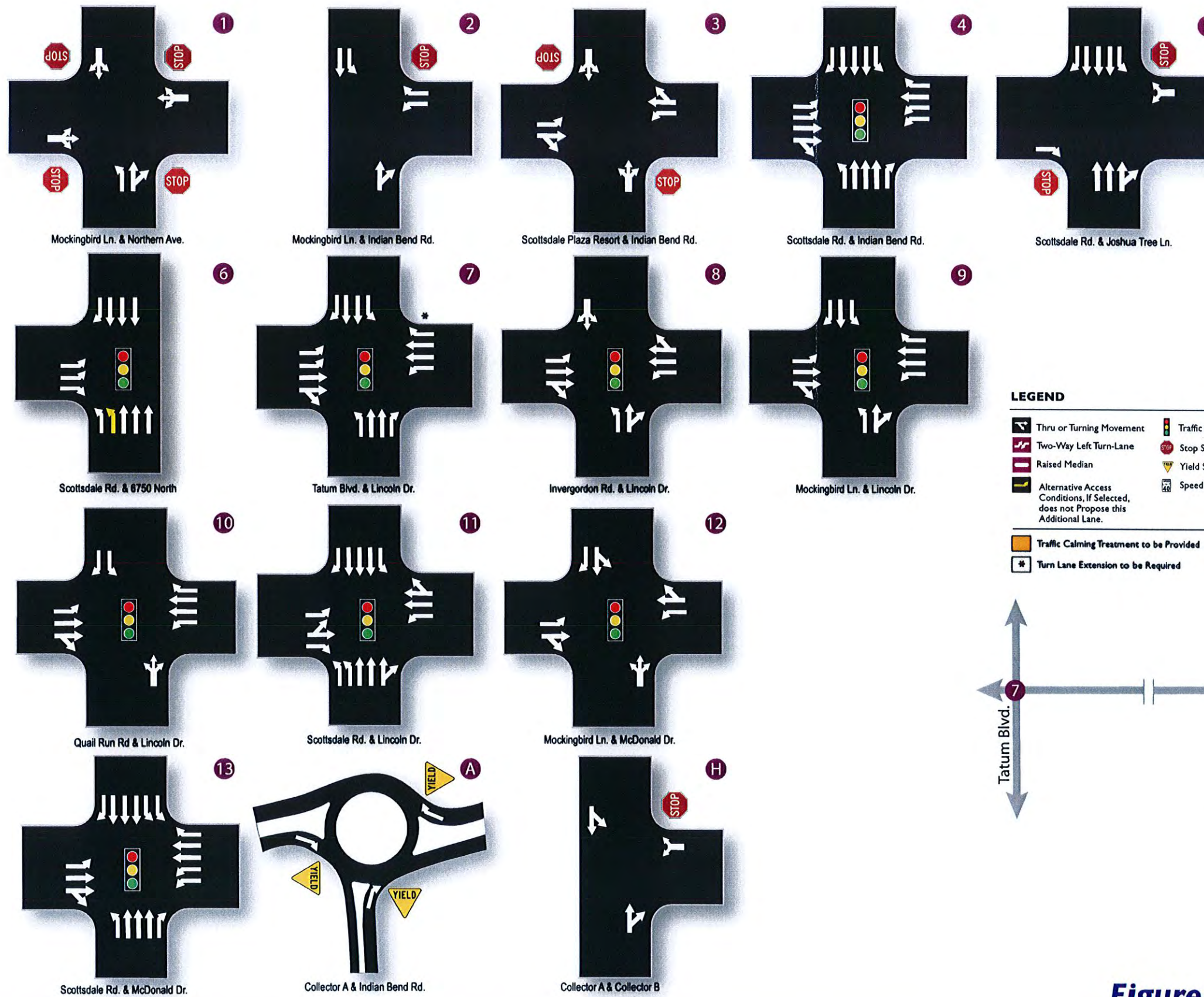
for stop controlled movements to major roadways. It should be noted that Synchro software does not allow HCM analysis left turn movements with 2-stages so actual delay may be better than analyzed. No mitigation is recommended.

- Without mitigation, the intersection of site **Scottsdale Road and Lincoln Drive** continues to experience elevated delays in some of its individual movements. It is recommended to adjust the signal timing and add right-turn overlap periods, where applicable. The mitigation will improve the delay such that the intersection may operate acceptably, although some individual movements are still anticipated to operate with elevated delays during the peak hours. Any phasing adjustments, including the additional of a right-turn overlap phase, will require the approval of the City of Scottsdale.
- The intersection of site **Scottsdale Road and McDonald Drive** continues to experience elevated delays in some of its individual movements. Due to the general high traffic volumes using the intersection, ROW acquisition would be required to mitigate the delays; however, this is not recommended as part of this study.
- The peak hour analyses of the alternative access conditions (only a northbound left turn lane on Scottsdale Road approaching 6750 North) indicate that both the intersection of Scottsdale Road and Indian Bend Road and the intersection of Scottsdale Road and 6750 North are anticipated to operate with fairly similar LOS compared to the LOS anticipated with the proposed conditions. Final mitigation and operating conditions of intersections within the jurisdiction of the city of Scottsdale will be subject to approval by the City of Scottsdale.
- All intersections considered during the event scenario are anticipated to operate acceptably.

Queue Storage Lengths

- Turn lane storage recommendations for the 2033 horizon year are summarized in **Table 20**. The new turn lanes at the intersection of Quail Run Road and Lincoln Drive are recommended to be striped with 150-feet of storage each. The proposed northbound dual left-turn lanes at the intersection of Scottsdale Road and 6750 North are able to be constructed with approximately 115-feet of storage each, which is more storage than the Synchro analysis predicts. The southbound right-turn lane at the intersection is will need to be increased when the intersection is completed; 150 feet of storage is recommended. The westbound left-turn lane at the intersection of Mockingbird Lane and Lincoln Drive is projected to require additional storage due to residential traffic volumes. It is recommended that the turn lane be extended to provide 350-feet of storage which will require the removal of a center median.
 - Should only a single northbound left turn lane be provided at the intersection of Scottsdale Road and 6750 North, Synchro's 95th percentile queue projection for

the turn lane is 132 feet; in the same scenario, the projected 95th percentile queue for the northbound left turn lane on Scottsdale Road approaching Indian Bend Road is 309 feet. Final mitigation at these intersections will be determined by the City of Scottsdale.



