

# PROJECT DATA SHEET

Date: 3/7/2018

Rev.:

TIP No.: I-5965/ B-5718	County: Guilford
Federal-aid No.: NHP-0040(021) (B-5718)	WBS No.: 45915.1.1 / 45674.1.1
NCDOT Division: 7	Scoping Meeting Date: 3/13/18

## Project Description:

- Length: 3.5 Miles (total)
- Termini (US Hwy / SR): Western – US 220/SR 1398 (Freeman Mill Road), Eastern – US 29/ US 70/ US 220
- MPO / RPO: Greensboro Urban Area Planning Organization (GUAMPO)
- NEPA / 404 Merger Candidate?  Yes  No  Unknown
- General Description of Project:

I-5965 – I-40/I-85 Business/ US 29/ US 70/ US 220 from US 220/ SR 1398 (Freeman Mill Road) to US 29/ US 70/ US 220 in Greensboro. Add lanes, improve SR 1007 (Randleman Road) and Elm-Eugene Street interchanges, and replace Norfolk Southern railroad bridge overpass east of Elm-Eugene Street.

B-5718 – Patton Avenue - Replace Bridge No. 329 over I-40/I-85 Business/ US 29/ US 70/ US 220.

I-40/I-85 Business/ US 29/ US 70/ US 220 will be referenced as I-40/I-85 Business for the remainder of this document for simplicity (See Figure 1).

## Design Data (Existing Conditions):

- Functional Classification: Interstate
- Strategic Transportation Corridor: Corridor Q (I-40)
- CTP Designation (Facility Type): Freeway
- Type of Access Control: Full
- Typical Section: Six lane divided freeway, with variable-width median
- Right of Way: Variable, 250-1,500 feet, expansive ROW near interchanges
- Posted Speed: 55 MPH
- Structure Inventory (bridges, RCBC, Walls, etc):

Bridge #679 US 220 ramp over I-40/US 220, Sufficiency Rating 88.87, Built in 1995

Bridge #327 I-40 EBL/US 220 NBL over South Buffalo Creek, Sufficiency Rating 87.26, Built in 1995

Bridge #678 I-40/US 220 WBL over South Buffalo Creek, Sufficiency Rating 94.33, Built in 1994

Bridge #336 I-40/US 220 EBL over I-85 Business SBL, Sufficiency Rating 98, Built in 2009

Bridge #299 I-40/I-85 Business over South Buffalo Creek, Sufficiency Rating 8, Built in 1955, Reconstructed in 1994

Bridge #321 NS Railroad over I-40/I-85 Business, Sufficiency Rating: To be determined  
Bridge #329 Patton Avenue over I-40/I-85 Business/US 29/US 70/US 220, Sufficiency Rating 16.72, Built in 1967  
Culvert #585 South Branch Buffalo Creek under I-40/I-85 Business/US 29, Triple 7'X8' RC Box Culvert, Sufficiency Rating 86.42, Built in 1954  
Bridge #339 I-40/I-85 Business EBL over SR 3762, Sufficiency Rating 78.38, Built in 1954  
Bridge #340 I-40/I-85 Business WBL over SR 3762, Sufficiency Rating 71.92, Built in 1954  
Bridge #022 SR 1007 over I-40/I-85 Business, Sufficiency Rating 80, Built in 1966  
Bridge #148 SR 1007 over I-40 WBL/I-85 Business SBL, Sufficiency Rating 81, Built in 1967  
Bridge #285 US 29SBL over SR 1401, Sufficiency Rating 96, Built in 1966  
Bridge #309 Elm Eugene St over I-40/I-85 Business, Sufficiency Rating 69.89, Built in 1955  
Bridge #325 US 220 over I-40 and US 220, Sufficiency Rating 99.84, Built in 1995

- Other TIP Projects in the Area (See Figure 2)

I-5955 includes interstate maintenance and pavement rehabilitation on I-40 from High Point Road (SR 4121) to east of SR 3037/SR 4240 (Gate City Boulevard) in Greensboro.

I-5964 proposes ramp widening and sidewalks at the interchange with I-40/I-85 Business/US 29/US 70/US 220 and Elm-Eugene Street in Greensboro.

B-5713 proposes replacement of the Willow Road Bridge #352 over I-40/ I-85 Business in Greensboro.

