



**Department of Engineering
and Public Works**

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May 12, 2021

Ron M. Ferris
City Manager
City of Palm Beach Gardens
10500 N Military Trail
Palm Beach Gardens, FL 33410

Re: Traffic Signal - Intersection of Northlake Blvd. and Bay Hill Dr. /
Ancient Tree Dr.
Project Application RW 52535

Dear Mr. Ferris,

This correspondence is in response to Palm Beach Gardens' letter signed by the City Attorney on April 14, 2021, regarding our April 7, 2021, decision to not permit the installation of a traffic signal at the referenced intersection following thorough engineering, safety, and traffic operational analysis, taking into consideration the impact of this signal on the mobility, safety, and wellbeing of the larger County population beyond just the desires of the two communities flanking this intersection.

Palm Beach County staff responses to the contentions brought up in the City's referenced letter are enclosed in Attachment 1.

While we stand by our finding that the signal does not meet the MUTCD warrants at this time, on further review, without waiving any claims or rights, and due to the specific facts present in this particular situation, we are constrained to follow the October 18, 2016, TPS letter (Attachment 2), which inadvertently stated that the City can determine the warrant for this signal. As the City has now made that signal warrant determination, the County will issue the necessary right-of-way permit for the installation of the above ground components of said signal, provided the City agrees to the following terms:

- 1- The City assumes full responsibility for their decision to deem the signal meeting the MUTCD warrants, and therefore, agrees to indemnify the County for all liability related to the said signal warrant determination.



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- 2- The City will complete the installation of the signal at no cost to the County.
- 3- The City and County will execute an amendment to the existing Interlocal Agreement (ILA) to transfer the traffic control authority from the City to the County over all County maintained thoroughfare roads within the City limits. This ILA will continue the County's commitment to the operation and maintenance of all the existing, and future traffic signals, according to the terms of the current agreement.
- 4- The County will assume full responsibility for the operation and maintenance of the subject signal, upon final inspection and acceptance by the County, in accordance with the terms of the amended ILA.

Please let me know if you will be amenable to this proposal, have any questions, or need more information. I look forward to working with you on resolving this concern.

Sincerely,

David L. Ricks, P.E.
County Engineer

/MAA

Encs.

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Commissioner Melissa McKinlay, District 6, MMcKinlay@pbcgov.org
Verdenia C. Baker, County Administrator, VBaker@pbcgov.org
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Staff responses to the contentions in Palm Beach Gardens' letter signed by the City Attorney on April 14, 2021:

The County decided to not permit the installation of a traffic signal at the reference intersection following thorough engineering, safety, and traffic operational analysis, taking into consideration the impact of this signal on the mobility, safety, and wellbeing of the larger county population beyond just the desires of the two communities flanking this intersection.

Northlake Blvd. is a high-speed (55 mph) corridor and is the only direct access to tens of thousands of current and future residents in the Indian Trail Improvement District, City of Westlake, Avenir, and many other communities. Installing an unwarranted traffic signal on this road is expected to significantly increase travel time for the residents of these communities and has the potential to increase certain types of crashes such as rear-end and side-swipe. Furthermore, a signal is also expected to increase delay for traffic coming out of Bay Hill Estates and Ancient Tree, especially outside the peak traffic periods.

The Manual on Uniform Traffic Control Devices (MUTCD) requires that several factors are considered in determining whether a traffic signal is justified at a particular location. Only one of the required factors is whether one or more of the signal warrants are met. Chapter 4C of the MUTCD, Titled "Studies and Factors for Justifying Traffic Control Signals," provides, in relevant part:

The investigation of the need for a traffic control signal **shall** include an analysis of factors related to [1] the existing operation and [2] safety at the study location and [3] the potential to improve these conditions, and [4] the applicable factors contained in the following traffic signal warrants:

Warrant 1, Eight-Hour Vehicular Volume

Warrant 2, Four-Hour Vehicular Volume

...The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. MUTCD, § 4C.01 Standard (emphasis added).

The MUTCD emphasizes that the signal warrants merely "define the **minimum** conditions under which installing traffic control signals **might** be justified." MUTCD § 4B.02 Support (emphasis added). As an option, the MUTCD provides that:

At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher of the major-street left-turn volumes as the "minor-street" volume and the corresponding single direction of opposing traffic



on the major street as the “major-street” volume. MUTCD, § 4C.01, Option (emphasis added) (hereinafter “Option”).