LEGEND
 XX(XX) - AM(PM) Peak Hour Traffic Volumes

LEGEND

	Thru or Turning Movement		Traffic Signal
	Two-Way Left Turn-Lane		Stop Sign
	Raised Median		Yield Sign
	Alternative Access Conditions, If Selected, does not Propose this Additional Lane.		Speed Limit
	Traffic Calming Treatment to be Provided		
	Turn Lane Extension to be Required		

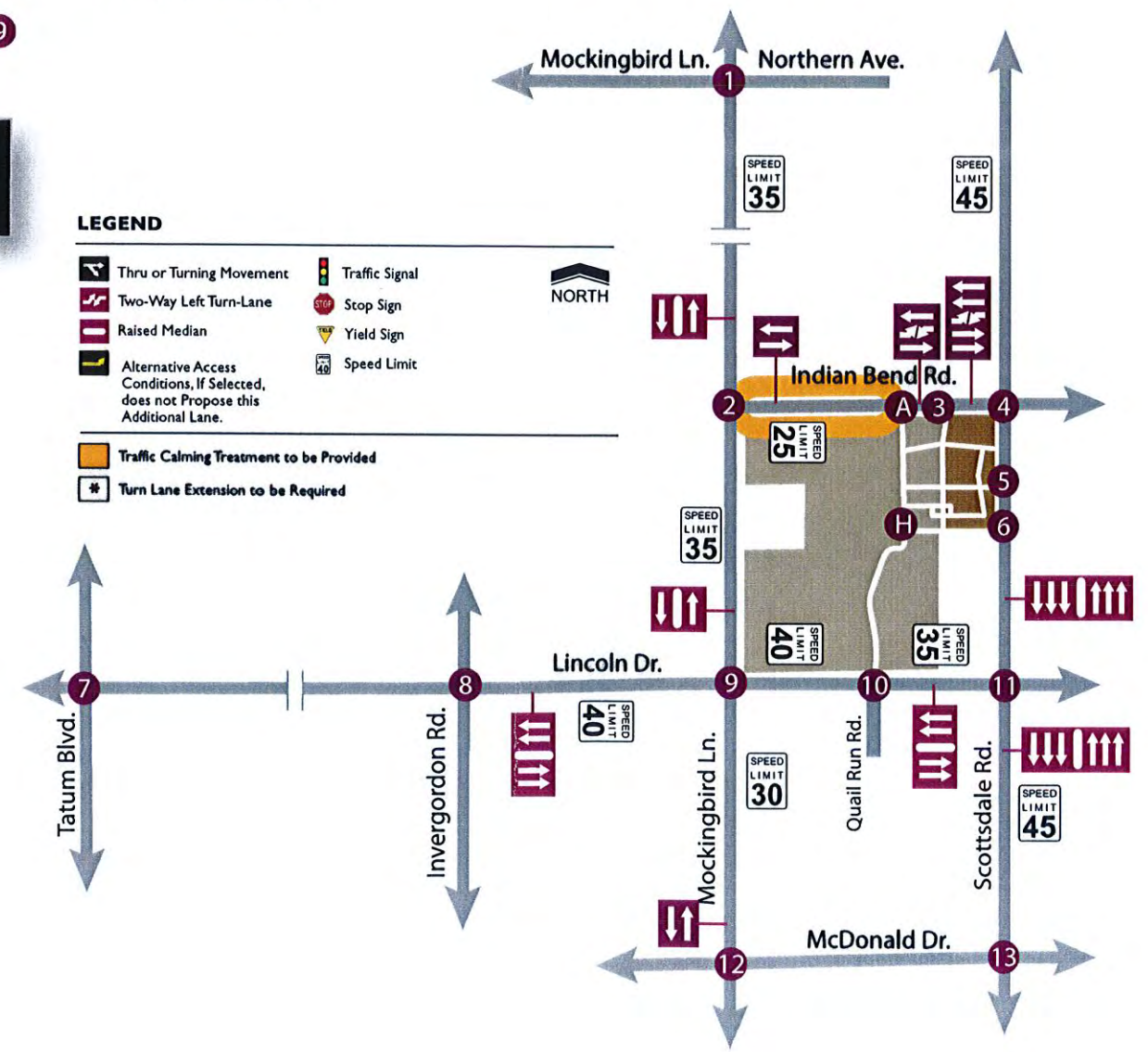
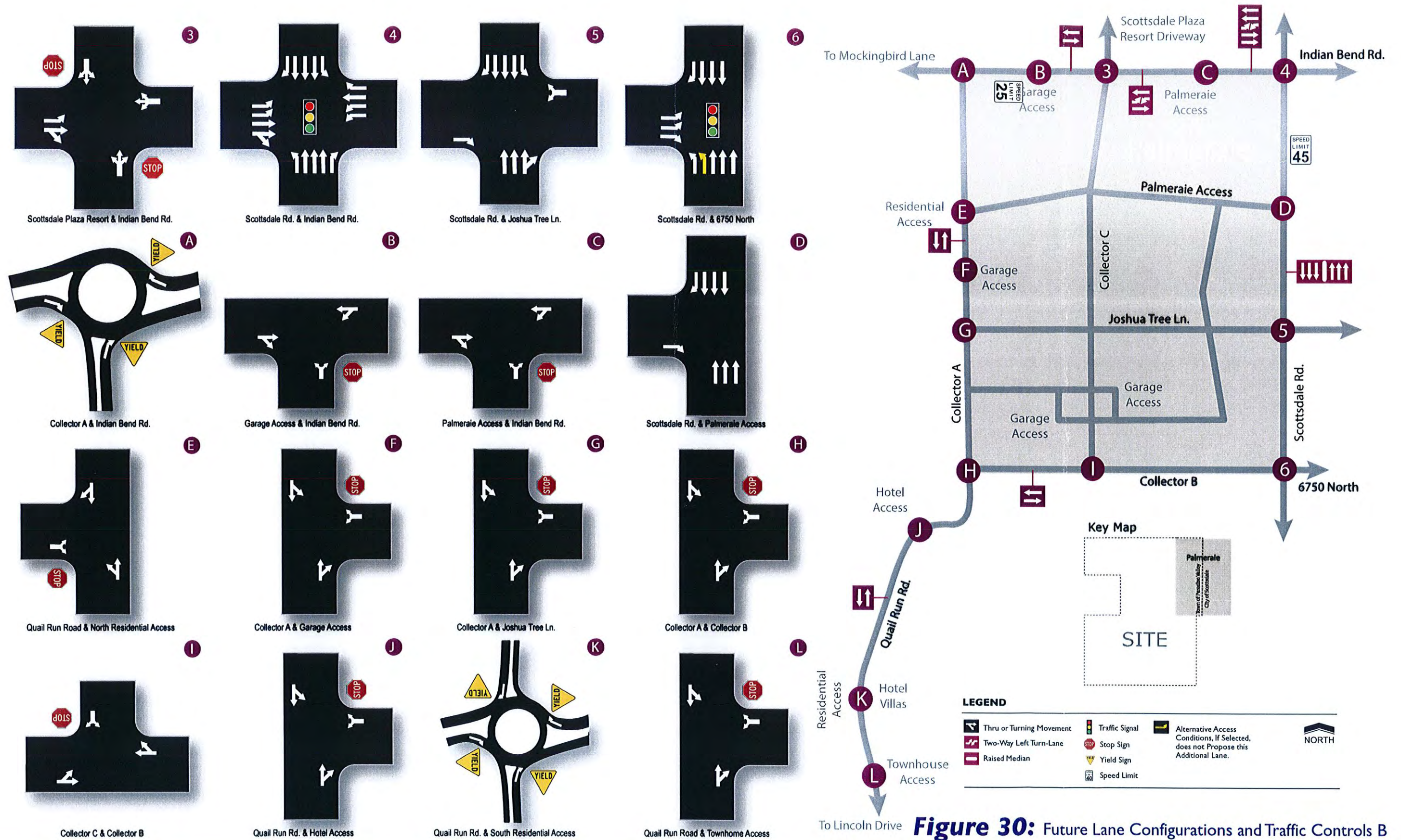


