NCDOT Prioritization 3.0 Project Summary

SPOT ID: H090267 **Mode:** Highway **Status:** Submitted

US-421 (New Route - Boone Bypass)

From/Cross Street: US 421 East of Boone

To: US 421 West of Boone

Length: 6.31

Specific Improvement Type: 5 - Construct Roadway on New Location

Project Category: Statewide Mobility

TIP#: U-2703

Fully Funded in Draft STIP? No

Cost to NCDOT: $148,000,000

Description:

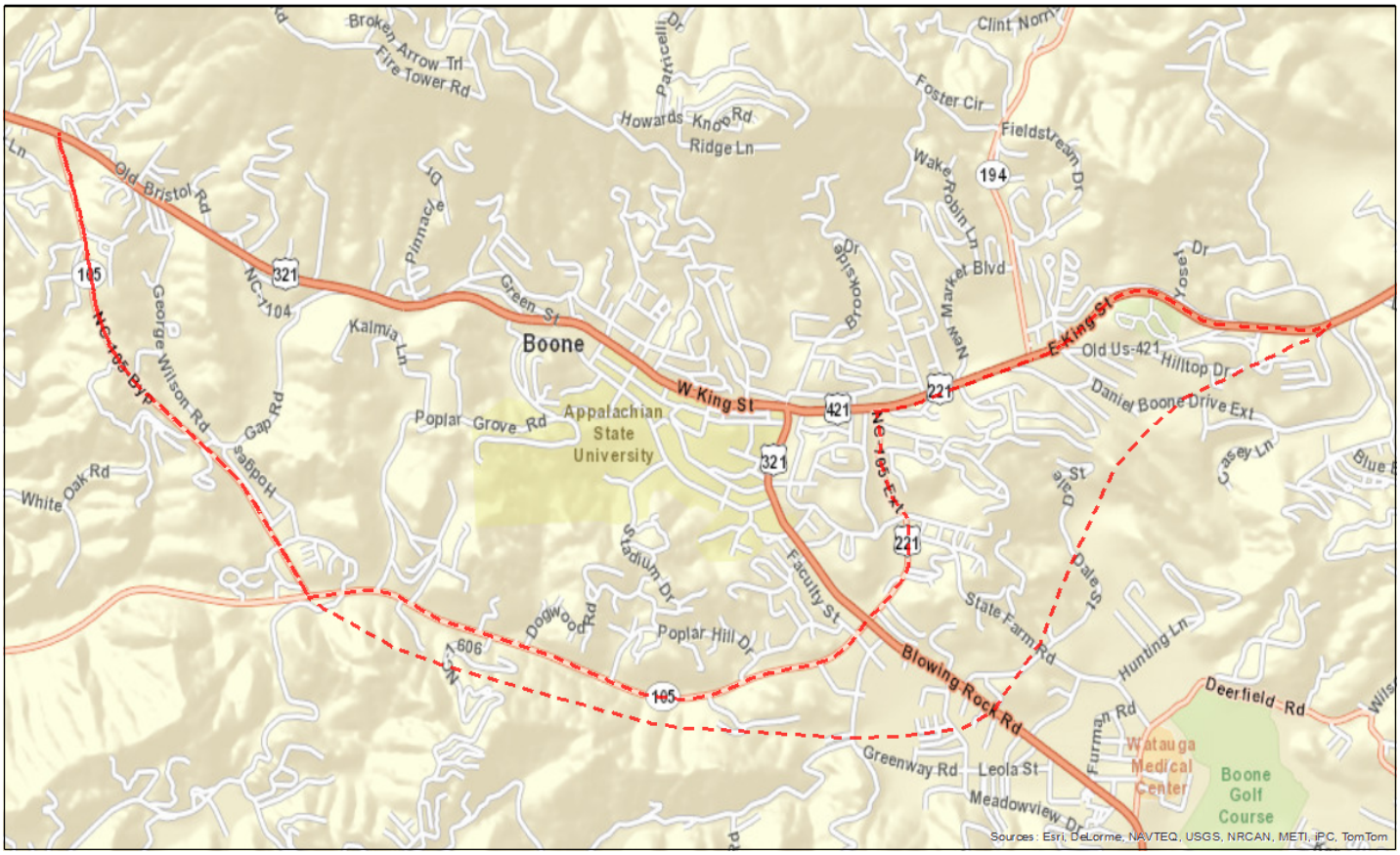
Construct Freeway on New Location

Division(s): Division 11

County(s): WATAUGA

MPOS(s)/RPO(s): High Country RPO

Project Location



Statewide Mobility Total Score: 37.62

Quanitative Score		Division Engineer Local Input Points	MPO/RPO Local Input Points
Safety (10%)	54.39	N/A	N/A
Multimodal + [Freight & Military] (20%)	7.48		
[Travel Time] Benefit/Cost (30%)	6.32		
Congestion (V/C) (30%)	62.65		
Economic Competitiveness (10%)	100.00		
Totals: Weight: 100% Weighted Score: 37.62			

Regional Impact Total Score: 0

Quanitative Score		Division Engineer Local Input Points	MPO/RPO Local Input Points
Congestion (V/C) (25%)	62.65	Percent: 15% Points:	Percent: 15% Points:
Safety (10%)	54.39		
[Travel Time] Benefit/Cost (25%)	6.32		
Accessibility / Connectivity (10%)	55.37		
Totals: Weight: 70% Weighted Score: 28.22			

Division Needs Total Score: 0

Quantitative Score		Division Engineer Local Input Points	MPO/RPO Local Input Points
Congestion (V/C) (20%)	62.65	Percent: 25% Points:	Percent: 25% Points:
Safety (10%)	54.39		
[Travel Time] Benefit/Cost (20%)	6.32		
Totals: Weight: 50% Weighted Score: 19.23			

Project Data *

Existing Conditions

Existing Cross-Section:	
Speed Limit:	45
Length (miles);	6.58
Facility Type:	Arterial
Access Control:	None
Functional Classification:	Other Principal Arterial
Terrain Type:	Mountainous
Lane Width:	12
Paved Shoulder Width:	1
Roadway has Curb & Gutter?	Yes
Volume (AADT):	23728.24
