



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

February 18, 2013

**MEMORANDUM**

**TO:** Mr. Calvin W. Leggett, P.E.  
Manager, Program Development Branch

**FROM:** Ms. Lynnise M. Hawes, P.E.  
Feasibility Studies Engineer

**SUBJECT:** **U-2509 Re-evaluation** – Proposed upgrading of US 74 (Independence Boulevard) from Idlewild Road to I-485 (Charlotte Outer Loop); Mecklenburg County.

As requested, we have completed feasibility study U-2509 Re-evaluation for the proposed upgrading of US 74 (Independence Boulevard) from Idlewild Road to I-485 in Mecklenburg County. The project location is shown on Figure 1. This study proposes the widening of US 74 for the limits mentioned above, a distance of approximately 6.5 miles. As part of the study, several different cross-sections were investigated, the details of which are as follows:

- Six-lane divided curb and gutter expressway or freeway with buffer separated managed lanes on variable width of right of way.
- Six-lane divided curb and gutter expressway or freeway with barrier separated managed lanes on variable width right of way.
- Six-lane divide curb and gutter expressway with buffer separated manage lanes and frontage roads on variable width right of way.
- Six-lane divided curb and gutter expressway with elevated managed lanes on 230 feet of right of way.
- Eight-lane divided curb and gutter expressway or freeway with buffer separated managed lanes on variable width right of way.
- Eight-lane divided curb and gutter expressway or freeway with barrier separated managed lanes on variable width right of way.

It is proposed to widen US 74 (Independence Boulevard) from Idlewild Road to I-485, a distance of approximately 6.5 miles. For evaluation purposes the project was divided into four sections. The details of each are described below:

**Section 1:** US 74 from Wallace Lane to Hayden Way, a distance of approximately 2.7 miles. Included in the costs is the proposed Village Lake Drive Extension, the proposed reconfiguration of Margaret Wallace Road, new dual bridges over US 74 at the Village Lake Drive Extension, a new bridge over Campbell Creek, a new bridge over McAlpine Creek, the proposed Sardis Road North extension, and a new interchange at the junction of US 74 and Sardis Road North. This section is shown on Figure 2.

**Section 2:** US 74 from Hayden Way to NC 51, a distance of approximately 1.5 miles. Included in the costs (Alternatives A, B, D1, D2) is the proposed realignment of Sam Newell Road and a new bridge over US 74 at Sam Newell Road. This section is shown on Figure 3.

**Section 3:** US 74 from NC 51 to approximately 0.1 mile east of Matthews-Mint Hill Road, a distance of approximately 0.8 miles. Included in the costs (Alternatives A, B, D1, D2) is new dual bridges over US 74 at the NC 51 junction, the proposed realignment of the US 74/NC 51 interchange ramps, and a new bridge over US 74 at Matthews-Mint Hill Road. This section is shown on Figure 3.

**Section 4:** US 74 from approximately 0.1 mile east of Matthews-Mint Hill Road to Blenheim Road, a distance of approximately 1.5 miles. Included in the costs (Alternatives A, B, D1, D2) is the proposed realignment of the I-485/US 74 interchange ramps and the proposed widening of existing bridges No. 746 and No. 748 to provide the minimal improvements needed to carry managed lanes through the interchange. This section is shown on Figure 4. Section 4 (Alternative C) as shown on Figure 7 provides direct access between the proposed managed lanes on US 74 and future managed lanes on I-485. If direct access is desired under other alternatives, the cost will need to be increased accordingly (approximately \$200,000,000).

**Alternative A – Option 1:** Ten-lane divided expressway with curb and gutter, with six 12-foot travel lanes, two 4-foot buffers, four 12-foot managed lanes, two 6-foot inside shoulders, a 1.5-foot concrete barrier median, and 6-foot sidewalks on both sides on 200 feet of right of way. The cross-section for this alternative is shown on Figure 5.

	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
<b>ALTERNATIVE A OPTION 1</b>	1	\$31,700,000	\$600,000	\$65,000,000	\$97,300,000	18
	2	\$16,800,000	\$200,000	\$23,000,000	\$40,000,000	7
	3	\$800,000	\$400,000	\$22,000,000	\$23,200,000	0
	4	\$12,200,000	\$300,000	\$26,000,000*	\$38,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE A OPTION 1</b>		<b>\$61,500,000</b>	<b>\$1,500,000</b>	<b>\$137,000,000*</b>	<b>\$200,000,000*</b>	<b>31</b>

Table 1. Total Estimated Costs Alternative A – Option 1

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative A – Option 2:** Ten-lane divided expressway with curb and gutter, with six 12-foot travel lanes, two 6-foot shoulders, two 1.5-foot concrete barriers, two 10-foot shoulders, two 12-foot managed lanes, two 6-foot inside shoulders, a 1.5-foot concrete barrier median, and 6-foot sidewalks on both sides on 230 feet of right of way. The cross-section for this alternative is shown on Figure 5.

ALTERNATIVE A OPTION 2	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
	1	\$43,400,000	\$500,000	\$80,000,000	\$123,900,000	18
	2	\$22,400,000	\$100,000	\$31,000,000	\$53,500,000	7
	3	\$3,900,000	\$100,000	\$26,000,000	\$30,000,000	0
	4	\$12,200,000	\$300,000	\$36,000,000*	\$48,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE A OPTION 2</b>		<b>\$81,900,000</b>	<b>\$1,000,000</b>	<b>\$174,000,000*</b>	<b>\$256,900,000*</b>	<b>31</b>

Table 2. Total Estimated Costs Alternative A – Option 2

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative A – Option 3:** Ten-lane divided freeway with expressway gutter, with two 10-foot outside shoulders, six 12-foot travel lanes, two 4-foot buffers, four 12-foot managed lanes, two 6-foot inside shoulders, and a 1.5-foot concrete barrier median on 250 feet of right of way. The cross-section for this alternative is shown on Figure 5.