Figure 29: Future Lane Configurations and Traffic Controls A





ARIZONA
TEXAS
NEW MEXICO
OKLAHOMA

September 15, 2015

Mr. James Shano, P.E., C.M.P.
Public Works Director/Town Engineer
Assistant to the Town Manager for Strategic Planning
Town of Paradise Valley
6401 East Lincoln Drive
Paradise Valley, Arizona 85253-4328

RE: Lee Engineering Review of the Ritz Carlton Resort Traffic Impact Analysis (TIA) by CivTech dated August, 2015 – 2nd submittal

Dear Mr. Shano:

I have reviewed the 2nd submittal to the Ritz Carlton Resort TIA report to determine whether the information presented in it meets the Town of Paradise Valley's guidelines set forth for this project, the Town Council Statement of Direction, and first review comments. In addition, I reviewed any engineering analysis and improvement details that were provided based on Town, City of Scottsdale, or MAG Standard Details.

The 2nd submittal report for the Ritz Carlton site has not be evaluated in great detail, but has been reviewed to a sufficient level to analyze site access conditions and impacts to the Town roadways. The accompanying Ritz Carlton Property Parking Analysis has not been reviewed. The following comments are presented based on my review of the traffic impact report:

General Comments

1. The report has addressed all of the original TIA comments in a satisfactory manner.
2. Throughout the report LOS E or F operation is identified as having "delay". A more appropriate term would be "elevated delay", and are locations where mitigation alternatives should be evaluated to permit acceptable traffic operations. It is noted, however, that many movements along the Scottsdale Road corridor intersections operate with elevated delay during the AM and PM peak hours, even without the added traffic impact of the proposed Ritz Carlton.

Technical Review Comments

1. The total traffic volumes indicated for the "2023 total traffic volume conditions" do not appear to be presented appropriately. The report indicates the total traffic (Figure 23) should be the sum of site traffic (Figure 11) plus background traffic (Figure 15). For example, Intersection #6 in the PM peak hour, the inbound northbound left-turn volume should equal 316 vehicles (153 plus 163) but is shown as 156 vehicles. Traffic volumes for other movements/intersections also appear not to be added properly. It does appear, however, the volumes utilized in the capacity analysis conducted for the 2023 total traffic condition has utilized appropriate turn volumes.
2. The 2023 capacity analysis shows Intersection #6 (Scottsdale Road and 6750 North) to be analyzed in an improved state with dual northbound left-turn lanes (existing condition is a single northbound

left-turn lane) operating with permissive-only left-turn phasing. This is not an operational condition that is typically utilized due to safety concerns, although it is found at a few select locations throughout the Valley. This phasing should be confirmed with the City of Scottsdale to determine if it would be allowed. Even under this scenario, the northbound left-turn movement into the site shows LOS F operation (PM peak hour). The report identifies LOS mitigation for this movement to include permissive plus protected left-turn phasing, which may or may not be permitted by the City of Scottsdale.

3. Mitigation at the intersection of Scottsdale Road and 6750 North identifies converting the single northbound left-turn lane to dual turn lanes and to maximize the left turn storage length (total dual lane storage about 220 feet, currently about 100 feet). As indicated, this will increase storage capacity but will not accommodate the projected storage needed. Under this scenario, vehicles waiting to turn left into the site could extend into the northbound through travel lane creating a safety issue. Analysis should identify the maximum number of vehicles that could be accommodated at this location then re-assign the remaining vehicles to other travel paths to access the site (northbound left-turn movement at Lincoln Drive or Indian Bend Road) to determine potential LOS and storage lane impacts at these locations due to the increased volumes. Secondary impacts may be realized through this re-assignment, such as the extension of the southbound right-turn lane storage area into the site at Quail Run Road or extension of the northbound left-turn lane at Indian Bend Road.
4. Mitigation as stated in the report at the Scottsdale Road / 6750 North intersection will require traffic signal and likely overhead utility improvements. The City of Scottsdale should be consulted for the operational conditions to be permitted at this location.
5. The report states all Paradise Valley study intersections, except for the Tatum Boulevard and Lincoln Drive intersection, are anticipated to operate acceptably in the future. This appears to be a true statement, although some individual movements, such as the southbound approach to Lincoln Drive from Mockingbird Lane, will operate at LOS E/F in the AM and/or PM peak hours, as indicated in the report. To improve the poor operating side street movements, intersection widening would be required which may or may not be feasible or appropriate.
6. Mitigation at the intersection of Scottsdale Road and Lincoln Drive is offered via modification of the green splits to favor the higher volume movements. This may or may not be appropriate mitigation, depending upon impact to vehicle queue length conditions and pedestrian considerations.
7. Any half-street improvements to the eastbound Indian Bend Road approach to Scottsdale Road should include the mitigation identified in the report (Figure 29) as well as considering any secondary improvement for increasing the northbound left-turn storage or capacity, if required, based on additional analysis at the Scottsdale Road/6750 North intersection.
8. Mitigation at the intersection of Mockingbird Lane and Lincoln Drive to install a westbound right-turn lane also appears to require relocation of red light camera equipment and traffic signal equipment that is located at the northeast corner of intersection.
9. The report indicated the site driveway on Lincoln Drive at the Quail Run Road alignment will meet MUTCD traffic signal installation warrants and operate at acceptable service levels. Typically, quarter-mile traffic signals are not favorable to traffic progression. To best accommodate through traffic along Lincoln Drive, the Town should strive to minimize the green time provided to the side street movements and minimize any protected eastbound to northbound left-turn phasing.
10. Table 19 of the report incorrectly identifies the intersection as STOP-controlled and a 150-foot eastbound left-turn lane appropriate (Synchro queue length results were not an output result provided in the appendix). Based on 2033 PM peak hour traffic volumes of 174 vehicles and a 130-second cycle length, a 200-foot turn bay would be more reasonable.