B-5356 replaces Bridge No. 299 on I-40/I-85 Business over South Buffalo Creek. That project is currently in final design and will be constructed before STIP I-5965/B-5718. The design of that bridge accommodates an additional lane in each direction along I-40/I-85 Business.

U-5754 is located at the eastern limits of STIP I-5965 and proposes to add a ramp lane on eastbound I-40/I-85 Business onto northbound US 29/US 70/US 220. It also proposes to extend the ramp on southbound US 29/US 70/US 220 onto SR 3762 (Martin Luther King, Jr. Drive).

B-5119 is one nearby project that has been constructed. That project replaced Bridge Nos. 291 and 349 on I-40/I-85 Business over US 29/US 70/US 220. These are the two westbound bridges.

- Railroad Involvement:

The Norfolk Southern Railway crosses over I-40/I-85 Business between South Buffalo Creek and Mile Run Creek. This is the CF-line from Greensboro to Cumnock, and the bridge #321 is at Milepost CF 71.72. Two to four trains per day, operate at speeds of 25 mph over the line. There are two tracks across the bridge (mainline and spur track).

### Long Range Plan History:

In 2016, NCDOT completed feasibility-level concepts for I-5965 that considered widening I-40/ I-85 Business to an eight-lane divided facility, with narrow median and interchange improvements. Two concepts were developed, both of which proposed a realignment of the Norfolk Southern railroad to maintain railroad traffic while a new bridge over I-40/I-85 Business is constructed. One project concept considered converting the Randleman Road interchange to a grade separation and upgrading the South Elm-Eugene Street interchange.

The other concept proposed more conventional interchange improvements.

GUAMPO's *2040 Metropolitan Transportation Plan* (October 2017) recommends widening I-40 from four lanes to six lanes between US 311 and I-40 Bus/US 421W. It was amended in November 2017 to recommend adding lanes and improving interchanges at Randleman Road and Elm-Eugene Street, and replacing the NS Railroad bridge overpass under I-5965.

GUAMPO's Comprehensive Transportation (CTP) (2010) designates existing I-40/I-85 Business as a freeway. It also recommends improvements to South Elm-Eugene Street (classified a boulevard), south of the I-40/I-85 Business corridor.

According to the *Greensboro Urban Area Comprehensive Bicycle, Pedestrian, and Greenway Plan* (BiPed Plan) (October 2006), there are no existing bicycle routes within the study area. The BiPed Plan recommends South Elm-Eugene Street and portions of Randleman Road and Creek Ridge Road for inclusion in the Greensboro Bicycle Network. This Network will be developed over the next twenty years and these recommended routes will be subject to additional review, refinement and negotiation. Land adjacent to South Buffalo Creek is planned for inclusion in the Greensboro Greenway Network. Trailheads are recommended near the edge of the study area at the eastern extent of Hillsdale Park, and within the study area near the Buffalo Creek crossings under US 220 South, and under Elm-Eugene Street. The proposed greenway corridor crosses the study area east of US 220, west of Elm-Eugene Street, and at Martin Luther King Jr. Boulevard. A portion of the proposed greenway continues east along South Buffalo Creek south of the I-40/I-85 corridor. Areas within this network require further evaluation and design-level analysis, before construction.

Traffic Data (AADT):

Year	Description	Average Annual Daily Traffic (AADT)
2015	East of Randleman Road/ West of Randleman Road	92,000 / 125,000
2040	East of Randleman Road/ West of Randleman Road	108,000 / 145,000

Source of Traffic Data: NCDOT July 2015 Traffic Forecast for Project B-5356

Cost Estimates:

	Construction	Right-of-Way	Utilities	Total
I-5965 TIP Estimate	\$103,438,000	\$11,511,000	\$1,381,000	\$116,330,000
B-5718 TIP Estimate	\$4,353,000	\$218,000	\$100,000	\$4,671,000
Total	\$107,791,000	\$11,729,000	\$1,381,000	\$121,001,000

Project Schedule:

Environmental Document (CE)	2019
Right of Way	2022
Construction	2022

## Initial Scoping Comments:

See the attached January 18, 2018, kickoff meeting summary, describing initial comments from the project team. Key comments are summarized as follows.