ALTERNATIVE A OPTION 3	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
	1	\$185,700,000	\$400,000	\$70,000,000	\$256,100,000	24
	2	\$42,900,000	\$100,000	\$26,000,000	\$69,000,000	16
	3	\$52,600,000	\$100,000	\$23,000,000	\$75,700,000	14
	4	\$12,200,000	\$300,000	\$30,000,000*	\$42,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE A OPTION 3</b>		<b>\$293,400,000</b>	<b>\$900,000</b>	<b>\$150,000,000*</b>	<b>\$444,300,000*</b>	<b>60</b>

Table 3. Total Estimated Costs Alternative A – Option 3

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative A – Option 4:** Ten-lane divided freeway with expressway gutter, with two 10-foot shoulders, six 12-foot travel lanes, two 6-foot shoulders, two 1.5-foot concrete barriers, two 10-foot shoulders, four 12-foot managed lanes, two 6-foot inside shoulders, and a 1.5-foot concrete barrier median on 280 feet of right of way. The cross-section for this alternative is shown on Figure 5.

ALTERNATIVE A OPTION 4	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
	1	\$191,700,000	\$400,000	\$84,000,000	\$276,100,000	24
	2	\$48,000,000	\$100,000	\$32,000,000	\$80,100,000	19
	3	\$53,800,000	\$100,000	\$27,000,000	\$80,900,000	14
	4	\$12,200,000	\$300,000	\$38,000,000*	\$50,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE A OPTION 4</b>		<b>\$305,700,000</b>	<b>\$900,000</b>	<b>\$182,000,000*</b>	<b>\$488,600,000*</b>	<b>63</b>

Table 4. Total Estimated Costs Alternative A – Option 4

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative B – Option 1:** Twelve-lane divided expressway with curb and gutter, with eight 12-foot travel lanes, two 4-foot buffers, four 12-foot managed lanes, two 6-foot inside shoulders, a 1.5-foot concrete barrier median, and 6-foot sidewalks on both sides on 220 feet of right of way. The cross-section for this alternative is shown on Figure 5.

ALTERNATIVE B OPTION 1	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
	1	\$40,000,000	\$600,000	\$72,000,000	\$112,600,000	18
	2	\$11,300,000	\$200,000	\$26,000,000	\$37,500,000	0
	3	\$2,900,000	\$400,000	\$23,000,000	\$26,300,000	0
	4	\$12,200,000	\$300,000	\$30,000,000*	\$42,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE B OPTION 1</b>		<b>\$66,400,000</b>	<b>\$1,500,000</b>	<b>\$152,000,000*</b>	<b>\$219,900,000*</b>	<b>24</b>

Table 5. Total Estimated Costs Alternative B – Option 1

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative B – Option 2:** Twelve-lane divided expressway with curb and gutter, with eight 12-foot travel lanes, two 6-foot shoulders, two 1.5-foot concrete barriers, two 10-foot shoulders, two 12-foot managed lanes, two 6-foot inside shoulders, a 1.5-foot concrete barrier median, and 6-foot sidewalks on both sides on 230 feet of right of way. The cross-section for this alternative is shown on Figure 5.

ALTERNATIVE B OPTION 2	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
	1	\$46,200,000	\$500,000	\$84,000,000	\$130,700,000	24
	2	\$21,100,000	\$100,000	\$33,000,000	\$54,200,000	5
	3	\$5,300,000	\$100,000	\$27,000,000	\$32,400,000	0
	4	\$12,200,000	\$300,000	\$39,000,000*	\$51,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE B OPTION 2</b>		<b>\$84,800,000</b>	<b>\$1,000,000</b>	<b>\$184,000,000*</b>	<b>\$269,800,000*</b>	<b>35</b>

Table 6. Total Estimated Costs Alternative B – Option 2

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative A – Option 3:** Twelve-lane divided freeway with expressway gutter, with two 10-foot outside shoulders, eight 12-foot travel lanes, two 4-foot buffers, four 12-foot managed lanes, two 6-foot inside shoulders, and a 1.5-foot concrete barrier median on 250 feet of right of way. The cross-section for this alternative is shown on Figure 5.

ALTERNATIVE B OPTION 3	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
	1	\$190,300,000	\$400,000	\$77,000,000	\$267,700,000	28
	2	\$98,300,000	\$100,000	\$29,000,000	\$127,400,000	27
	3	\$65,000,000	\$100,000	\$25,000,000	\$90,100,000	24
	4	\$12,200,000	\$300,000	\$34,000,000*	\$46,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE B OPTION 3</b>		<b>\$365,800,000</b>	<b>\$900,000</b>	<b>\$166,000,000*</b>	<b>\$532,700,000*</b>	<b>85</b>

Table 7. Total Estimated Costs Alternative B – Option 3

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative B – Option 4:** Twelve-lane divided freeway with expressway gutter, with two 10-foot shoulders, eight 12-foot travel lanes, two 6-foot shoulders, two 1.5-foot concrete barriers, two 10-foot shoulders, four 12-foot managed lanes, two 6-foot inside shoulders, and a 1.5-foot concrete barrier median on 280 feet of right of way. The cross-section for this alternative is shown on Figure 5.

	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
<b>ALTERNATIVE B OPTION 4</b>	1	\$198,900,000	\$400,000	\$89,000,000	\$288,300,000	39
	2	\$98,300,000	\$100,000	\$35,000,000	\$133,400,000	27
	3	\$67,600,000	\$100,000	\$29,000,000	\$96,700,000	24
	4	\$12,200,000	\$300,000	\$43,000,000*	\$55,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
	<b>TOTAL COST ALTERNATIVE B OPTION 4</b>		<b>\$377,000,000</b>	<b>\$900,000</b>	<b>\$197,000,000*</b>	<b>\$574,900,000*</b>

Table 8. Total Estimated Costs Alternative B – Option 4

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative C:** Six-lane divided expressway with curb and gutter, with six 12-foot travel lanes, two 6-foot inside shoulders, 6-foot sidewalks on both sides, a four-lane divided elevated section with 10-foot outside shoulders, four 12-manage lanes, 6-foot inside shoulders, and a 1.5-foot concrete barrier median on 230 feet of right of way. The cross-section for this alternative is shown on Figure 6. Included the costs shown below is new dual bridges over US 74 at the NC 51 junction (Section 3), the proposed realignment of the US 74/NC 51 interchange ramps (Section 3), the proposed widening of existing bridges No. 746 and No. 748 (Section 4), and three new bridges to provides access to I-485 managed lanes (Section 4). Alternative C (Section 4) is shown on Figure 7. During later planning and design phases, alternative interchange concepts should be fully evaluated to determine the best and cost effective way to provide direct access between managed lanes on US 74 and I-485.