Conclusions

The TIA has identified a number of issues that the Ritz Carlton site is expected to generate, which any development fronting Scottsdale Road would create. The Town should consult with the City of Scottsdale regarding the signal operation/phasing of the Scottsdale/6750 North intersection to best accommodate site traffic demand. Depending upon the signal operation permitted, additional mitigation may be needed at adjacent intersection locations along Scottsdale Road to accommodate increased turn movement volumes. Mitigation identified by the TIA along Indian Bend Road appears to be appropriate to maximize the eastbound approach cross-section to Scottsdale Road. Improvements at the site driveway onto Lincoln Drive appear to be appropriate.

Closure

If a further discussion of these comments/conclusions is needed, I can be reached at (602) 955-7206 or by e-mail at pguzek@lee-eng.com.

Respectfully submitted,

A handwritten signature in blue ink that reads "Paul Guzek". The signature is written in a cursive, flowing style.

Paul Guzek, PE, PTOE

Lee Engineering, LLC

**Ritz Carlton
2nd Submittal**

Town of Paradise Valley

CivTech, Inc.

Review Comments & Responses

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Refer to Consultant/Owner

Item No.	Reviewer	Location	Code	Review Comment	Response
General Comments					
1.	Paul Guzak- Lee Engineering	General	n/a	The report has addressed all of the original TIA comments in a satisfactory manner.	This comment provides informational to the Town/developer with no indication of a required change in the TIA. A response is not required.
2.	Paul Guzak- Lee Engineering	General	1	Throughout the report LOS E or F operation is identified as having "delay". A more appropriate term would be "elevated delay", and are locations where mitigation alternatives should be evaluated to permit acceptable traffic operations. It is noted, however, that many movements along the Scottsdale Road corridor intersections operate with elevated delay during the AM and PM peak hours, even without the added traffic impact of the proposed Ritz Carlton.	Applicable instances of having "delay" changed to having "elevated delay"
Technical Review Comments					
1.	Paul Guzak- Lee Engineering	Figure 23 (p. 53)	1	The total traffic volumes indicated for the "2023 total traffic volume conditions" do not appear to be presented appropriately. The report indicates the total traffic (Figure 23) should be the sum of site traffic (Figure 11) plus background traffic (Figure 15). For example, Intersection #6 in the PM peak hour, the inbound northbound left-turn volume should equal 316 vehicles (153 plus 163) but is shown as 156 vehicles. Traffic volumes for other movements/intersections also appear not to be added properly. It does appear, however, the volumes utilized in the capacity analysis conducted for the 2023 total traffic condition has utilized appropriate turn volumes.	The figures printed and collated within the physical report are not the correct, updated figures. The figures within the electronic version were correct (which was included within the submittal on a CD). The most recent figures are now included.

**Ritz Carlton
2nd Submittal**

Town of Paradise Valley

CivTech, Inc.

Review Comments & Responses

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Item No.	Reviewer	Location	Code	Review Comment	Response
2.	Paul Guzak- Lee Engineering	pp. 59, 63 & 66-67	1	<p>The 2023 capacity analysis shows Intersection #6 (Scottsdale Road and 6750 North) to be analyzed in an improved state with dual northbound left-turn lanes (existing condition is a single northbound left-turn lane) operating with permissive-only left-turn phasing. This is not an operational condition that is typically utilized due to safety concerns, although it is found at a few select locations throughout the Valley. This phasing should be confirmed with the City of Scottsdale to determine if it would be allowed. Even under this scenario, the northbound left-turn movement into the site shows LOS F operation (PM peak hour). The report identifies LOS mitigation for this movement to include permissive plus protected left-turn phasing, which may or may not be permitted by the City of Scottsdale.</p>	<p>The recommendation is based on similar phasing situations, such as at the intersection of Scottsdale Road & McDowell Road (one of the study intersections) which has permitted and protective left turn phasing for the EB (single) & WB (dual) left turn movements. Synchro predicts that the delay and queue length will be greater with only protected phasing; however, CivTech agrees that the City of Scottsdale will determine signal configuration and phasing. The previously analyzed condition evaluates the turn lane to operate at 56 seconds of delay per average vehicle, or LOS E. The phase split was previously assigned by synchro's automatic formulas without adjustment by the analyst, resulting in a 12 second phase (including 4 seconds of yellow and all-red intervals). The analysis now considers a split of 20 seconds. The study now also includes an alternative analysis should the city of Scottsdale not allow the 2nd northbound left-turn lane.</p>

Reviewed Date: 8/16/2015
 CivTech Received Date: 8/17/2015
 CivTech Entered Date: 8/19/2015
 CivTech Response Date: 9/15/2015

Ritz Carlton

2nd Submittal

Town of Paradise Valley

CivTech, Inc.