In the study dated September 19, 2020, the City’s consulting engineer, Pinder Troutman Consulting, Inc. (PTC) attempts to use the Option and consider the major-street left-turn volumes on Northlake Blvd. as the “minor street” volume in its warrant analysis. However, as we have explained, the Option is not applicable for the location at issue and the PTC report contravenes the MUTCD.

Contrary to PTC’s report, Warrant 1 Condition B is not applicable and not met here. In relevant part, the MUTCD explains that “Condition B is intended for application at locations ...where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.” MUTCD, § 4C.02, Support. In other words, Warrant 1, Condition B of the MUTCD examines the need and justification of the installation of a signal based on excessive delay or conflict suffered by traffic on the minor street approaches. We agree that excessive delays or conflicts are evaluated in the MUTCD based upon traffic volumes. The signed and sealed report submitted to the City by PTC found that the traffic counts on the minor street (Bay Hill Dr. / Ancient Tree Dr.) **did not meet** either Warrant 1, Condition B, nor Warrant 2. PTC then decided to use the Option by using the westbound left-turn traffic volumes on Northlake Blvd. in lieu of the traffic volumes on Bay Hill Dr. / Ancient Tree Dr. to conclude that the signal meets the MUTCD warrants. It is our professional engineering judgment that the Option, as used by PTC, is not applicable as demonstrated by examining the values of the stop time delay suffered by the westbound left turn traffic on Northlake Blvd. during the most congested hour of the day.

We agree that the Level of Service (LOS) criteria are not in the MUTCD. They are provided in the Highway Capacity Manual (HCM), another national standard governing transportation, traffic design, and planning. As you know, the County, like most other local government jurisdictions, adopted LOS “D” for its roads and intersections. LOS helps define the magnitude of the measured stopped-time delay and determine whether it is “excessive delay.” Obviously, traffic operating at a much better than the adopted LOS “D” does not justify a signal.

The amount of conflict suffered by the westbound left-turn traffic on Northlake Blvd. is much less than that suffered by the minor street traffic (Bay Hill Dr. / Ancient Tree Dr.). The westbound left-turn traffic has to contend with the opposing eastbound traffic only (single conflict point). In contrast, the minor street traffic has to yield to the eastbound through, westbound through, eastbound left-turn, westbound left-turn, and the opposing minor street approach traffic (five conflict points). Therefore, “conflict” does not justify using westbound left-turn traffic volumes on Northlake Blvd. to warrant the signal.



In conclusion, the assertion that "once the signal is warranted [sic] it is required to be constructed," is incorrect. For example, the MUTCD specifically says that "[t]he satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." MUTCD § 4C.01, Line 03. The MUTCD further acknowledges that signals sometimes cause more operational delays and an increase in certain types of accidents. It recommends not constructing signals even when one or more warrants are met, "Since vehicular delay and the frequency of some types of crashes are sometimes greater under traffic signal control than under STOP sign control, consideration should be given to providing alternatives to traffic control signals even if one or more of the signal warrants has been satisfied." MUTCD § 4B.04, Line 01.



October 18, 2016

Dawn C. Sonneborn, AICP
Principal Planner
City of Palm Beach Gardens
10500 North Military Trail
Palm Beach Gardens, FL 33410

Department of Engineering
and Public Works
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RE: **Balsamo Parcel (a.k.a. Ancient Tree)**
Project #: 160610
TRAFFIC PERFORMANCE STANDARDS REVIEW

Dear Dawn:

The Palm Beach County Traffic Division has reviewed the Balsamo Parcel (a.k.a. Ancient Tree) Traffic Analysis prepared by Susan E. O'Rourke, P.E., Inc., revised October 3, 2016, pursuant to the Traffic Performance Standards in Article 12 of the Palm Beach County Unified Land Development Code (ULDC). The project is summarized as follows:

Municipality: City of Palm Beach Gardens
Location: North of Northlake Boulevard, at Bayhill Drive Intersection
PCN #: 00-41-42-14-00-000-3010 (To be annexed by the City)
Existing Uses: Vacant
Proposed Uses: 97 Single Family Dwelling Units
Access: Propose a signalized access driveway on Northlake Blvd at Bayhill Drive
New Net Daily Trips: 970
New Net PH Trips: 73 AM (18, 55) and 102 PM (64, 38)
Build-Out: December 31, 2021

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Based on our review, the Traffic Division has determined the proposed development meets the Traffic Performance Standards of Palm Beach County. This approval letter supersedes the previous letter issued on 9/22/2016, which approves the traffic concurrency of the same parcel based on the Traffic Analysis dated on September 13th, 2016, prepared by Susan E. O'Rourke, P.E., Inc. This TPS approval letter is subject to the following conditions:

- 1) The Property Owner shall fund the cost of signal installation meeting design standards, if warranted, as determined by the County Engineer or City of Palm Beach Gardens on Northlake Blvd at Project Driveway/Bayhill Drive.
 - a. Signalization shall be a mast arm structure installation. The cost of signalization shall also include all design costs and any required utility relocation and right of way or easement acquisition.
 - b. No Building Permits shall be issued until the Property Owner provides acceptable surety to either the Traffic Division or the City of Palm Beach Gardens in an amount as determined by the Director of the Traffic Division or the City.
 - c. In order to request release of the surety for the traffic signal at the above intersection, the Property Owner shall provide written notice to the Traffic Division/City of Palm Beach Gardens stating that the final certificate of occupancy has been issued for this development and requesting that a signal warrant study be conducted at the intersection. The Traffic Division or the City of Palm Beach Gardens shall have 24 months from receipt of this notice to either draw upon the monies to construct the traffic signal or release the monies.
- 2) No building permits for more than 39 single family dwelling units shall be issued until the property owner contributes the total proportionate share payments of the following roadway segments:
 - a. 0.64% of the construction cost of widening Northlake Boulevard from 140th Avenue to Coconut Boulevard from 2L to a 6LD facility.
 - b. 1.43% of the construction cost of widening Northlake Boulevard from Coconut Boulevard to Bayhill Drive from 4LD to a 6LD facility.

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- c. 1.26% of the construction cost of widening Northlake Boulevard from Bayhill Drive to SR-7 from 4LD to an 8+LD facility.
- 3) No building permits for more than 82 single family dwelling units shall be issued:
 - a. Until the contract has been let for the Assured Construction of SR-7 from 60th Street N. to Northlake Boulevard as a 4LD facility;
 - b. Or, until the property owner contributes a proportionate share payment of 2.14% of the construction cost of widening Northlake Boulevard from SR-7 to Beeline Highway from 4LD to a 6LD facility.
- 4) All conditions, numbered 1 and 3 above, shall be incorporated into the municipal Development Order exactly as set forth above. No later than ten calendar days after approval of the Development Order, the municipality shall transmit an official, recorded copy of the same to the County Engineer. In the event that: 1) the municipal Development Order is not received by the County Engineer within fifteen calendar days after approval of same; or 2) the official, recorded Development Order does not contain conditions 1, 2 and 3 exactly as set forth above, then the Traffic Division's conditional finding that this proposed development meets the Traffic Performance Standards of Palm Beach County shall be deemed rescinded and rendered void.
- 5) A Proportionate Share Agreement must be fully executed, by the property owner seeking approval of the project and Palm Beach County, before the municipality considers approval of the proposed project. The agreement shall be in substantially the same form as set forth in Exhibit A, which is attached hereto. In lieu of a Proportionate Share Agreement, the property owner may make a payment to Palm Beach County for the proportionate share included in condition 2 and 3 above. If such a payment is received prior to the approval of the municipal Development Order, a Proportionate Share Agreement will not be required. Otherwise, a Proportionate Share Agreement must be fully executed as outlined in this letter. In the event the municipality approves the proposed development before this proportionate share agreement is fully executed, or the County has not received the payment, then the Traffic Division's conditional finding that this proposed development meets the Traffic Performance Standards of Palm Beach County shall be deemed rescinded and rendered void.

Please note the receipt of a Traffic Performance Standards (TPS) approval letter does not constitute the review and issuance of a Palm Beach County Right-of-Way (R/W) Construction Permit nor does it eliminate any requirements that may be deemed as site related. For work within Palm Beach County R/W, a detailed review of the project will be provided upon submittal for a R/W permit application. The project is required to comply with all Palm Beach County standards and may include R/W dedication.

No building permits are to be issued by the City after the build-out date specified above. The approval letter shall be valid no longer than one year from date of issuance, unless an application for a Site Specific Development Order has been approved, an application for a Site Specific Development Order has been submitted, or the approval letter has been superseded by another approval letter for the same property.

If you have any questions regarding this determination, please contact me at 561-684-4030 or email to qyuan@pbcgov.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Quan Yuan".

Quan Yuan, P.E.
Professional Engineer
Traffic Division

QY/dd
Attachment: Proportionate Share Agreement (8 pages)

cc: Addressee
Susan E. O'Rourke, P.E. - Susan E. O'Rourke, P.E., Inc.
Quazi Bari, P.E., Professional Engineer - Traffic Division
Steve Bohovsky, Technical Assistant III - Traffic Division

File: General - TPS - Mun - Traffic Study Review
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