



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

November 5, 2025

Mr. Allen J. Reid, P.E.
Impact Designs, Inc.
PO Box 3728
Mooresville, NC 28117

Reference: LEO Cottages at Haywood Road Traffic Impact Analysis

Dear Mr. Reid,

The Traffic Impact Analysis (TIA) submitted to the North Carolina Department of Transportation (NCDOT) for the development titled as the LEO Cottages at Haywood Road project is summarized as follows:

Proposed Development

According to the TIA, the proposed LEO Cottages at Haywood Road is to be located on NC 191 (Haywood Road) east of SR 2162 (Blythe Street) in Hendersonville, Henderson County. The TIA states the development is to be built out in 2028 and is to consist of the following:

Land Use	Land Use Code	Size
Single Family Attached Housing	215	180 DU

Trip Generation - Unadjusted Volumes During a Typical Weekday

Based on appropriate methodology outlined in the *ITE Trip Generation Manual, 11th Ed.*

	IN	OUT	TOTAL
AM Peak Hour	22	66	88
PM Peak Hour	61	43	104
Daily Trips			1,321

Requested Access Points

Driveway	Public Roadway	Access Type
Site Access	NC 191 (Haywood Road) approximately 440' east of SR 2162 (Blythe Street)	All-Movement

Using the Institute of Traffic Engineers (ITE) Trip Generation Manual, 11th Edition, an unadjusted total of 1,321 Daily Trips are expected to be generated by Land Use Code (LUC) 210. With 1,510 Daily Trips, the

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION 14 / DISTRICT 1 FIELD OFFICE
4142 HAYWOOD ROAD
MILLS RIVER, NC 28759

Telephone: (828) 435-7300
Fax: (828) 891-5026
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
4142 HAYWOOD ROAD
MILLS RIVER, NC 28759

development did not meet the NCDOT 3000 daily trip threshold for a TIA, but does meet the 1000 daily trips/100 residential unit threshold for the City of Hendersonville and a TIA was required by City of Hendersonville Code 6-18-1. This project is also within the limits of TIP R-2588A. A TIA was required by the NCDOT Policy On Street and Driveway Access to North Carolina Highways (NCDOT Driveway Manual).

- The need for a TIA was initially determined in 2024.
- The final TIA Scoping document was initially submitted on 8/26/2025 and approved on 9/10/2025.
- The full TIA was submitted on 9/15/2025 and deemed complete on 10/8/2025.
- Full review comments on the TIA are due on or before 11/5/2025.
- All statutory time frames as written in **NCGS 136-93.1A** have been met.

The LEO Cottages at Haywood TIA is accepted by the NCDOT on this date with the following comments and required mitigations:

It should be noted that the site plan will need to be updated to meet the minimum standards for site plans by the NCDOT Policy On Street And Driveway Access to North Carolina Highways (NCDOT Driveway Manual) prior to an Application for a Driveway Permit.

NCDOT has the authority and the responsibility to require a sufficient length of protected stem (beyond the right-of-way limits) within the site for operational and safety needs of the adjacent roadway system. An Internal Protected Stem with a minimum storage of 100', measured from the near edge of the right of way line is the requirement per the NCDOT Driveway Manual.

The TIA states that Haywood Road (NC 191) is a two-lane undivided roadway. The NCDOT Functional Class currently shows NC 191 as a Principal Arterial. The French Broad River Metropolitan Planning Organization's Comprehensive Transportation Plan (CTP) shows that portion of NC 191 as a Major Thoroughfare – Needs Improvement. The CTP recommends adding turn lanes, and improving geometrics and intersection operations as appropriate. It is listed in the French Broad River MPOs Metropolitan Transportation Plan (MTP) 2045 labeled as R-2588A, and as a widening project. The AADT for NC 191 in the area of the development is listed as 12,953. The posted speed limit on NC 191 in the vicinity of the project site is 35mph.

The TIA states that Blythe Street (SR 2162) is a two-lane undivided roadway. The NCDOT Functional Class currently shows SR 2162 as a Major Collector. The French Broad River Metropolitan Planning Organization's Comprehensive Transportation Plan (CTP) shows that portion of NC 191 as a Minor Thoroughfare – Needs Improvement. The CTP recommends adding turn lanes, widening shoulders, and improving geometrics and intersection operations as appropriate. It is listed in the French Broad River MPOs Metropolitan Transportation Plan (MTP) 2045 labeled as HD144519, and as a modernization project; add turn lanes, widen shoulders, and improve geometrics and intersection operations as appropriate; Include complete streets improvements. The AADT for SR 2162 in the area of the development is listed as 6,966. The posted speed limit on SR 2162 in the vicinity of the project site is 35mph.

Chapter 5, Section J, of the NCDOT Driveway Manual states, with emphasis added:

The applicant ***shall be required to identify mitigation improvements to the roadway network*** if at least one of the following conditions exists when comparing base network conditions to project conditions:

- the total average delay at an intersection or individual approach increases by 25% or greater, while maintaining the same level of service,
- the Level of Service degrades by at least one level,
- or Level of Service is “F.”

For turning lanes, mitigation improvements shall be identified when the analysis indicates that the ***95th percentile queue exceeds the storage capacity of the existing lane***.