	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
<b>ALTERNATIVE C</b>	1	**	**	**	**	**
	2	\$14,700,000	\$3,000,000	\$137,000,000	\$154,700,000	3
	3	\$5,700,000	\$700,000	\$83,000,000	\$89,400,000	0
	4	\$12,200,000	\$300,000	\$225,000,000	\$237,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
	<b>TOTAL COST ALTERNATIVE C</b>		<b>\$32,600,000**</b>	<b>\$4,000,000**</b>	<b>\$446,000,000**</b>	<b>\$482,600,000**</b>

Table 9. Total Estimated Costs Alternative C

**Note: \*\*The cost of Section 1 is not included in the above estimate for Alternative C because it addresses an elevated managed lane facility through Section 2 and 3 as well as direct access to I-485 in Section 4.**

**Alternative D1 – Option 1:** Ten-lane divided expressway with paved shoulders and frontage roads, with six 12-foot travel lanes, two 4-foot buffers, four 12-foot managed lanes, two 6-foot inside shoulders, a 1.5-foot concrete barrier median, 21.5-foot shoulders with a 1.5-foot concrete barrier, a 24-foot frontage road, 2.5-foot curb and gutter, and 6-foot sidewalks on both sides on 300 feet of right of way. The cross-section for this alternative is shown on Figure 6.

	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
ALTERNATIVE D1 OPTION 1	2	\$104,000,000	\$400,000	\$39,000,000	\$143,400,000	25
	3	\$71,100,000	\$400,000	\$30,000,000	\$101,500,000	23
	4	\$12,200,000	\$300,000	\$27,000,000*	\$39,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE D1 OPTION 1</b>		<b>\$187,300,000</b>	<b>\$1,100,000</b>	<b>\$97,000,000*</b>	<b>\$285,400,000</b>	<b>54</b>

Table 10. Total Estimated Costs Alternative D1 – Option 1

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative D1 – Option 2:** Ten-lane divided expressway with paved shoulders and frontage roads, with six 12-foot travel lanes, two 6-foot shoulders, two 1.5-foot concrete barriers, two 10-foot shoulders, two 12-foot managed lanes, two 6-foot inside shoulders, a 1.5-foot concrete barrier median, 21.5-foot outside shoulders with a 1.5-foot concrete barrier, a 24’ frontage road, 2.5-foot curb and gutter, and 6-foot sidewalks on both sides on 330 feet of right of way. The cross-section for this alternative is shown on Figure 6.

	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
ALTERNATIVE D1 OPTION 2	2	\$104,300,000	\$100,000	\$45,000,000	\$149,400,000	33
	3	\$71,100,000	\$100,000	\$35,000,000	\$106,200,000	23
	4	\$12,200,000	\$300,000	\$30,000,000*	\$42,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE D1 OPTION 2</b>		<b>\$187,600,000</b>	<b>\$500,000</b>	<b>\$111,000,000*</b>	<b>\$299,100,000*</b>	<b>62</b>

Table 11. Total Estimated Costs Alternative D1 – Option 2

**Note:** \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.

**Alternative D2 – Option 1:** Ten-lane divided expressway with paved shoulders and frontage roads, with six 12-foot travel lanes, two 4-foot buffers, four 12-foot managed lanes, two 6-foot inside shoulders, a 1.5-foot concrete barrier median, two 46-foot depressed grass medians, a 24-foot frontage road, 2.5-foot curb and gutter, and 6-foot sidewalks on both sides on 340 feet of right of way. The cross-section for this alternative is shown on Figure 6.

	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
ALTERNATIVE D2 OPTION 1	2	\$104,300,000	\$400,000	\$39,000,000	\$143,700,000	33
	3	\$71,200,000	\$400,000	\$30,000,000	\$101,600,000	24
	4	\$12,200,000	\$300,000	\$27,000,000*	\$39,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE D2 OPTION 1</b>		<b>\$187,700,000</b>	<b>\$1,100,000</b>	<b>\$97,000,000*</b>	<b>\$285,800,000*</b>	<b>63</b>

Table 12. Total Estimated Costs Alternative D2 – Option 1

**Note: \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.**

**Alternative D2 – Option 2:** Ten-lane divided expressway with paved shoulders and frontage roads, with six 12-foot travel lanes, two 6-foot shoulders, two 1.5-foot concrete barriers, two 10-foot shoulders, two 12-foot managed lanes, two 6-foot inside shoulders, a 1.5-foot concrete barrier median, two 46-foot depressed grass medians, a 24' frontage road, 2.5-foot curb and gutter, and 6-foot sidewalks on both sides on 370 feet of right of way. The cross-section for this alternative is shown on Figure 6.