Review Comments & Responses

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Item No.	Reviewer	Location	Code	Review Comment	Response
3.	Paul Guzak- Lee Engineering	p. 72	1	Mitigation at the intersection of Scottsdale Road and 6750 North identifies converting the single northbound left-turn lane to dual turn lanes and to maximize the left turn storage length (total dual lane storage about 220 feet, currently about 100 feet). As indicated, this will increase storage capacity but will not accommodate the projected storage needed. Under this scenario, vehicles waiting to turn left into the site could extend into the northbound through travel lane creating a safety issue. Analysis should identify the maximum number of vehicles that could be accommodated at this location then re-assign the remaining vehicles to other travel paths to access the site (northbound left-turn movement at Lincoln Drive or Indian Bend Road) to determine potential LOS and storage lane impacts at these locations due to the increased volumes. Secondary impacts may be realized through this re-assignment, such as the extension of the southbound right-turn lane storage area into the site at Quail Run Road or extension of the northbound left-turn lane at Indian Bend Road.	Similar to the response to the prior comment, this queue reported previously considered a phase duration of 12 seconds, including 4 seconds of yellow and all-red intervals. The analysis now considers a split of 20 seconds resulting in a shorter 95th percentile queue. The study now also includes an alternative analysis should the city of Scottsdale not allow the 2nd northbound left-turn lane. This alternative is provided to give a range of mitigation that could occur on-set since the City of Scottsdale will provide guidance in the future with the submission of the Palmarraie TIA.
4.	Paul Guzak- Lee Engineering	General	1	Mitigation as stated in the report at the Scottsdale Road/6750 North intersection will require a traffic signal and likely overhead utility improvements. The City of Scottsdale should be consulted for the operational conditions to be permitted at this location.	Likely utility improvements are mentioned in the TIA. An alternative evaluation has been provided to satisfy a possible scenario where more cars divert to Indian Bend Road.

**Ritz Carlton
2nd Submittal**

Town of Paradise Valley

CivTech, Inc.

Review Comments & Responses

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

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5.	Paul Guzak- Lee Engineering	General	n/a	The report states all Paradise Valley study intersections, except for the Tatum Boulevard and Lincoln Drive intersection, are anticipated to operate acceptably in the future. This appears to be a true statement, although some individual movements, such as the southbound approach to Lincoln Drive from Mockingbird Lane, will operate at LOS E/F in the AM and/or PM peak hours, as indicated in the report. To improve the poor operating side street movements, intersection widening would be required which may or may not be feasible or appropriate.	It may be noted that the intersection of Tatum Boulevard and Lincoln Drive is anticipated to operate at LOS E or F during the peak hours even without the proposed site. Also a recommendation to lengthen the eastbound right-turn lane on Lincoln Drive to Tatum Boulevard would require additional right-of-way (ROW). This recommendation should be considered if additional ROW is acquired and is now included as a recommendation in the TIA.
6.	Paul Guzak- Lee Engineering	pp. 63 & 66	n/a	Mitigation at the intersection of Scottsdale Road and Lincoln Drive is offered via modification of the green splits to favor the higher volume movements. This may or may not be appropriate mitigation, depending upon impact to vehicle queue length conditions and pedestrian considerations.	A Southbound right-turn lane at the intersection of Mockingbird/Lincoln should also be considered if ROW is available. This has also been added to the TIA.
7.	Paul Guzak- Lee Engineering	Figure 29 (p. 58)	1	Any half-street improvements to the eastbound Indian Bend Road approach to Scottsdale Road should include the mitigation identified in the report (Figure 29) as well as considering any secondary improvement for increasing the northbound left-turn storage or capacity, if required, based on additional analysis at the Scottsdale Road/6750 North intersection.	This intersection will be reviewed again by the City of Scottsdale with the Palmeraie TIMA and mitigation will need to be determined by both the Town of Paradise Valley and the City of Scottsdale. A statement has been added to the TIA. Agree: The eastbound approach should provide dual left-turn lanes, one (1) through lane and a shared through/right-turn lane. A second westbound through lane may be required if dual northbound turn lanes are required by the City of Scottsdale. Mitigation improvements at the intersection of Indian Bend/Scottsdale Road should meet City of Scottsdale design standards which will be determined during the review of the Palmeraie TIA.

Reviewed Date: 8/16/2015
CivTech Received Date: 8/17/2015
CivTech Entered Date: 8/19/2015
CivTech Response Date: 9/15/2015

**Ritz Carlton
2nd Submittal**

Town of Paradise Valley

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

CivTech, Inc.

Review Comments & Responses

Item No.	Reviewer	Location	Code	Review Comment	Response
8.	Paul Guzak- Lee Engineering	General	n/a	Mitigation at the intersection of Mockingbird Lane and Lincoln Drive to install a westbound right-turn lane also appears to require relocation of red light camera equipment and traffic signal equipment that is located at the northeast corner of intersection.	We agree. The need for this improvement is stated in the improvement summary.
9.	Paul Guzak- Lee Engineering	General	n/a	The report indicated the site driveway on Lincoln Drive at the Quail Run Road alignment will meet MUTCD traffic signal installation warrants and operate at acceptable service levels. Typically, quarter-mile traffic signals are not favorable to traffic progression. To best accommodate through traffic along Lincoln Drive, the Town should strive to minimize the green time provided to the side street movements and minimize any protected eastbound to northbound left-turn phasing.	Agree - comment regarding progression and the need to retime signals has been added to the Recommendation and Conclusions
10.	Paul Guzak- Lee Engineering	Table 19 (p. 72)	1	Table 19 of the report incorrectly identifies the intersection as STOP-controlled and a 150-foot eastbound left-turn lane appropriate (Synchro queue length results were not an output result provided in the appendix). Based on 2033 PM peak hour traffic volumes of 174 vehicles and a 130-second cycle length, a 200-foot turn bay would be more reasonable.	The cell indicating "1-way stop (NB)" control, which is existing, has been corrected to "Signal" control, which is proposed. The queue recommendations of 150' is greater than the 95th percentile queue reported by Synchro. A reference to Appendix L (previously Appendix N) is now included within the report.
Conclusions					

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Town of Paradise Valley

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CivTech, Inc.

