



### III. PROJECT BUDGET

#### PROJECT DESCRIPTION

The North Carolina Department of Transportation (NCDOT) seeks \$156 million in Multimodal Project Discretionary Grant (MPDG), INFRA or Mega, funds to maintain the project schedule for the shovel ready 321 CONNECT (Calibrating Our National Network to Encourage Commerce and Tourism) project between Gastonia and Lenoir, North Carolina. The funding will allow NCDOT to move forward with 2024 - 2033 State Transportation Improvement Program (STIP) project U-4700. Due to costs, the project has been split into multiple construction phases. U-4700A will improve US 321 from US 70 to US 321 Business in Hickory and is the only funded phase in the current STIP. MPDG funds will allow for the construction of NCDOT STIP project U-4700A, which has already been delayed due to escalating materials costs, to move forward. MPDG funding will allow NCDOT to construct critically needed improvements to US 321 in this western Piedmont area, including the replacement of two aging, functionally obsolete bridges over the Catawba River. MPDG funding will also allow the installation of broadband from Gastonia in Gaston County to Lenoir in Caldwell County, addressing critical educational and commercial needs.

#### PROJECT BUDGET, SOURCES, AND USES OF FUNDING

The U-4700 portion of 321 CONNECT has completed environmental documentation and right of way (ROW) designs. The Environmental Assessment was signed on February 25, 2016 and the Finding of No Significant Impact (FONSI) was signed on June 11, 2018. Public involvement activities for the project have included public hearings on July 11 and 12, 2016, as well as public meetings on July 27, 2017 and October 12, 2017. NCDOT has an active project website, which includes materials from the 2017 public meetings and would be updated to include award of funding under MPDG. ROW acquisition for U-4700A is in progress.

Current cost estimates for U-4700A are based on ROW plans and were updated in July 2023. Previously incurred costs for project development, environmental documentation, ROW plans and ROW acquisition are \$57,833,000. Total remaining costs for the project are \$265,463,160. Broadband and ITS installation costs were estimated by NCDOT in July 2023.

As shown in Table 1, the state share of the construction of U-4700A is over 20.1 percent, with the federal share of the construction component is just under 79.9 percent. For all ITS components, the state and federal shares of funding are split 50/50. In total, the state share of 321 CONNECT is approximately 21.7 percent, the overall federal share is approximately 78.3 percent, of which 58.8 percent will be MPDG funds. Cost estimates include a 16 and 15 percent contingency for U-4700A construction and Broadband and ITS costs, respectively.



<b>TABLE 1. 321 CONNECT Future Eligible Costs</b>				
<b>ITEM</b>	<b>STATE FUNDS</b>	<b>OTHER FEDERAL FUNDS</b>	<b>MPDG FUNDS</b>	<b>TOTAL FUNDS</b>
<b>U-4700A</b>				
Roadway	\$26,000,359	\$27,055,590	\$75,981,956	\$129,038,000
Structures	\$17,674,251	\$17,711,796	\$52,329,986	\$87,716,000
Contingency (16%)	\$7,001,109	\$7,015,981	\$20,728,909	\$34,746,000
Total	\$50,675,719	\$51,783,368	\$147,040,852	\$251,500,000
<b>Flood Gauge</b>	\$22,500		\$22,500	\$45,000
<b>Broadband &amp; ITS Installation</b>				
Fiber	\$3,891,280		\$3,891,280	\$7,782,560
DMS	\$600,000		\$600,000	\$1,200,000
Cameras	\$275,000		\$275,000	\$550,000
5-Year O&M Costs	\$495,808		\$485,808	\$991,616
Program Costs	\$789,313		\$789,313	\$1,578,626
Contingency (15%)	\$907,710		\$907,710	\$1,815,420
Total	\$6,959,111		\$6,959,111	\$13,963,222
<b>Combined Total</b>	<b>\$57,657,330</b>	<b>\$51,783,368</b>	<b>\$156,000,000</b>	<b>\$265,463,160</b>



Tables 2A and 2B show the costs of U-4700A and broadband installation, respectively, as part 321 CONNECT by 2019 Census Tract. The tables also include information on Area of Persistent Poverty (APP) and/or Historically Disadvantage Community (HDC) status.

