



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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MEMO TO: Steven Kichefski, USACE

FROM: Derrick Weaver, PE, NCDOT
Team Lead – Divisions 11-14 Project Management Unit

DATE: April 16, 2018

SUBJECT: Project R-5100A (SR 1109 (Williamson Road) Widening) Iredell County
WBS 41890.1.D1

Independent Utility and Logical Termini

To ensure meaningful evaluation of alternatives, Federal Highway Administration (FHWA) regulations require that:

1. *Projects have logical limits (known as “logical termini”) and be long enough that the environmental analysis has a sufficiently broad scope.*

For the Williamson Road project, the southern project terminus is at I-77 - a four-lane interstate freeway that connects Columbia, South Carolina to Cleveland, Ohio. Express lanes are currently being added to I-77 (see Table 1 for a description of this project as well as other funded projects in the area). The northern project terminus is at SR 1100 (Brawley School Road) - a 4-lane divided roadway from west of SR 1109 (Williamson Road) to I-77. A new Single Point Urban Interchange was constructed within the last ten years to provide direct access from SR 1100 (Brawley School Road) to I-77. Project R-3833C will widen SR 1100 (Brawley School Road) from I-77 east to US 21 (see Table 1). Both of these terminal points would connect the proposed project to the greater roadway network and would allow for a sufficiently broad environmental analysis of corridor improvement alternatives. Refer to Figure 1 for R-5100A project limits as well as other area projects.

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Memorandum

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2. *Projects are usable, even if no additional transportation improvements in the area are made (known as “independent utility”).*

The project would have independent utility because improvements to Williamson Road between its terminal points would be useful at improving the corridor without requiring other abutting or adjacent projects to be built. As shown on Figure 1, other area projects are already funded and underway in some form of project development, design, or construction including the R-5100B project that will widen SR 1109 (Williamson Road) from SR 1100 (Brawley School Road) to NC 150 (classified as a Principal Arterial). Additionally, SR 1109 (Williamson Road) is classified as a Major Collector in the NCDOT classification system. Interstate 77, the southern terminus of project R-5100A is classified as an Interstate. At the northern terminus, SR 1100 (Brawley School Road) is classified as a Major Collector and exists as a 4-lane, median divided roadway and also connects to I-77. The R-5100A project would connect roadways of similar or higher functional classifications.

3. *Approval of a project would not restrict consideration of alternatives for other foreseeable transportation improvements.*

The project has been developed in coordination with CRTPO, Iredell County, and the Town of Mooresville. Continuing coordination will help to avoid potential conflicts with foreseeable transportation improvements. The R-5100A project proposes to widen an existing facility. The location of the facility is such that approval of the proposed widening would not restrict development of alternatives on other foreseeable transportation improvements in the area, most notably:

- a. I-77 Express Lanes – under construction
 - b. U-6037 – US 21 Widening in project development phase with a southern terminus at Medical Park Drive where US 21 exists as a 4-lane facility
 - c. R-5100B – SR 1109 (Williamson Road) Widening in design phase. Portions of the southern terminus of this project were widened as part of the R-3833B project
 - d. R-2307 – NC 150 Improvements is in the right-of-way phase
 - e. U-5817 – Fairview Road over I-77 with connector to SR 1109 (Williamson Road) is under design. Two alternatives for tie to Williamson Road are under consideration.
4. *Conclusions*

Based on the above discussion, the R-5100A project satisfies the FHWA regulations for logical termini, independent utility, and not restricting development of alternatives on other transportation improvements.

Table 1 – Transportation Project Surrounding R-5100A

TIP Project	Description	ROW Date	Constr. Date
R-5100A	SR 1109 (Williamson Road) from I-77 to SR 1100 (Brawley School Road). Widen to 4-lanes divided.	2019	2020
R-5100B	SR 1109 (Williamson Road) from SR 1100 (Brawley School Road) to NC 150. Widen to 4-lanes divided.	2019	2020
R-2307B	NC 150 From East of SR 1840 (Greenwood Road) in Catawba Co. to US 21 in Iredell Co.	Current	2019
U-5816	SR 1305 (Oates Road) from US 21 (Charlotte Highway) to SR 1474 (Bluefield Road). Widen to three lanes with overpass over I-77.	2019	2021
U-5817	Extend SR 1246 (Fairview Road) over I-77 to connect with SR 1206 (Alcove Road) and construct parallel north-south connector roads to SR 1109 (Williamson Road).	2019	2021
R-3833C	SR 1100 (Brawley School Road) From I-77 to US 21. Widen to multi-lanes.	2018	2020
U-6037	US 21 From NC 150 (Plaza Drive) to SR 1245 (Medical Park Road) Widen to 4-lanes divided.	2022	2024
I-77 Express Lanes	I-77 Express Lanes project will help provide more reliable travel times on 26 miles of I-77 from the Brookshire Freeway (Exit 11) in Mecklenburg County to N.C. 150 (Exit 36) in Iredell County	NA	Current
U-5717	NC 150 interchange improvements	Current	2019