Review Comments & Responses

Item No.	Reviewer	Location	Code	Review Comment	Response
	Paul Guzak- Lee Engineering	General	n/a	<p>The TIA has identified a number of issues that the Ritz Carlton site is expected to generate, which any development fronting Scottsdale Road would create. The Town should consult with the City of Scottsdale regarding the signal operation/phasing of the Scottsdale/6750 North intersection to best accommodate site traffic demand. Depending upon the signal operation permitted, additional mitigation may be needed at adjacent intersection locations along Scottsdale Road to accommodate increased turn movement volumes. Mitigation identified by the TIA along Indian Bend Road appears to be appropriate to maximize the eastbound approach cross-section to Scottsdale Road. Improvements at the site driveway onto Lincoln Drive appear to be appropriate.</p>	<p>A meeting was held with the City of Scottsdale which results in an alternative scenario now presented in the TIA. The final mitigation along Scottsdale Road will be determined by the City of Scottsdale.</p>

Ritz Carlton
2nd Submittal
 City of Scottsdale

CivTech, Inc.

Review Comments & Responses

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Item No.	Reviewer	Location	Code	Review Comment	Response
n/a				n/a	Formal comments from the City of Scottsdale were never received by CivTech. Informal comments were provided by Phillip Kercher on 9/1/2015 in email format. These informal comments are addressed below.
1.	Phillip Kercher, City of Scottsdale	General	2	In doing a quick review of the traffic impact study for the Ritz Carlton site, I have an immediate concern that the site plan for the portion of the site in Scottsdale does not match the plan that was submitted to us in 2008/2009. The previous plan did not have any site driveways onto Scottsdale Road other than the existing driveway identified as Collector B, and the site access on Indian Bend was located further west. We will likely not support two site driveways on Scottsdale Road between the signalized Indian Bend Road and Collector B intersections, and we will recommend removal of Driveway C on Indian Bend Road or relocating it further west. Modifying these access points could impact the overall site plan.	Traffic shown at this intersection includes volumes from Palmeraie which cannot be constructed without updating the Palmeraie TIMA. This intersection will continue to be evaluated within the Palmieri TIMA and mitigation acceptable to the City will be provided. While this TIA for the Ritz-Carlton Resort includes anticipated traffic conditions from the adjacent Palmeraie development, the driveways in question are driveways potentially constructed by the Palmeraie development. The developer of Palmeraie plans to prepare an updated TIMA for Palmeraie incorporating it's site plan changes.

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Item No.	Reviewer	Location	Code	Review Comment	Response
2.	Phillip Kercher	General	1	Also, there is a significant constraint for site traffic on Scottsdale Road at the Collector B intersection. As noted on page 72 of the study, there is an existing single northbound left-turn bay with 95 feet of storage. The traffic analysis is indicating that two left-turn lanes with 284 feet of storage are required to accommodate the projected traffic volumes. The traffic engineer is recommending two left-turn lanes with 120 feet of storage and modifying the traffic signal timing. At this point without any recent discussion on this situation, I am not sure that they can achieve 120 feet of storage, that we would support removal of the existing median to provide dual left-turn lanes, and that modified signal timing would reduce the storage requirement by 328 feet (164 feet per lane). This access point may need to be restricted to only serve a portion of the site, or the site intensity may have to be reduced. Again, this may impact the overall site plan.	The intersection was previously intended to have the proposed northbound left-turn lanes operate with protected and permitted phasing. The projected queue was based on protected phasing only. Additionally, the phase was allotted only 12 seconds (including yellow and red intervals). The phasing type has been corrected and the duration extended to 20 seconds. The projected 95th percentile queue length may now be accommodated within the future turn lanes and gap. The TIMA now also includes an alternative where more traffic enters the site from Indian Bend Road.
3.	Phillip Kercher	General	2	We will do a full review and provide comments by the end of next week. I checked with our Current Planning Director and he said that we have not received a new submittal for the portion of the site in Scottsdale. This means that the development has not been reviewed by our staff yet. There may be other issues like storm water management that I am not aware of.	The developer of Palmeraie plans to prepare an updated TIMA for Palmeraie incorporating it's site plan changes.



REPORT REVIEW

REPORT TITLE: Ritz Carlton Resort

REPORT DATE: August 2015

PREPARED BY: CivTech

CASE #: N/A Paradise Valley

REVIEWED BY: John Bartlett & Phillip Kercher

REVIEW DATE: September 2015

COMMENTS:

1. Include a discussion of the site's current zoning and proposed zoning (if needed).
2. Page 10 – The 6750 North driveway (Collector B) was constructed to provide access to the Spectrum office building and the adjacent parcel to the north. It was not anticipated that it would continue to the west into Paradise Valley.
3. Include a trip generation comparison to a development plan that would be allowed under the current zoning or to an approved site plan.
4. The distribution for hotel trips appears to be too heavily weighted to Tatum Boulevard to the west in comparison to the use of Loop 101 and Scottsdale Road (75% of hotel traffic using Tatum Boulevard).
5. Access to the residential parcel B should be oriented to Indian Bend Road rather than using Collector B through the commercial portion of the site to/from Scottsdale Road.
6. Please submit a conceptual layout for Indian Bend Road improvements adjacent to the site with a transition to the Paradise Valley cross section west of the site. The intersection configuration shows two eastbound through lanes approaching Scottsdale Road but does not show two westbound lanes. Dual northbound left-turns may be needed at the Scottsdale Road and Indian Bend Road intersection; therefore, two westbound receiving lanes along Indian Bend Road should be provided.
7. A southbound right-turn lane should be provided at the intersection of Scottsdale Road and Indian Bend Road.
8. The daily traffic volume capacities used in Figure 32 and Table 18 are significantly higher than the City of Scottsdale uses. Scottsdale Road, a major arterial, has a daily capacity of 48,000 vehicles, not 59,900. McDonald Drive and Indian Bend Road, both minor arterials, have a daily capacity of 34,000 vehicles, not 39,800.