	SECTION	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	BUSINESS RELOCATIONS
ALTERNATIVE D2 OPTION 2	2	\$104,500,000	\$100,000	\$45,000,000	\$149,600,000	33
	3	\$81,100,000	\$100,000	\$35,000,000	\$116,200,000	24
	4	\$12,200,000	\$300,000	\$30,000,000*	\$42,500,000	6
	ITS DELPOYMENT			\$1,000,000	\$1,000,000	
<b>TOTAL COST ALTERNATIVE D2 OPTION 2</b>		<b>\$197,800,000</b>	<b>\$500,000</b>	<b>\$111,000,000*</b>	<b>\$309,300,000*</b>	<b>63</b>

Table 13. Total Estimated Costs Alternative D2 – Option 2

**Note: \* Indicates cost of minimal interchange improvements at I-485. See Alternative C – Section 4 for cost associated with direct access between US 74 and I-485 managed lanes.**

As part of this study, several connector routes which provide connectivity in the study were investigated. The details of each are described below and are shown on Figure 8:

- **Arequipa Drive Extension:** This route is from Margaret Wallace Road to Sam Newell Road, a distance of approximately 1.3 miles. The proposed cross-section is a two-lane divided curb and gutter section, with 11-foot travel lanes, a 17-foot raised grass median, 4-foot bike lanes, and 6-foot sidewalks on both sides on 80 feet of right of way. Included in the costs is a new bridge over Irvins Creek.
- **Krefeld Drive Extension:** This route is from the end of existing Krefeld Drive to Sardis Road North, a distance of approximately 0.7 miles. The proposed cross-section is a two-lane divided curb and gutter section, with 11-foot travel lanes, a 55-foot raised grass median, 4-foot bike lanes, and 6-foot sidewalks on both sides on 120 feet of right of way. Included in the costs is a new bridge over Irvins Creek.
- **Independence Pointe Parkway Extension (Part 1):** This route is from approximately 0.1 mile east of Sardis Road North to Sam Newell Road, a distance of approximately 0.9 miles. The proposed cross-section is a two-lane curb and gutter section, with 11-foot travel lanes, 4-foot bike lanes, and 6-foot sidewalks on both sides on 80 feet of right of way.
- **Independence Pointe Parkway Extension (Part 2):** This route is from Sam Newell Road to NC 51, a distance of approximately 0.5 miles. The proposed cross-section is a two-lane curb and gutter section, with 11-foot travel lanes, 4-foot bike lanes, and 6-foot sidewalks on both sides on 80 feet of right of way.
- **Northeast Parkway Extension:** This route is from approximately 0.1 mile east of NC 51 to Matthews-Mint hill Road, a distance of approximately 0.4 miles. The proposed cross-section is a two-lane curb and gutter section, with 11-foot travel lanes, 4-foot bike lanes, and 6-foot sidewalks on both sides on 80 feet of right of way.

ROADWAY	RIGHT OF WAY	UTILITY RELOCATION	CONSTRUCTION	TOTAL COST	RESIDENTIAL RELOCATIONS
AREQUIPA DRIVE EXT.	\$1,000,000	\$100,000	\$12,000,000	<b>\$13,100,000</b>	1
KREFELD DRIVE EXT.	\$1,500,000	\$100,000	\$5,000,000	<b>\$6,600,000</b>	0
INDEPENDENCE POINT EXT.	\$1,000,000	\$100,000	\$3,000,000	<b>\$4,100,000</b>	0
NORTHEAST PARKWAY EXT.	\$1,000,000	\$100,000	\$2,000,000	<b>\$3,100,000</b>	1
INDEPENDENCE POINT EXT.	\$900,000	\$100,000	\$2,000,000	<b>\$3,000,000</b>	0

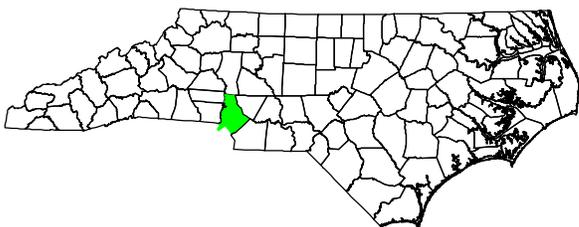
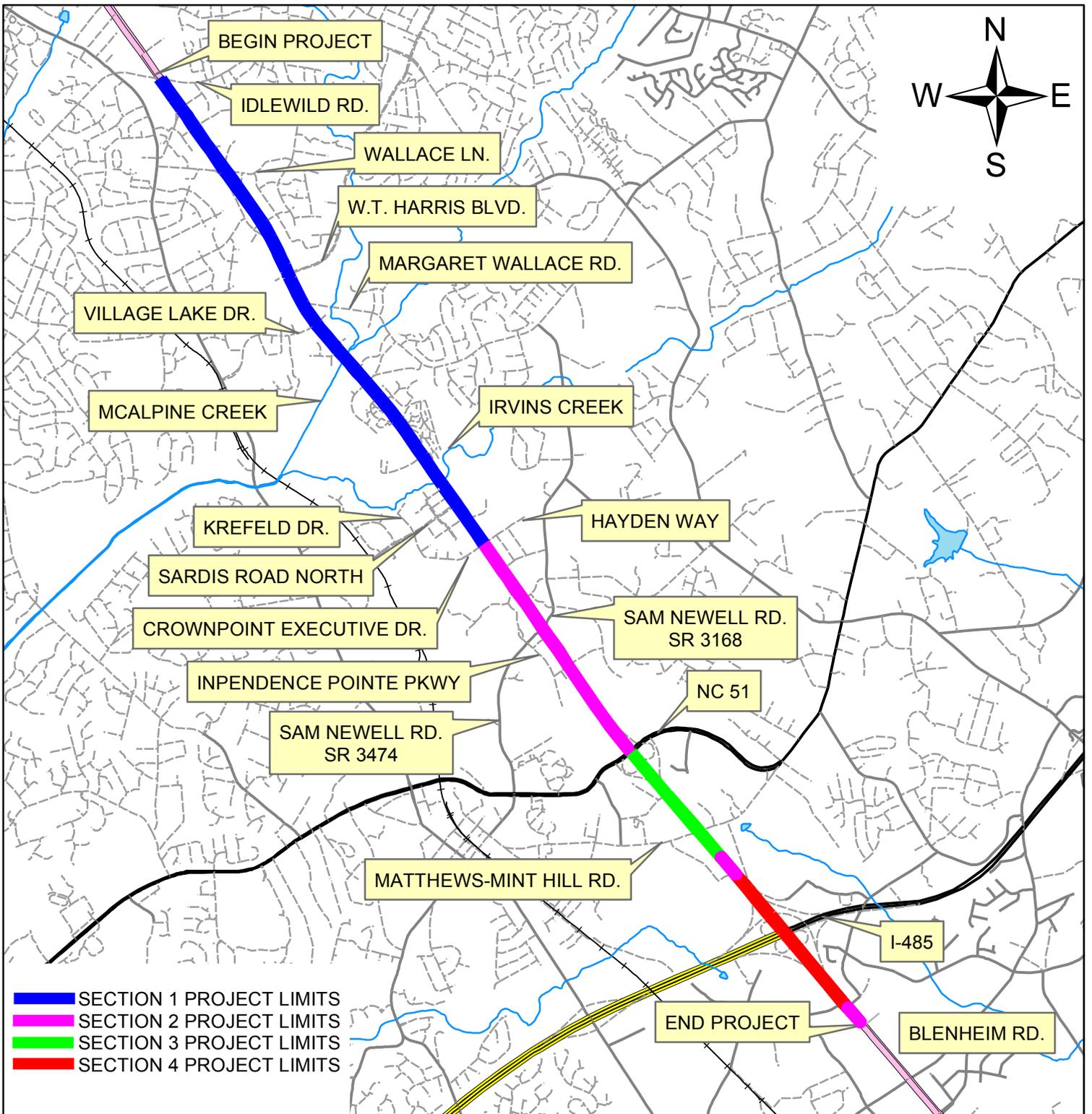
Table 14. Total Estimated Costs Connector Routes