DW/BDD

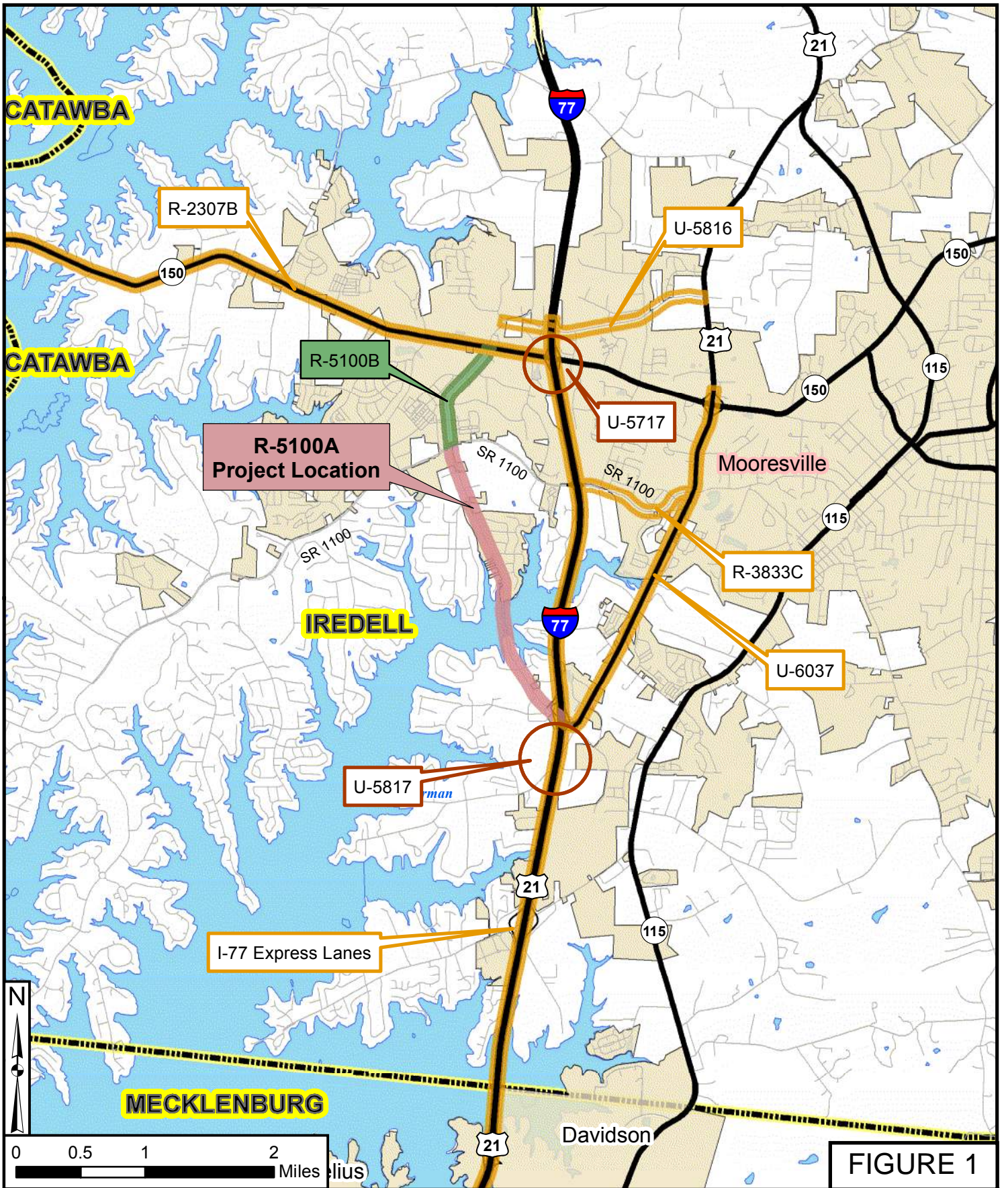


FIGURE 1



NORTH CAROLINA
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**LOCATION MAP
SR 1109 (WILLIAMSON ROAD) WIDENING
FROM I-77 TO NC 150
IREDELL COUNTY**

TIP: R-5100A
WBS: 41890.1.D1
Div.: 12
Date: March 2018