9. There is a lack of storage length available for the anticipated westbound left-turn traffic volume on Indian Bend Road at Scottsdale Road, yet no mitigation is recommended.
10. Table 19 – The storage requirement from Synchro for the northbound left turn at the intersection of Scottsdale Road and Collector B is shown as dual left-turn lanes with a storage length of 284 feet per lane. The study recommends providing dual left-turn lanes with 120 feet of storage. There is only 95 feet of single lane left-turn storage available with the existing median configuration. This situation is not acceptable. Some access management/reconfiguration must be provided to reduce the left turn demand at this quarter-mile intersection.
11. Do not support the modification to provide dual left-turns in the northbound direction at the Collector B intersection on Scottsdale Road by removal of the existing median. The northbound left-turn movements should be encouraged to access the development via Indian Bend Road and Lincoln Drive where dual left-turn lanes exist or could be restriped within the existing roadway improvements.
12. Do not support the location of Access D as shown on the figures or the circular configuration that would result in two connections to Scottsdale Road. The projected volumes at this location do not show a significant benefit for this access to be allowed. The spacing does not meet minimum driveway spacing required by City of Scottsdale policy.
13. Do not support the location of Access C due to the proximity to the Scottsdale Road and Indian Bend Road signalized intersection. Full access should not be provided 300 feet from a major intersection. This traffic should use Collector C to access Indian Bend Road.
14. Volume Figures – Intersection E is shown as a “T” intersection with the side street extending to the west and turning movements to match; however, the site plan and roadway network on each volume figure shows a connection to the east labeled “Palmeria Access.”
15. Volume Figures – Intersection G is shown as a “T” intersection with the side street extending to the west and turning movements to match; however, the site plan shows a connection into residential Parcel B to the west.
16. 1st Submittal Comment Responses – Comment 9 – Identifies that signal timing at Scottsdale Road intersections was based on a 120 second cycle length and coordinated. Contact Steve Ramsey at the City of Scottsdale to acquire current timing plans for the study area intersections within Scottsdale to accurately report before and after operations, storage lengths, etc., at these locations.
17. The recommendations for signal timing adjustments to provide additional time to east-west movements at intersections along Scottsdale Road may not be feasible given the desire to maintain traffic progression along Scottsdale Road.
18. Please describe in the study if any access restrictions are intended to be installed on the internal driveways. For example, will the commercial parcels be able to utilize Quail Run Road to access Lincoln Drive? Will the resort parcel be able to utilize Collector B to access Scottsdale Road?
19. Right-turn overlap phasing should not be assumed at the signalized intersections along Scottsdale Road without approval from City of Scottsdale Traffic Engineering.

20. A site plan that shows the relation of the of the proposed site driveway locations to the existing streets/driveways along Scottsdale Road, Indian Bend Road, and Lincoln Drive should be provided.

General Comments:

1. The City of Scottsdale has not approved the site plan for Palmeraie portion of the development.
2. The City of Scottsdale Transportation Department has not approved any of the proposed improvements to streets and intersections within the city of Scottsdale.
3. The City of Scottsdale Transportation Department has not approved any of the proposed site access locations along City of Scottsdale street frontages.
4. We will be encouraging strong pedestrian connections between the resort and residential portions of the overall development to the retail parcels and to the adjacent signalized intersections on Scottsdale Road to encourage bike and pedestrian travel, especially to the adjacent McCormick-Stillman Railroad Park.

Ritz Carlton - City of Scottsdale Review Comments CivTech, Inc.
1st Review of 2nd Submittal

Review Comments & Responses

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Item No.	Reviewer	Location	Code	Review Comment	Response
1.	John Bartlett & Phillip Kercher		3	Include a discussion of the sites' current zoning and proposed zoning (if needed).	Zoning identified in the SUP.
2.	John Bartlett & Phillip Kercher	Page 10		The 6750 North driveway (Collector B) was constructed to provide access to the Spectrum office building and the adjacent parcel to the north. It was not anticipated that it would continue to the west into Paradise Valley.	Sentence removed from the study.
3.	John Bartlett & Phillip Kercher			Include a trip generation comparison to a development plan that would be allowed under the current zoning or to an approved site plan.	Future Palmaria Study will provide comparison for Scottsdale portion. Trip Generation provided was based on amount shown in the SUP.
4.	John Bartlett & Phillip Kercher			The distribution for hotel trips appears to be too heavily weighted to Tatum Boulevard to the west in comparison to the use of Loop 101 and Scottsdale Road (75% of hotel traffic using Tatum Boulevard).	The main entrance to the resort is to/from Lincoln Drive which provides a shorter path to the airport. Since the reports is based on AM and PM peak hour trips, and not mid day trips, the distribution was weighted for arrival and departure trips.
5.	John Bartlett & Phillip Kercher			Access to the residential parcel B should be oriented to Indian Bend Road rather than using collector B through the commercial portion of the site to/from Scottsdale Road.	An access to Indian Bend Road will not be provided however the site plan has been updated to move the internal access along the Quail Run alignment closer to Indian Bend Road.
6.	John Bartlett & Phillip Kercher			Please submit a conceptual layout for Indian Bend Road improvements adjacent to the site with a transition to the Paradise Valley cross section west of the site. The intersection configuration shows two eastbound through lanes approaching Scottsdale Road but does not show two westbound lanes. Dual northbound left-turns may be needed at the Scottsdale Road and Indian Bend Road intersection; therefore, two westbound receiving lanes along Indian Bend Road should be provided.	A conceptual layout will be provided to the Town for review prior to the City Council approval hearing.
7.	John Bartlett & Phillip Kercher			A Southbound right-turn lane should be provided at the intersection of Scottsdale Road and Indian Bend Road.	The report text and Figure 29 have been updated to include SB the right-turn lane.

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 CivTech Response Date:

Ritz Carlton - City of Scottsdale Review Comments CivTech, Inc.
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Item No.	Reviewer	Location	Code	Review Comment	Response
8.	John Bartlett & Phillip Kercher	Figure 32 and Table 18		The daily traffic volume capacities used in Figure 32 and Table 18 are significantly higher than the City of Scottsdale uses. Scottsdale Road, a major arterial, has a daily capacity of 48,000 vehicles, not 59,900. McDonald Drive and Indian Bend Road, both minor arterials, have a daily capacity of 34,000 vehicles, not 39,800.	The daily traffic considers all left and right turning traffic in addition to the through traffic on this segment of roadway. While the City of Scottsdale thresholds are utilized, they typically consider the average through volumes in the area. The average roadway volumes comply with the City's threshold. To provide a conservative view of likely conditions for Town residents, the minor turning volumes were considered which necessitated a methodology for level of service which provides capacity allowances in these areas. The Florida DOT method considers variables for these movements and was thus utilized for this effort.
9.	John Bartlett & Phillip Kercher			There is a lack of storage length available for the anticipated westbound left-turn traffic volume on Indian Bend Road at Scottsdale Road, yet no mitigation is recommended.	The TIA has been updated to discuss available northbound to westbound left turn capacity as well as discussing the existing condition and likely future condition with the westbound to southbound left turn movement. Additional green time was provided for this movement which reduced the queue storage and delay to a constructible level. In addition, the TIA nor considers an alternative analysis for traffic turning northbound onto Indian Bend Road.
10.	John Bartlett & Phillip Kercher	Table 19		The storage requirement from Synchro for the northbound left turn at the intersection of Scottsdale Road and Collector B is shown as dual left-turn lanes with a storage length of 284 feet per lane. The study recommends providing dual left-turn lanes with 120 feet of storage. There is only 95 feet of single lane left-turn storage available with the existing median configuration. This situation is not acceptable. Some access management/reconfiguration must be provided to reduce the left-turn demand at this quarter-mile intersection.	