The cost of the connector roads are not currently included in the alternative cost previously discussed.

As you are aware, this work is preliminary and not the product of comprehensive environmental or design evaluations. If you should have further questions or additional information is needed, please do not hesitate to contact me at 919-707-4662, or via e-mail at [lmhawes@ncdot.gov](mailto:lmhawes@ncdot.gov).

ATT: Figure 1: Project Location Map  
Figure 2: Section 1 Preliminary Design Map  
Figure 3: Section 2 Preliminary Design Map  
Figure 4: Section 3 Preliminary Design Map  
Figure 5: Section 4 Preliminary Design Map  
Figure 5: Alternative Cross-sections  
Figure 6: Alternative Cross-sections  
Figure 7: Alternative C Preliminary Design Map  
Figure 8: Connector Routes Location Map

cc: Deborah Barbour, P.E., Director Preconstruction  
Louis Mitchell, P.E., Division 10 Engineer  
Van Argabright, P.E., Manager – STIP Western Region  
Tim Gibbs, City of Charlotte DOT  
Norm Steinman, City of Charlotte DOT  
Robert Cook, Mecklenburg-Union MPO  
Hazen Blodgett, Town of Matthews  
Ralph Messera, Town of Matthews  
Kathi Ingrish, Town of Matthews  
C.J. O’Neill, P.E., Town of Matthews