### Project Coordination

I-5965 activities will be coordinated with STIP B-5356, U-5754, I-5964 to ensure logical order of operations and to avoid reconstructing components of the facility. Project B-5356 will be completed prior to the letting of I-5965.

### Bicycle and Pedestrian Uses

Bicycle and pedestrian uses have been noted along Randleman Road and Elm-Eugene Street and should be considered in the development of interchange concepts.

### Interchanges

Due to the close proximity between the Randleman Road and Elm-Eugene Street interchanges, various concepts should be considered to improve traffic operations.

### Rail Coordination

Realignment of the Norfolk Southern railroad to maintain railroad traffic while the new bridge over I-40/I-85 Business is being constructed.

## Design Data (Proposed Conditions):

- Designation (Facility Type): Freeway/Interstate
- Type of Access Control: Full
- Typical Section:
  - Eight lane freeway, with auxiliary lanes and a minimum 22' median and barrier
- Right-of-Way: Variable
- Design Speed: 60 mph

## Purpose and Need Data:

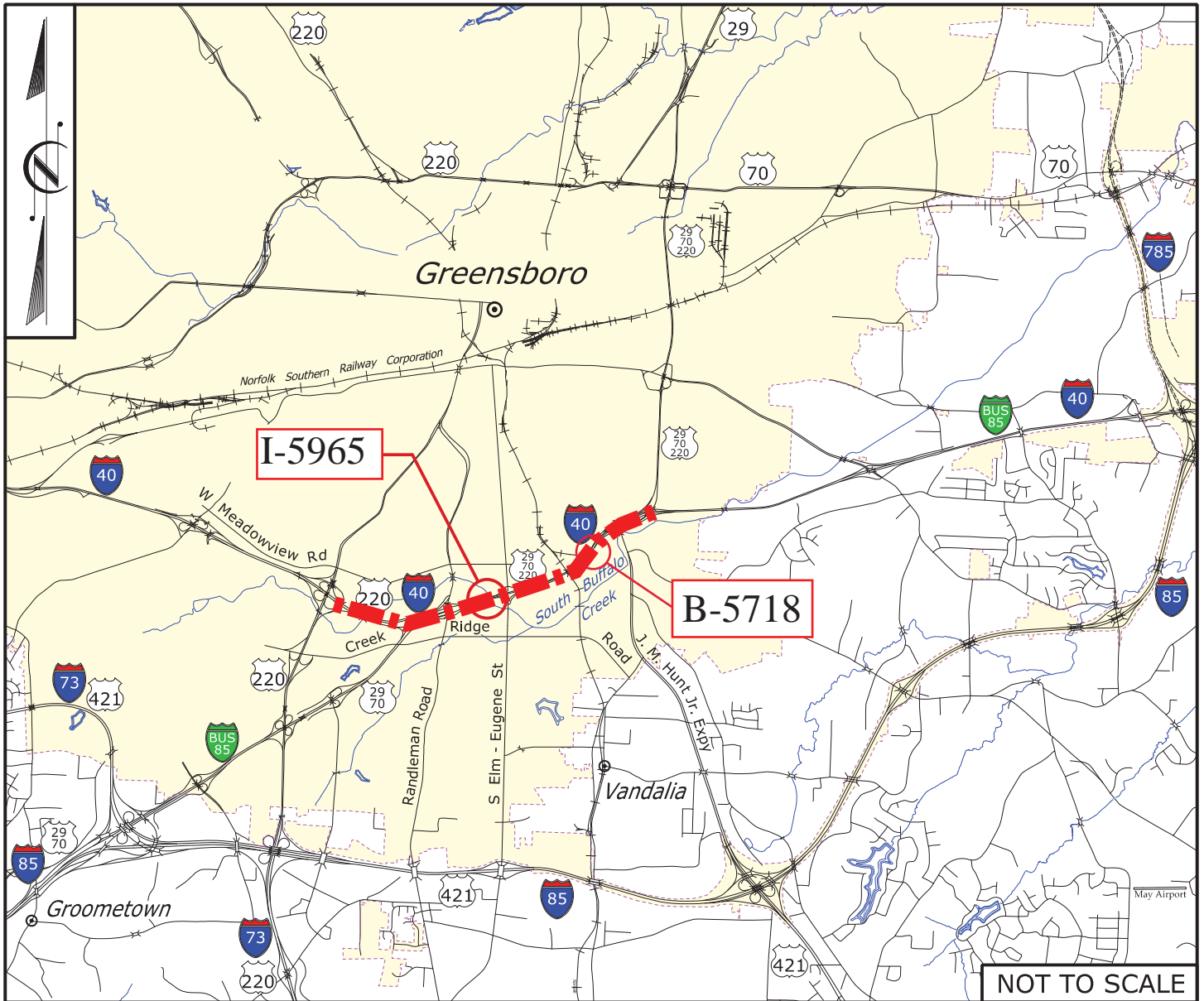
### Draft Project Need:

I-40/I-85 Business serves as a strategic regional highway and is an important east-west interstate route, connecting Greensboro with Winston-Salem to the west and with Raleigh/Durham/Chapel Hill to the east. According to the B-5356 Traffic Analysis Technical Memorandum (2016), portions of this corridor are expected to reach or exceed the traffic carrying capacity in AM/PM Peak Hours under no-build scenarios by the year 2020. Upgrades are necessary in order to improve mobility and increase the roadway-carrying capacity of I-40/I-85 Business in the project area, to support regional transportation needs.

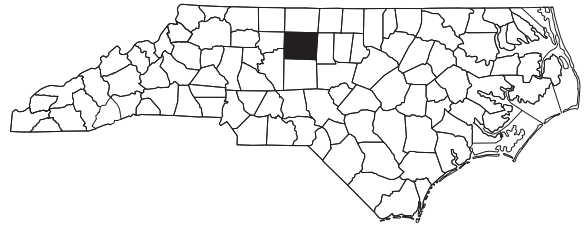
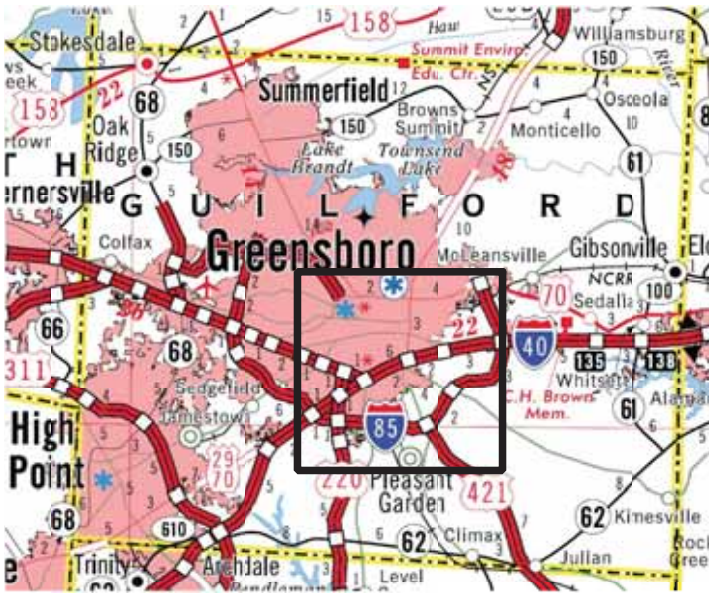
NCDOT Bridge Management Unit records indicate Bridge No. 329 on Patton Avenue, has a sufficiency rating of 16.72 out of a possible 100. As such, the bridge is considered structurally deficient. Components of Bridge No. 329 are experiencing an increasing degree of deterioration that can no longer be addressed by reasonable maintenance activities, since the bridge is approaching the end of its useful life. Replacement of the bridge will result in safer traffic operations.

**Draft Project Purpose:**

The purpose of the proposed projects is to improve the traffic-carrying capacity of I-40/I-85 Business through Greensboro and to provide safer traffic operations by improving the deficient Bridge No. 329 on Patton Avenue, over I-40/ I-85 Business.