Capacity:	26783.81
Volume/Capacity Ratio:	0.89
% Autos:	94%
% Trucks:	6%
Truck Volume:	1496.37
Crash Density:	70.91
Crash Severity:	40.57
Critical Crash Rate:	51.71
Crash Frequency:	0
Severity Index:	0
County Tier Designation:	3
Non-Interstate STRAHNET Route?	No
Average Commuting Time:	14
Existing Median Type (for Cost Estimation):	Undivided
Pavement Condition Rating:	60
Actual Congested Speed:	15.02
Travel Time Index:	0.63

Project Benefits

Project Cross-Section:	4A - 4 Lane Divided (46' Depressed Median) with Paved Shoulders
Speed Limit:	60
Length (miles):	6.31
Facility Type:	Freeway
Access Control:	Full
Functional Classification:	Other Principal Arterial-Other Freeway
TerrainType:	Mountainous
DOT Design Lane Width:	12
DOT Design Paved Shoulder Width:	4
Travel Time Savings for 30 Years (Total):	41412862.71
Travel Time Savings for 30 Years (Autos):	38801247.83
Travel Time Savings for 30 Years (Trucks):	2611614.88
Long-Term Employment:	697
% Change in Economy:	0.00267838
Provides Direct Connection to Transportation Terminal?	No
Does project upgrade how the roadway functions?	Yes
In CTP or LRTP?	No
CTP/LRTP Name:	
CTP/LRTP Completion Year:	
Submitted by:	Division 11

* Data reflects calculations which include weighted averages (where applicable) and represent raw output from the Department's SPOT On!ine tool and associated databases.

Project Ownership

Division

Division	Percent	Regional Impact	Division Needs
Division 11	100%	0	0
	0%	0	0
	0%	0	0
TOTAL Division Points		**0**	**0**

MPO/RPO

MPO/RPO	Percent	Regional Impact	Division Needs
High Country RPO	100%	0	0
	0%	0	0
	0%	0	0
TOTAL MPO/RPO Points		**0**	**0**

Project Cost and Source

Construction Cost:	$102,000,000	TIP Unit
Right-of-Way Cost:	$46,000,000	TIP Unit
Utilities Cost:	$0	TIP Unit
Total Project Cost:	$148,000,000	
Other Funding:	$0	None
Cost to NCDOT :	**$148,000,000**	