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 PROGRAM DEVELOPMENT BRANCH

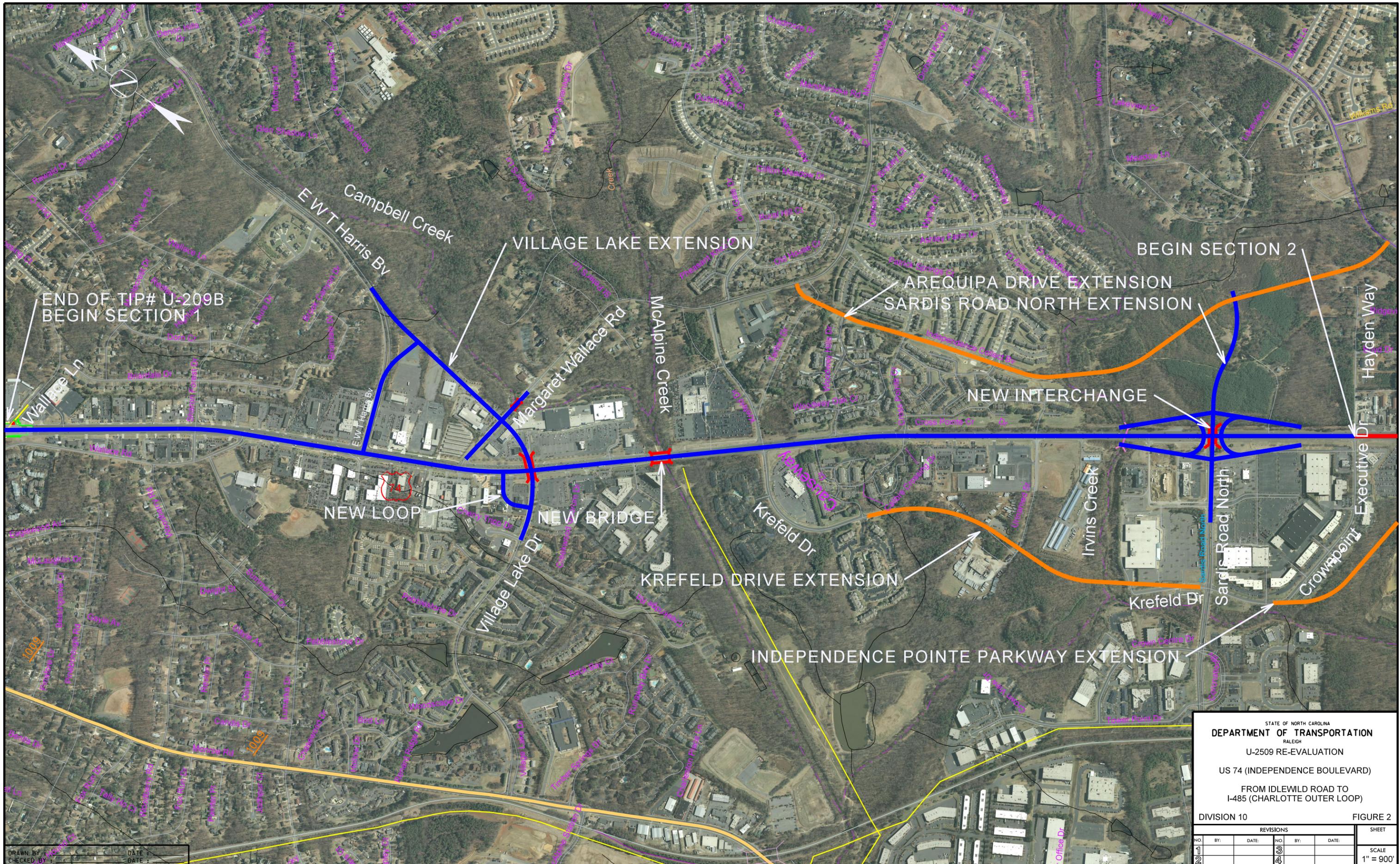
U-2509 RE-EVALUATION

US 74 (INDEPENDENCE BOULEVARD)  
 FROM IDLEWILD ROAD TO I-485 (CHARLOTTE OUTER LOOP)

MECKLENBURG COUNTY

DIVISION 10

FIGURE 1



END OF TIP# U-209B  
BEGIN SECTION 1

VILLAGE LAKE EXTENSION

AREQUIPA DRIVE EXTENSION  
SARDIS ROAD NORTH EXTENSION

BEGIN SECTION 2

NEW INTERCHANGE

NEW LOOP

NEW BRIDGE

KREFELD DRIVE EXTENSION

INDEPENDENCE POINTE PARKWAY EXTENSION

DRAWN BY: [blank]  
CHECKED BY: [blank]  
DATE: [blank]

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
U-2509 RE-EVALUATION  
US 74 (INDEPENDENCE BOULEVARD)  
FROM IDLEWILD ROAD TO  
I-485 (CHARLOTTE OUTER LOOP)

DIVISION 10      FIGURE 2

REVISIONS						SHEET
NO	BY	DATE	NO	BY	DATE	SCALE 1" = 900'
1			3			
2			4			

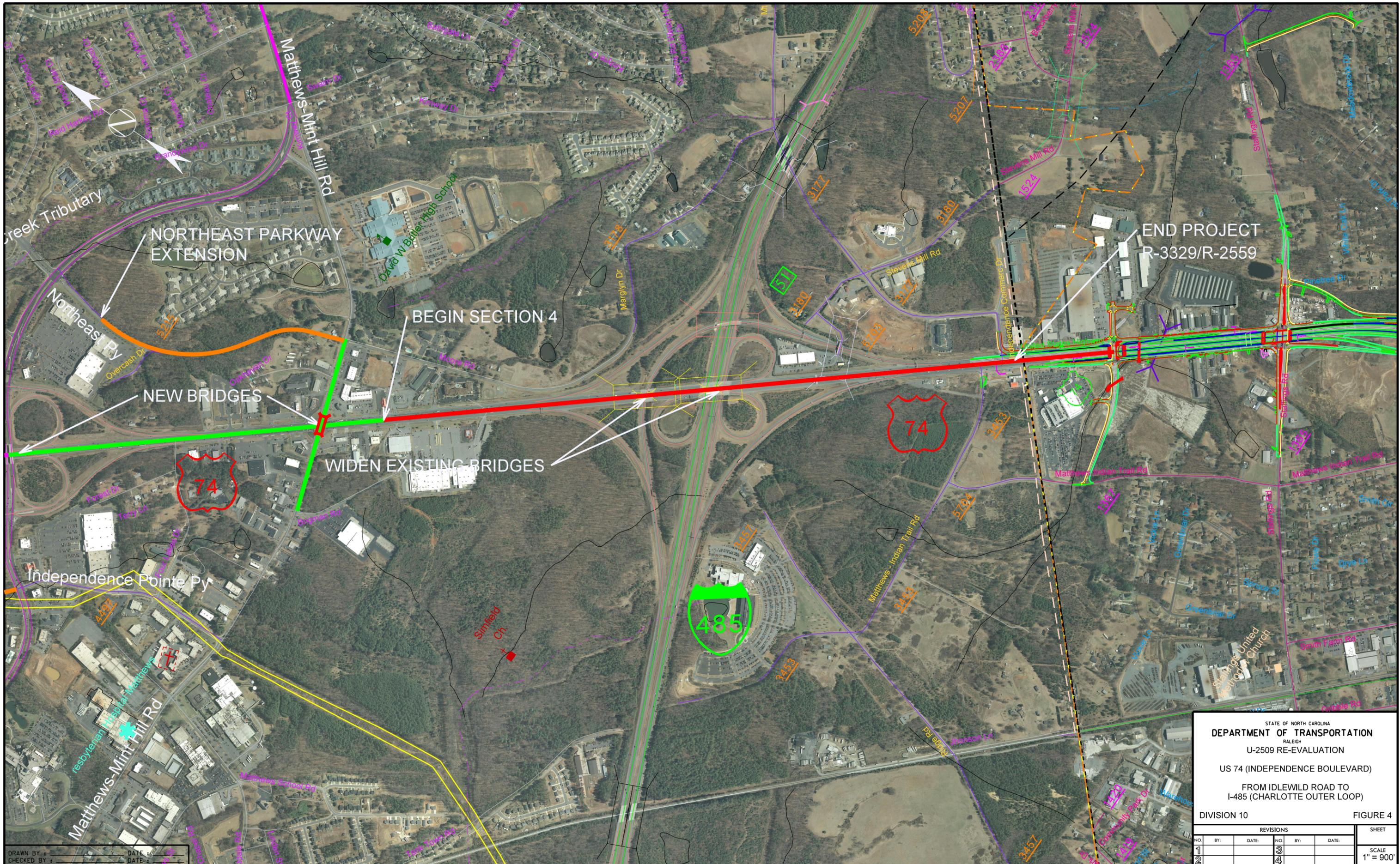


STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 U-2509 RE-EVALUATION  
 US 74 (INDEPENDENCE BOULEVARD)  
 FROM IDLEWILD ROAD TO  
 I-485 (CHARLOTTE OUTER LOOP)  
 DIVISION 10