For 321 CONNECT U-4700A construction, 62.2 percent of corridor miles are within APP and/or HDC census tracts. For the 321 CONNECT broadband area, 73.6 percent of the corridor miles are within APP and/or HDC census tracts. Overall, 50 percent of the study area by distance along US 321 qualifies as urban and 50 percent qualifies as rural.

**TABLE 2A. Demographics for Census Tracts on the U-4700A Corridor**

COUNTY	CENSUS TRACT	POPULATION	HDC/APP	RURAL/URBAN	TOTAL COSTS PER TRACT
Burke	211	6,000	HDC	Both	\$53,665,914
Caldwell	313	8,912	Neither	Both	\$30,947,370
Caldwell	314.02	3,357	Neither	Both	\$74,805,387
Catawba	106	6,517	HDC	Urban	\$63,498,136
Catawba	107	2,366	APP-HDC	Urban	\$28,628,131
<b>Total</b>		<b>27,152</b>			<b>\$251,545,000</b>

**TABLE 2B. Costs per Census Tract for 321 CONNECT Broadband and ITS**

COUNTY	CENSUS TRACT	POPULATION	HDC/APP	RURAL/URBAN	TOTAL COSTS PER TRACT
Burke	211	6,000	HDC	Both	\$61,739
Caldwell	303	4,170	APP	Both	\$134,680
Caldwell	304	3,947	APP-HDC	Urban	\$277,658
Caldwell	305	4,940	Neither	Both	\$332,997
Caldwell	306	4,711	Neither	Urban	\$801,798
Caldwell	313	8,912	Neither	Both	\$502,888
Caldwell	312.02	4,387	Neither	Rural	\$161,387
Caldwell	314.02	3,357	Neither	Both	\$502,888
Caldwell	314.03	2,531	APP-HDC	Urban	\$425,034
Catawba	106	6,517	HDC	Urban	\$399,427
Catawba	107	2,366	APP-HDC	Urban	\$180,209
Catawba	111.01	3,885	Neither	Both	\$216,744
Catawba	111.02	7,671	HDC	Both	\$1,726,610
Catawba	117.01	4,563	HDC	Both	\$376,850
Catawba	117.02	7,067	HDC	Rural	\$1,680,354



TABLE 2B. Costs per Census Tract for 321 CONNECT Broadband and ITS Installation (cont'd)					
COUNTY	CENSUS TRACT	POPULATION	HDC/APP	RURAL/URBAN	TOTAL COSTS PER TRACT
Gaston	315	3,760	APP-HDC	Both	\$385,802
Gaston	314.01	2,746	Neither	Urban	\$422,304
Gaston	303.01	2,723	HDC	Rural	\$1,042,275
Gaston	303.02	2,518	APP-HDC	Rural	\$361,662
Gaston	304.01	4,271	Neither	Rural	\$121,872
Gaston	304.02	4,492	HDC	Both	\$176,816
Gaston	309.01	2,154	APP-HDC	Urban	\$345,430
Lincoln	703	4,097	APP-HDC	Both	\$1,083,389
Lincoln	704	5,538	HDC	Both	\$95,489
Lincoln	708	6,848	APP-HDC	Both	\$1,567,068
Lincoln	702.01	5,051	APP-HDC	Urban	\$534,852
<b>Total</b>		<b>119,222</b>			<b>\$13,918,222</b>

Geographic Information Systems (GIS) analysis determined the length of the US 321 corridor (NCDOT data) within each US Census Bureau 2019 Census Tract (TIGER data). However, where US 321 appears to be a boundary between tracts, the length of the corridor was split, such that each census tract has half of the total distance and therefore half the cost of broadband and ITS installation cost (i.e. if the total distance is 1 mile, then each census tract would benefit by 0.5 mile). Calculations of costs can be found in the [Supplemental Materials](#).

NCDOT seeks MPDG funds to maintain the project schedule for the shovel ready 321 CONNECT project, which has been delayed due to escalating materials costs. MPDG funding will allow NCDOT to construct critically needed improvements to US 321, as part of STIP Project U-4700A, including the replacement of two bridges over the Catawba River. MPDG funding will also allow NCDOT to upgrade US 321 by installing broadband along US 321 from Gastonia, NC to Lenoir, NC, as well as installing cameras and ITS infrastructure that will prepare the corridor for future automated/connected vehicle use.

Supplemental Materials can be found on the [321 CONNECT website](#).