

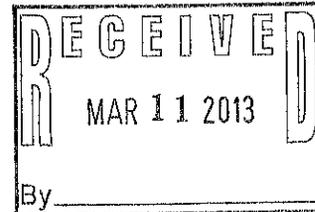


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

February 26, 2013



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

Subject: Miami Boulevard Commercial TIA

The proposed Miami Boulevard Commercial Development is located on the west side of Miami Boulevard (NC 54) between Emperor Boulevard and Surles Court in Durham, North Carolina. The development will consist of 20,000 square feet of retail space, 5,000 square feet of office space, and 4,000 square feet of high-turnover sit-down restaurant with two proposed access points onto Miami Boulevard. The north driveway aligned with the existing Bradford Office driveway will function as an entrance only. The south driveway will provide a full movement access. The development has a build-out year of 2013 and study year of 2014.

The TIA analyzed the following intersections:

- Miami Boulevard at Emperor Boulevard
- Miami Boulevard at Surles Court / Church Street
- Miami Boulevard at Bradford Office Driveway / North Site Driveway
- Miami Boulevard at Berrington Office Driveway
- Miami Boulevard at South Site Driveway

Approved Surrounding Developments

- None in the area

TIP Roadway Improvement Projects Relevant to Proposed Development

- U-4716A/B/C: NC Railroad from south of I-40 in Durham to north of McCrimmon Parkway in Morrisville with the construction of a grade separation at Hopson Road (SR 1978), extension of Keystone Park Drive from Park Knoll Drive to Hopson Road, and the closing of Church Street at Miami Boulevard.

Trip Generation and Distribution

The Miami Boulevard Commercial development is estimated to produce 114 a.m. peak hour trips (65 entering and 49 exiting) and 190 p.m. peak hour trips (96 entering and 94 exiting).

The study assumed that the Church Street connection to Miami Boulevard will be closed and the connection of Church Street to Hopson Road will be made via Keystone Park Drive under the U-4716A/B/C project at build-out. The following assumptions were made due to the TIP project:

- Church Street's eastbound right turns onto NC 54 continue south to McCrimmon Parkway
- 50% of NC 54's southbound right turns onto Church Street are diverted to Hopson Road
- 50% of NC 54's southbound right turns onto Church Street continue south to McCrimmon Parkway
- NC 54's northbound U-turns at Berrington office driveway continue north to Hopson Road

The trips will be distributed as follows:

- 50% to/from the South via Miami Boulevard (NC 54)
- 40% to/from the North via Miami Boulevard (NC54)
- 10% to/from the East via Emperor Boulevard

Capacity Analysis for Existing and Future Conditions

- Existing (2012) Conditions
- Projected (2014) No-Build Conditions (Existing traffic + 3.0% Annual Background Growth + Approved Development Traffic)
- Projected (2014) Build Conditions (Existing traffic + 3.0% Annual Background Growth + Approved Development Traffic + Site Traffic)

Summary of Road Improvements

The Department has reviewed the preliminary site plan and Traffic Impact Analysis (TIA) for Miami Boulevard Commercial developments prepared by Kimley-Horn and Associates, Inc., (Sealed and dated 01/04/13). 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 recommend 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.

Miami Boulevard and Emperor Boulevard

No further geometric improvements are necessary at this intersection at this time to mitigate site-generated traffic.

Miami Boulevard and Surles Court / Church Street

No further geometric improvements are necessary at this intersection at this time to mitigate site-generated traffic.

Miami Boulevard and Bradford Office Driveway / North Site Driveway

SB Miami Boulevard

- Construct an exclusive Right-Turn Lane with adequate storage plus appropriate tapers.

North Site Driveway

- Construct driveway with one Ingress Lane.

Miami Boulevard and Berrington Office Driveway

No further geometric improvements are necessary at this intersection at this time to mitigate site-generated traffic.

Miami Boulevard and South Site Driveway

SB Miami Boulevard

- Construct an exclusive Right-Turn Lane with adequate storage plus appropriate tapers. Based on the Site Plan Schematic dated 12/18/12, this turn lane may be required to extend to the end of the right turn lane at the north site driveway for one continuous right turn lane.

South Site Driveway

- Construct driveway with a three lane cross-section that has one Ingress Lane and Two Egress Lanes and a minimum of 100 feet of driveway stem. Egress Lanes shall be one Left-Turn Lane and one Right-Turn Lane.

General

Cross-access to adjacent properties is strongly encouraged to reduce repetitive trips and provide future alternative routes of ingress/egress.

Due to, but not limited to, the comments and recommendations from this review of the proposed developments, changes in the internal circulation may be necessary to ensure that driver confusion is minimized to the maximum extent possible.

Any signal revisions, modifications, or additions necessitated by the development should be coordinated with the Regional Traffic Engineer, the Division Traffic Engineer, the Signals and Geometrics Section and the City of Durham.

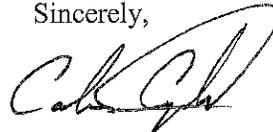
Any pavement marking revisions/modifications necessitated by the development should be the responsibility of the developer and coordinated with the Division Traffic Engineer.

Any roadway modifications or improvements necessitated by the development should be the responsibility of the developer unless otherwise noted.

Reference should also be made to the information included in the "General Recommendations Attachment."

NCDOT driveway permit will be required for driveway access on Miami Boulevard (NC54). Once the driveway permit has been approved and issued, a copy of the final driveway permit requirements should be forwarded to this office. If we can provide further assistance, please contact me at (919) 220-4750.

Sincerely,



R. C. Capehart, P.E.
District Engineer

Attachment

Cc: Mr. H. Wesley Parham, P.E.

General Recommendations Attachment
(For Miami Boulevard Commercial 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. Any additional development, either within this site or adjacent to this site, that intends on using the developments access will require an updated driveway permit and re-evaluation of geometric and traffic control needs

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.

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.

Where possible, opposite side driveways should be aligned to prevent the operational and safety problems caused by offset driveways.