FIGURE 3

REVISIONS						SHEET
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			SCALE 1" = 900'
2			4			

DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: [Date]



NORTHEAST PARKWAY  
EXTENSION

BEGIN SECTION 4

NEW BRIDGES

WIDEN EXISTING BRIDGES

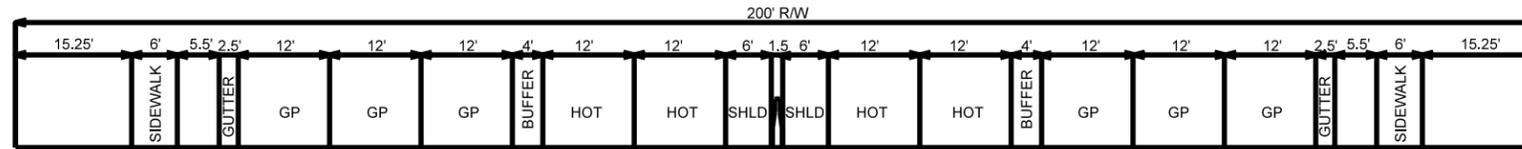
END PROJECT  
R-3329/R-2559

DRAWN BY : \_\_\_\_\_ DATE : \_\_\_\_/\_\_\_\_/\_\_\_\_  
 CHECKED BY : \_\_\_\_\_ DATE : \_\_\_\_/\_\_\_\_/\_\_\_\_

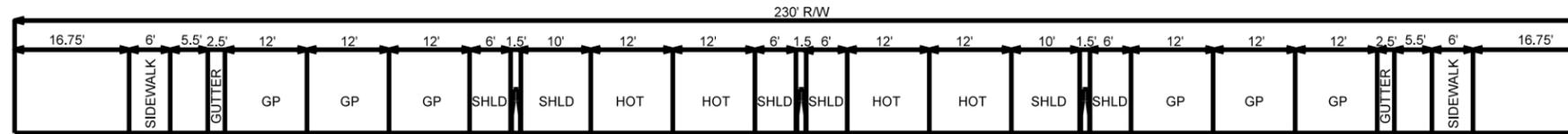
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 U-2509 RE-EVALUATION  
 US 74 (INDEPENDENCE BOULEVARD)  
 FROM IDLEWILD ROAD TO  
 I-485 (CHARLOTTE OUTER LOOP)  
 DIVISION 10

FIGURE 4

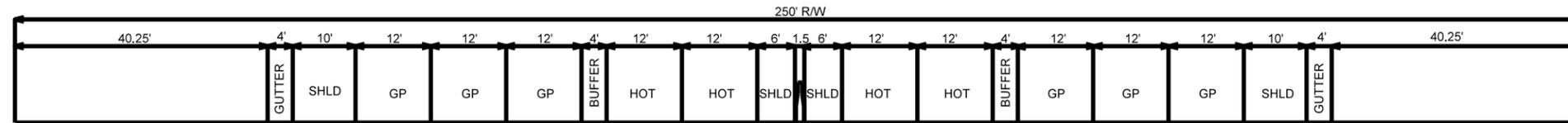
REVISIONS						SHEET
NO	BY	DATE	NO	BY	DATE	
1			3			SCALE 1" = 900'
2			4			



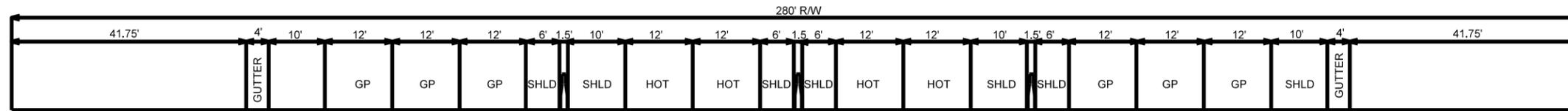
ALTERNATIVE A - OPTION 1 (AT GRADE TOLL ROAD)



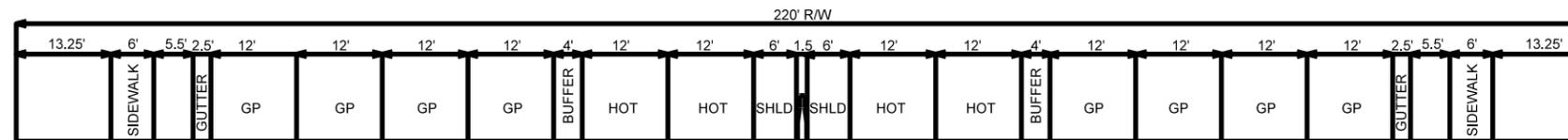
ALTERNATIVE A - OPTION 2 (AT GRADE TOLL ROAD)



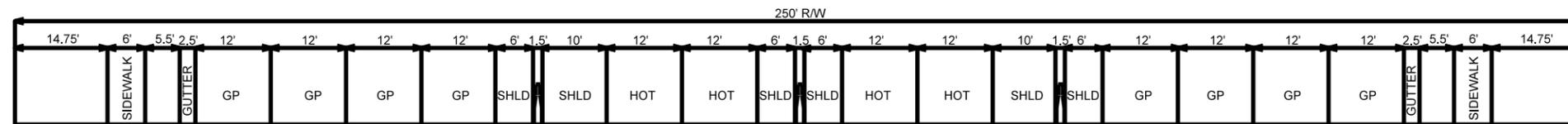
ALTERNATIVE A - OPTION 3 (AT GRADE TOLL ROAD)



