STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

RECEIVED
OCT 18 2011
By

October 13, 2011

To: Earl Lewellyn, P.E.
Kimley-Horn and Associates, Inc.
102 City Hall Plaza, Suite 201
Durham, N.C 27701

Subject: Proposed Gateway Terrace Traffic Impact Analysis Review

The proposed Gateway Terrace Development site, developed by Atlas Real Estate, LLC, is located in the southwest quadrant of US 15/501 and S.W. Durham Drive in Durham, North Carolina. According to the TIA, the proposed development will consist of approximately 36,000 square feet of shopping center and two (2) 4,500 square foot fast food restaurants. The anticipated build-out year is 2013 with an analysis year of 2014. The site is projected to generate an unadjusted volume of 7,961 daily trips with 563 A.M. peak hour site trips and 631 P.M. peak hour site trips.

The TIA analyzed the following six (8) intersections:
- US 15/501* and Mt. Moriah Road – Signalized
- US 15/501* and S. W. Durham Drive* – Signalized
- Mt. Moriah Road) and Ladle Drive/McFarland Drive - Unsignalized
- S.W. Durham Drive* and Witherspoon Boulevard – Unsignalized
- Watkins Road and Witherspoon Boulevard– Unsignalized
- Witherspoon Boulevard and Kroger Driveway – Unsignalized
- Watkins Road and Site Access #1 – Unsignalized
- Watkins Road and Site Access #2 – Unsignalized

* State Maintained Roads

Approved Surrounding Developments
Patterson Place Development Phases 2
This project is defined as approved and is located on the southeast quadrant of the US 15/501 and Mt. Moriah Road intersection. The TIA states that the development is to consist of:
- 5,782 SF of High Turnover Sit Down Restaurant and
- 19,546 SF of Specialty Retail

TIP Roadway Improvement Projects Relevant to Proposed Development
There are no funded NCDOT TIP roadway improvement projects in the vicinity of the study area.

Trip Generation and Distribution
- 35% to/from the west via US 15/501
- 30% to/from the east via US 15/501

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- 9% to/from the north via SR (Mt. Moriah Road)
- 8% to/from the south via SR (Mt. Moriah Road)
- 8% to/from the southwest via Brier Creek Parkway
- 10% assigned to/from existing portions of the Patterson Place Development

Capacity Analysis for Existing and Future Conditions
- Existing (2011) Condition
- Projected (2014) No-Build Condition (Existing Condition + 0.5% Background growth + Approved Developments)
- Projected (2014) Build Condition (Projected No-Build Condition+ Site Traffic)

Summary of Road Improvements
The Department has reviewed the preliminary site plan and Traffic Impact Analysis (TIA) for the proposed Gateway Terrace Development prepared by Kimley-Horn and Associates, Inc. (Sealed and dated August 8, 2011). In order to accommodate the site-generated traffic safely and efficiently, while also attempting to protect the functional integrity and operational capacity of the adjacent roadway facilities, we require the following improvements and/or restrictions related to this development. Any additional changes to the site plan must be submitted in writing to the District Office.

US 15/501* and Mt. Moriah Road Intersection
No future improvements are necessary at this intersection at this time to mitigate site-generated traffic.

US 15/501* and S. W. Durham Drive* Intersection
No future improvements are necessary at this intersection at this time to mitigate site-generated traffic.

Mt. Moriah Road and Ladle Drive/McFarland Drive Intersection
It is recommended that the following improvements be performed at this intersection.

<u>Westbound McFarland Drive</u>
- Restripe the existing exclusive left-turn lane to a shared left/thru lane.
- Restripe the existing shared thru/right lane to an exclusive channelized right turn lane.

S.W. Durham Drive* and Witherspoon Boulevard Intersection
No future improvements are necessary at this intersection at this time to mitigate site-generated traffic.

Watkins Road and Witherspoon Boulevard Intersection
No future improvements are necessary at this intersection at this time to mitigate site-generated traffic.

Witherspoon Boulevard and Kroger Driveway Intersection
No future improvements are necessary at this intersection at this time to mitigate site-generated traffic.

Watkins Road and Site Access #1 Intersection
<u>Southbound Proposed Driveway #1</u>
- Construct a two (2) lane cross-section consisting of one (1) ingress and one (1) egress lane consisting of a shared left/thru/right lane. A minimum of 100 feet internal protected storage should be provided.

General Recommendations Attachment
(For the Gateway Terrace Development)

Adequate horizontal and vertical sight distances should be reserved at all proposed entrances. Foliage that interferes with sight distance should be cut back to protect lines of sight. The District Engineer should determine if all drainage facilities are adequate. Curb cuts and curb ramps should be constructed in conformance with the "*Guidelines for Curb Cuts and Ramps for Disabled Persons*," if applicable.

The developer may be required to obtain an approved encroachment agreement covering proposed work within the state right-of-way. If this is the case, the encroachment should be cross-referenced to this review.

All street and driveway entrances onto state system roadways should be controlled with appropriate traffic control devices, including but not limited to, stop, yield, directional, regulatory, and advisory signs and pavement markings. All traffic control devices shall conform to the requirements set forth in the Manual on Uniform Traffic Control Devices. Final pavement marking and signing plans should be submitted to the Division Traffic Engineer for approval prior to the installation of any signs and/or pavement markings.

Unless otherwise noted, a recommended width of 40 feet (curb face to curb face) should be used at each drive. It is also recommended that 40 feet (minimum) radii should be used at each drive to accommodate any service type vehicles or truck traffic that may visit the site.

If the developer anticipates adding or petitioning for addition to the state system, all roads/streets should be designed and constructed in conformance with the current North Carolina Department of Transportation design and construction guidelines.

All "outparcels" or "excluded areas" should be served internally with no additional access onto abutting roadways. The developer should convey this condition in any lease or sell agreements.

As required by the "*Policy on Street and Driveway Access to North Carolina Highways*," dated July 2003, the applicant is responsible for identifying all right-of-way and/or control-of-access limits and for including this information on all submittals. Failure to accurately disclose R/W and C/A limits could result in the denial or closure of access points.

Adequate right-of-way for widening and sight distance triangles should be reserved. Consideration should be given to the possible future need for signalization and associated span poles, controller and pad, and guy wires at the intersections along NC 98 (Wake Forest Highway) and SR 1906 (Leesville Road).

Any additional development, either within this site or adjacent to this site, that intends on using this development's access will require an updated driveway permit and re-evaluation of geometric and traffic control needs. Where possible, opposite side driveways should be aligned to prevent the operational and safety problems caused by offset driveways.

All widening should include appropriate transitional and deceleration tapers. Recommended turn lane and transitional treatments are shown on pages 78 and 79 of the "*Policy on Street and Driveway Access to North Carolina Highways*," dated July 2003.