NCGS 136-18(29) states, in part “The Department of Transportation may require the construction and public dedication of acceleration and deceleration lanes, and traffic storage lanes and medians by others for the driveway connections into any United States route, or North Carolina route, and on ***any secondary road route with an average daily traffic volume of 4,000 vehicles per day or more***.” Emphasis added

NCDOT Individual Intersection Mitigation Requirements (In order as presented in the TIA)

Asheville Highway (US 25 Business) and Haywood Road (NC 191)

Impact Designs, Inc, recommends no improvements to this intersection.

NCDOT notes a drop in LOS and the increase in delay is 1.5 seconds. NCDOT concurs and requires no mitigation at this intersection.

Haywood Road (NC 191) and Blythe Street (SR 2162)

Impact Designs, Inc, recommends no improvements to this intersection.

NCDOT concurs and requires no mitigation at this intersection.

Brevard Road/6th Avenue West (US 64) and Blythe Street (SR 2162)

Impact Designs, Inc, recommends no improvements to this intersection.

NCDOT concurs and requires no mitigation at this intersection.

Haywood Road (NC 191) and Ewbank Drive (City)

Impact Designs, Inc, recommends no improvements to this intersection.

NCDOT concurs and requires no mitigation at this intersection.

Haywood Road (NC 191) and Morris Lane (City)

Impact Designs, Inc, recommends no improvements to this intersection.

NCDOT concurs and requires no mitigation at this intersection.

Haywood Road (NC 191) and Ridgewood Boulevard / Whitmire Circle (City)

Impact Designs, Inc, recommends no improvements to this intersection.

NCDOT notes a drop in LOS and the increase in delay is 0.7 seconds. NCDOT concurs and requires no mitigation at this intersection.

Haywood Road (NC 191) and Orleans Avenue (City)

Impact Designs, Inc, recommends no improvements to this intersection.

NCDOT notes a drop in LOS and the increase in delay NB is 7.8 seconds, while the SB increase is 4.2 seconds. These increases are on the stop-controlled side street approaches. NCDOT concurs and requires no mitigation at this intersection.

Haywood Road (NC 191) and N. Justice Street (City)

Impact Designs, Inc, recommends no improvements to this intersection.

NCDOT notes a drop in LOS and the increase in delay is 0.2 seconds. NCDOT concurs and requires no mitigation at this intersection.

Haywood Road (NC 191) and Site Access

Impact Designs, Inc, recommends construction of a westbound left turn lane on Haywood Road at the site access with at least 50 feet of storage. Final design to be coordinated with NCDOT.

NCDOT concurs with construction of a westbound left turn lane on Haywood Road at the site access. Haywood Road is a NC Route and carries almost 13,000 vehicles a day. NCDOT requires the left turn lane to have a minimum of 100' of full 11' width storage and an eastbound right turn lane with a minimum of 75' full 11' width storage, as provided for in NCGS 136-18(29). Appropriate taper lengths will be coordinated through the permitting process.

NC 191 is to be widened to 11' lanes with 2' paved shoulders along the frontage of the project and to the extents of widening. Pavement structures are to be approved during the permitting process. As provided for in the NCDOT Driveway Manual, NC 191 will be required to be full width resurfaced 100' outside of the outer limits of any pavement disturbance. Resurface to milled headers with 1" Asphalt Surface Course to provide a consistent surface for effective striping, improved ride-ability and maintainability, and improved night and wet pavement lane visibility.

Any resurfacing on NC 191 is required to be fully restriped, and all pavement markings reinstalled 200' beyond the limits of resurfacing. Temporary pavement markings may be paint and permanent markings shall be Thermoplastic. Pavement markings and striping material and dimensions are to be approved by the NCDOT Division 14 Traffic Engineer.

NC 191 is required to have a minimum 4' grass shoulder from the edge of pavement over the frontage of the project, if curb and gutter is not utilized.

Any proposed curb and gutter within NCDOT right of way shall not have the gutter calculated into lane widths and is to be 2'6" wide and comply with NCDOT Standard 640.01.

If any traffic signals need to be retimed and/or coordinated with the corridor, signal work is to be coordinated and approved through the NCDOT Division 14 Traffic Engineer.

All required improvements are to have NCDOT approved roadway plans.

Allen J. Reid, P.E.
LEO Cottages at Haywood Road Traffic Impact Analysis
11/5/2025
Page 5

All improvements to the NCDOT system will be bonded prior final driveway permits and/or encroachment agreements are approved.

All required driveway permits and/or encroachment agreements are to be approved prior to construction.

If you have any questions, please let me know by email at ext-rhdarnell@ncdot.gov or by phone at 828-435-7300.

Sincerely,

Signed by:

E1A48C80B317448...

R.H. Darnell
District Project Engineer

RHD/rhd

CC: Troy S. Wilson, PLS, NCDOT District Engineer
Michael P. Reese, PE, CPM, NCDOT Congestion Management Regional Engineer
Wesley T. Grindstaff, PE, NCDOT Division Engineer
Christopher D. Lee, PE, NCDOT Deputy Division Engineer
Steven M. Buchanan, NCDOT Division Traffic Engineer
Scott M. Collier, PE, NCDOT Western Regional Field Operations Engineer
Lew Holloway, City of Hendersonville, Community Development Director
Matthew Manley, AICP, City of Hendersonville, Strategic Projects Manager