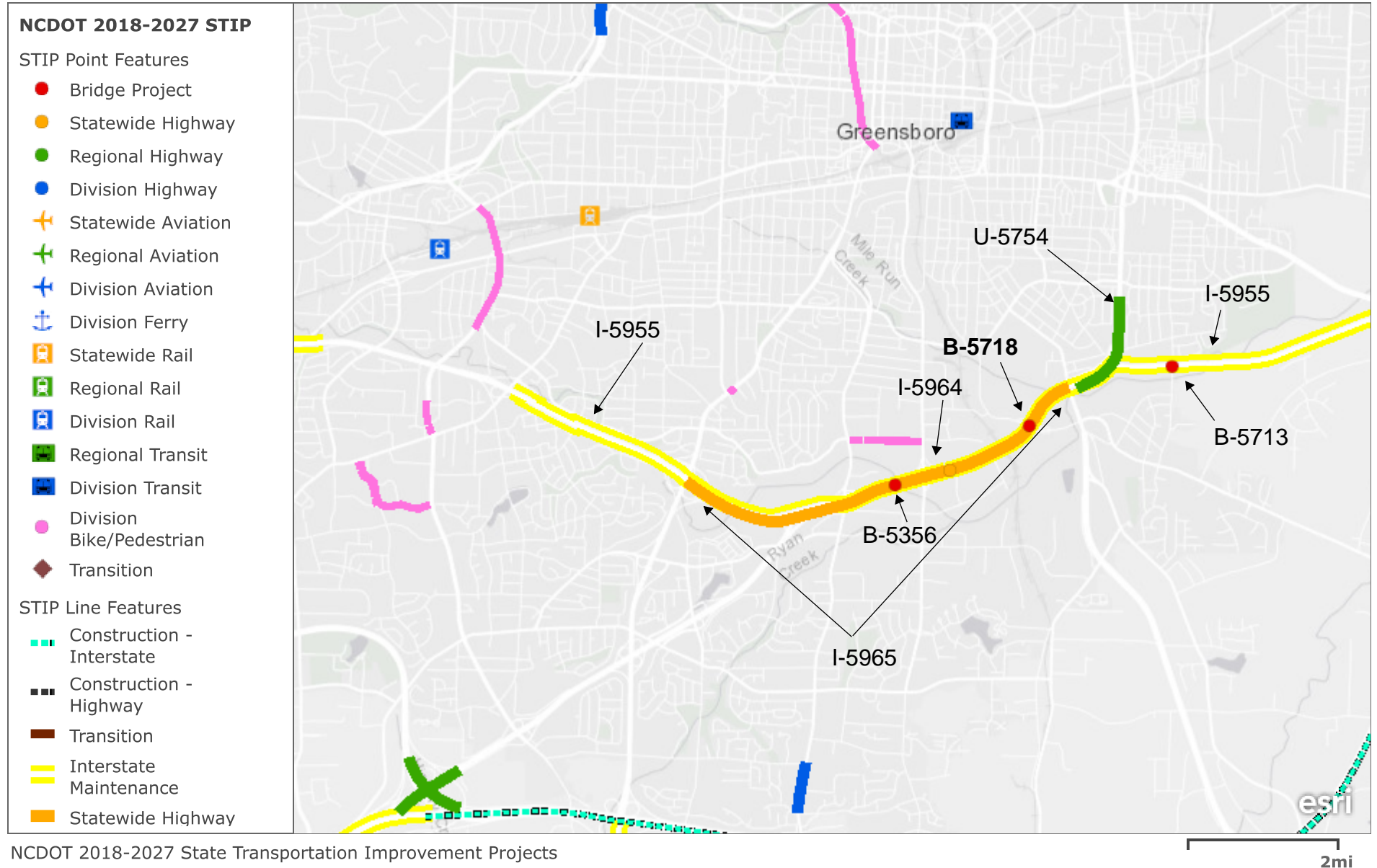
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NORTH CAROLINA DEPARTMENT OF  
TRANSPORTATION  
DIVISION OF HIGHWAYS