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Item No.	Reviewer	Location	Code	Review Comment	Response
11.	John Bartlett & Phillip Kercher			Do not support the modification to provide dual left-turns in the northbound directional the Collector B intersection on Scottsdale Road by removal of the existing median. The northbound left-turn movements should be encouraged to access the development via Indian Bend Road and Lincoln Drive where dual left-turn lanes exist or could be restriped within the existing roadway improvements.	The TIA now considers an alternative analysis for traffic turning northbound onto Indian Bend Road should that be the preferred improvement by the City of Scottsdale. The intersection improvements necessary within the City of Scottsdale will be evaluated again with the Palmeraie TIA.
12.	John Bartlett & Phillip Kercher			Do not support the location of Access D as shown on the figures or the circular configuration that would result in two connections to Scottsdale Road. The projected volumes at this location do not show a significant benefit for this access to be allowed. The spacing does not meet minimum driveway spacing required by City of Scottsdale Policy.	The final driveway configuration and spacing will be determined by the City of Scottsdale during the Palmeraie site planning process. We anticipate the volume of right turning vehicles remaining consistent with that shown in the report. Therefore other traffic recommendations in the TIA should continue to operate acceptably with the reconfiguration of the driveways.
13.	John Bartlett & Phillip Kercher			Do not support the location of Access C due to the proximity to the Scottsdale Road and Indian Bend Road signalized intersection. Full access should not be provided 300 feet from the major intersection. This traffic should use Collector C to access Indian Bend Road.	The final driveway configuration and spacing will be determined by the City of Scottsdale during the Palmeraie site planning process. We anticipate the volume of turning vehicles remaining consistent with that shown in the report. Therefore other traffic recommendations in the TIA should continue to operate acceptably with the reconfiguration of the driveways.
14.	John Bartlett & Phillip Kercher	Volume Figures		Intersection E is shown as a "T" intersection with the side street extended to the west and turning movements to match; however, the site plan and roadway network on each volume figure shows a connection to the east labeled "Palmeraie Access."	This intersection was transposed in the volume graphic and has now been corrected.
15.	John Bartlett & Phillip Kercher	Volume Figures		Intersection G is shown as a "T" intersection with the side street extended to the west and turning movements to match, however, the site plan shows a connection into residential Parcel B to the west.	The site plan has been updated and no longer supports the same connections as previously reviewed.

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Ritz Carlton - City of Scottsdale Review Comments CivTech, Inc.
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Item No.	Reviewer	Location	Code	Review Comment	Response
16.	John Bartlett & Phillip Kercher	1st Submittal Comment Responses, Comment 9		Identifies that signal timing at Scottsdale Road intersections was based on a 120 second cycle length and coordinated. Contact Steve Ramsey at the City of Scottsdale to acquire current timing plans for the study area intersections within Scottsdale to accurately report before and after operations, storage lengths, etc., at these locations.	Signal timing cards were obtained from Steve Ramsey prior to the first review of the TIA. The timing cards indicate that the intersection is currently operating with a 120 second cycle length which was utilized for the analysis.
17.	John Bartlett & Phillip Kercher			The recommendations for signal timing adjustments to provide additional time to east-west movements at intersections along Scottsdale Road may not be feasible given the desire to maintain traffic progression along Scottsdale Road.	The report recommends that timing be evaluated when the signal is placed at Quail Run. It is understood that this timing may prioritize Scottsdale Road which could increase delays to Lincoln Drive.
18.	John Bartlett & Phillip Kercher			Please describe in the study if any access restrictions are intended to be installed on the internal driveways. For example, will the commercial parcels be able to utilize Quail Run Road to access Lincoln Drive? Will the resort parcel be able to utilize Collector B to access Scottsdale Road?	No access restrictions have been planned internal to the development. Through connections have been provided from all parcels. However, the design of the internal street network is circuitous to limit those using the roadway network as a cut through route. It is likely that a majority of the Palmeraie patrons will use the arterial street system in order to avoid the circuitous nature of the Ritz Carlton roadway network.
19.	John Bartlett & Phillip Kercher			Right-turn overlap phasing should not be assumed at the signalized intersections along Scottsdale Road without approval from City of Scottsdale Traffic Engineering.	The analysis has been revised to provide LOS with and without the right turn overlap. This improvement would require the support of the City prior to installation and can be reviewed with the Palmeraie TIA.
20.	John Bartlett & Phillip Kercher			A site plan that shows the relation of the proposed site driveway locations to the existing streets/driveway along Scottsdale Road, Indian Bend Road, and Lincoln Drive should be provided.	An updated site plan for Palmeraie will be provided during the site planning process. The site plan shown in the Ritz Carlton TIA is conceptual and will be further refined through the City review process.
21.	John Bartlett & Phillip Kercher	General	1	The City of Scottsdale has not approved the site plan for Palmeraie portion of the development.	Understood.

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Item No.	Reviewer	Location	Code	Review Comment	Response
22.	John Bartlett & Phillip Kercher	General	1	The City of Scottsdale Transportation Department has not approved any of the proposed improvements to streets and intersections within the City of Scottsdale.	Understood. The Palmeraie TIA will be updated during the site plan submittal process for the Palmeraie.
23.	John Bartlett & Phillip Kercher	General	1	The City of Scottsdale Transportation Department has not approved any of the site access locations along City of Scottsdale street frontages.	Understood. The Palmeraie TIA will be updated during the site plan submittal process for the Palmeraie.
24.	John Bartlett & Phillip Kercher	General	1	We will be encouraging strong pedestrian connections between the resort and residential portions of the overall development to the retail parcels and to the adjacent signalized intersections on Scottsdale Road to encourage bike and pedestrian travel, especially to the adjacent McCormick-Stillman Railroad Park.	Agree that a strong pedestrian element should be provided.