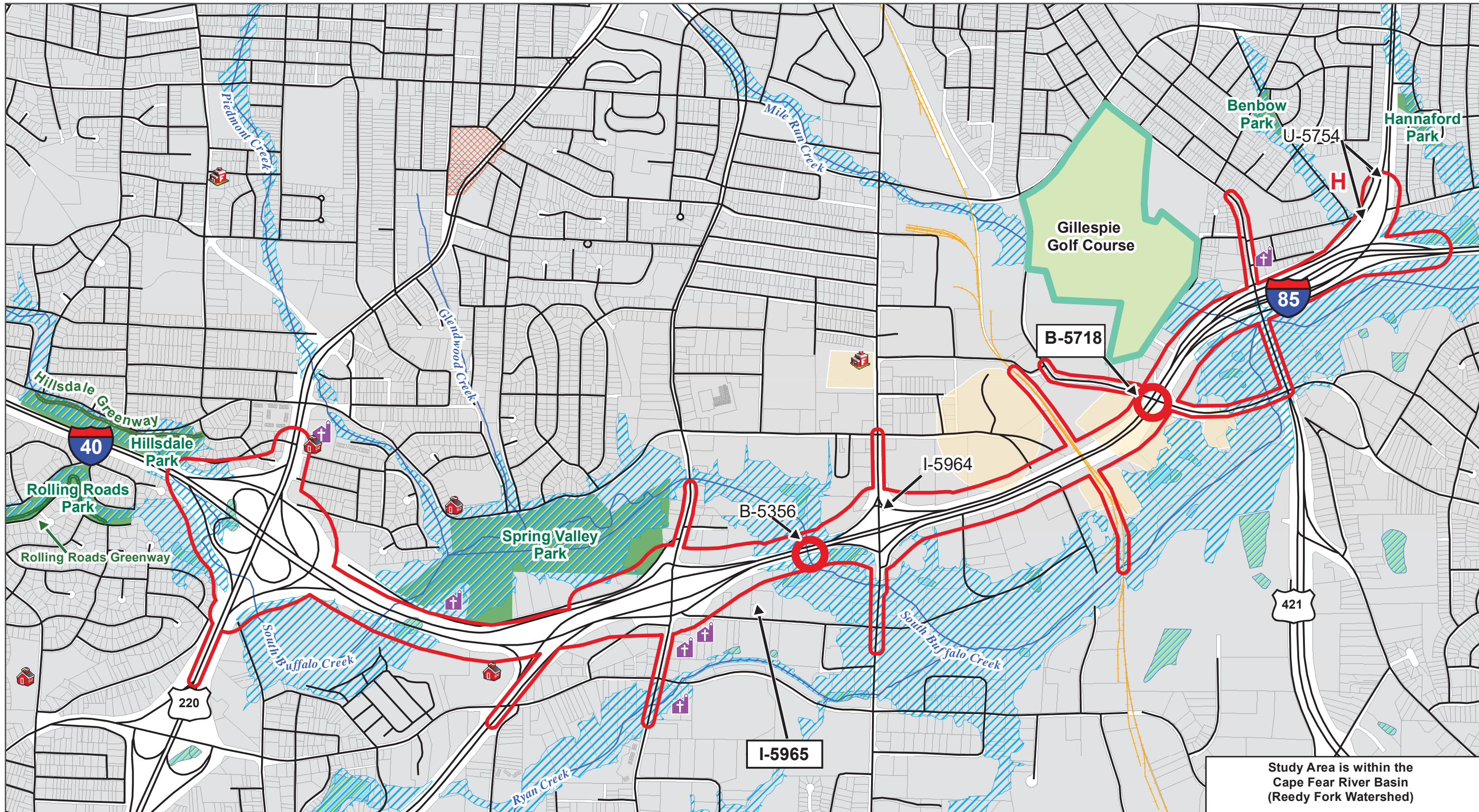
**STIP PROJECTS I-5965 & B-5718**  
I-40/ BUS. 85/ US 29/ US 70/ US 220 FROM  
US 220/SR 1398 (FREEMAN MILL RD) TO US 29/US 70/US 220  
PATTON AVENUE/ REPLACE BRIDGE 400329  
OVER I-40/BUS. 85/US 29/ US 70  
GREENSBORO, GUILFORD COUNTY  
**VICINITY MAP**  
**FIGURE 1**

# NCDOT 2018-2027 STIP Map



State of North Carolina DOT, Esri, HERE, Garmin, NGA, USGS | NCDOT GIS Unit | State of North Carolina DOT, Esri, HERE | NCDOT STIP Unit

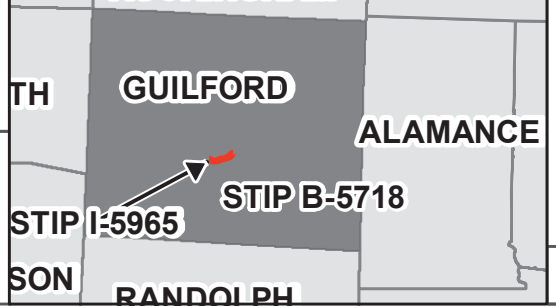
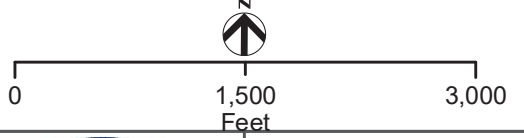
**NCDOT STIP MAP  
FIGURE 2  
MARCH 2018**



Study Area is within the  
Cape Fear River Basin  
(Reedy Fork Watershed)

**ENVIRONMENTAL FEATURES MAP  
FIGURE 3**  
STIP PROJECTS I-5965 & B-5718  
US 220 / SR 1398 (FREEMAN MILL ROAD)  
TO US 29 / US 70 / US 220 IN GREENSBORO.  
REPLACE BRIDGE 400329 OVER  
I-40 / BUSINESS 85 / US 29 / US 70 / US 220  
GREENSBORO, GUILFORD COUNTY

MARCH 2018



- |                     |                    |            |               |
|---------------------|--------------------|------------|---------------|
| Park                | Bridge Replacement | Study Area | Stream/ Creek |
| 100-year Floodplain | School             | LWCF Land  | Railroad      |
| Wetlands            | Fire Station       | Superfund  | Road          |
| Parcels             | Kindred Hospital   | Parcels    | Greenway      |
| Watershed Boundary  | Place of Worship   |            |               |

DATA SOURCES: NCDOT GIS, NC OneMap, Guilford County, USA Topo Maps, HDR



**Table 2: Preliminary Study Area Resources Inventory Table  
(Use with Figure 3)**

Resource/Affected Environment	Applicability/ Resources in Study Area
General Project Information	
Length of project (I-5965/B-5718)	Approximately 3.5 miles
Crossing or Intersecting Routes (#)	5 – Interchanges – I-40/I-85 at US 220/ Freeman Mill Road, I-85 Business/ US 29/US 70, Randleman Road, Elm-Eugene Street, US 29/ US 70/ US 220 1 – Grade separated RR Crossing
Cultural Resources	
NRHP (and eligible sites, districts, other properties) (#)	0– Known sites 0 – Known National Register Historic Districts
Human Environment	
Community Resources (#)	6 – Places of Worship; World Victory International Christian Center, The Embassy Church, Victory & Dominion, Greater Harvest Fellowship, Potter's House Ministries, Ali-Ummil Ummat Islamic Center 1 – Isaac Weatherly Cemetery 4 - Schools – Archer Elementary School, Julius I Foust Elementary School, Triad Math and Science Academy, Gillespie Park Elementary School 1 - Golf Course; 2 - Fire Stations; 1 - Hospital
Public Parks	5 – Rolling Roads Park, Hillsdale Park, Spring Valley Park, Benbow Park, Hannaford Park
Greenways, Game Lands, Land and Water Conservation Fund Properties, etc. (#)	2 – Rolling Roads Greenway, Hillsdale Greenway
Residential Properties (# potentially affected)	To Be Determined
Business Properties (# potentially affected)	To Be Determined
High % Special Populations (Low-income, Minority)	No – Language Assistance
Natural Environment	
Streams (# of stream crossings)	4 – South Buffalo Creek (3), Mile Run Creek (1) Other tributaries to be determined
Wetlands (est. acres)	Approximately 9.0 NWI acres within Study Area. Jurisdictional determinations to be determined
Critical Water Supply Watersheds	0
Riparian Buffer Rules apply	Cape Fear River Basin/ Jordan Lake Buffer Rules
Identified Critical Habitat/ESA Spp. (# known)	1 – Small whorled pogonia (Threatened)
Physical Environment	
Hazardous Materials (# suspected/known sites)	5—Superfund 1—Brownfield Site 2 – gas stations 6—Possible Underground Storage Tank (UST) facilities
Utilities	electric, water, sewer, power transmission corridors and towers, phone
Active agriculture (Voluntary Agricultural District)	0 Known
Noise	Impact Locations To Be Determined