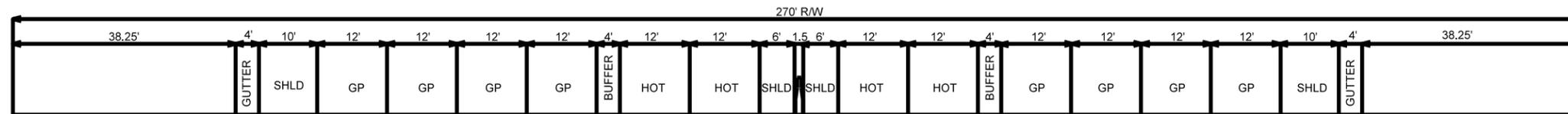
ALTERNATIVE A - OPTION 4 (AT GRADE TOLL ROAD)



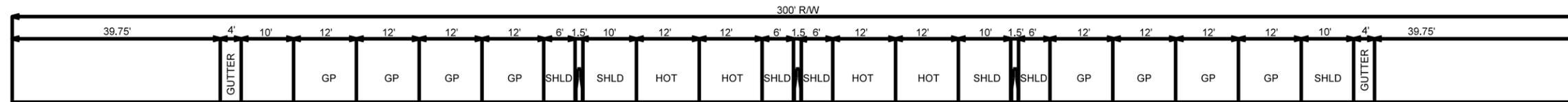
ALTERNATIVE B - OPTION 1 (AT GRADE TOLL ROAD)



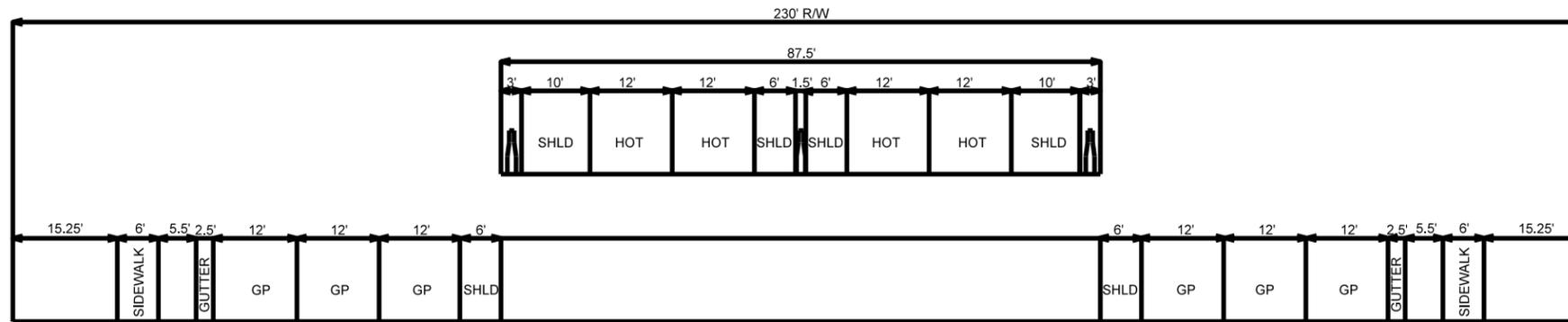
ALTERNATIVE B - OPTION 2 (AT GRADE TOLL ROAD)



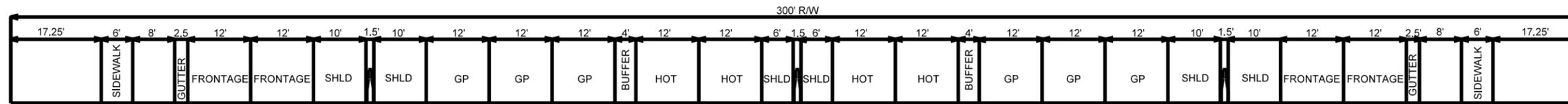
ALTERNATIVE B - OPTION 3 (AT GRADE TOLL ROAD)



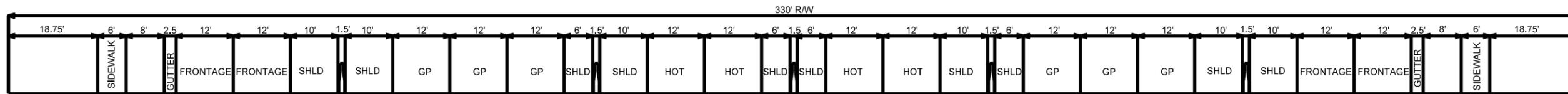
ALTERNATIVE B - OPTION 4 (AT GRADE TOLL ROAD)



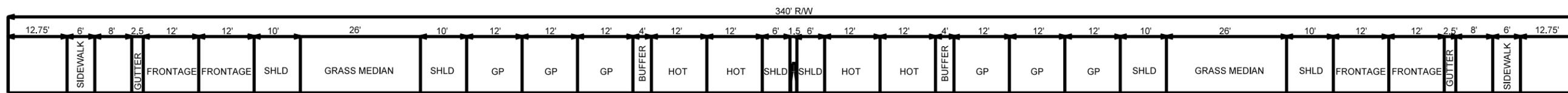
ALTERNATIVE C (ELEVATED TOLL ROAD)



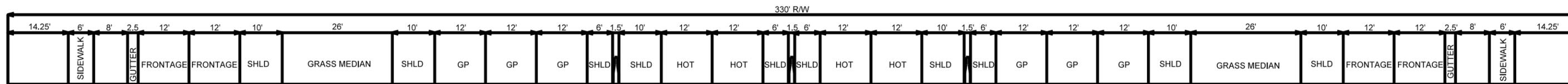
ALTERNATIVE D1 - OPTION 1 (AT GRADE TOLL ROAD)



ALTERNATIVE D1 - OPTION 2 (AT GRADE TOLL ROAD)



ALTERNATIVE D2 - OPTION 1 (AT GRADE TOLL ROAD)



ALTERNATIVE D2 - OPTION 2 (AT GRADE TOLL ROAD)



NORTHEAST PARKWAY  
EXTENSION

BEGIN SECTION 4

NEW BRIDGES

WIDEN EXISTING BRIDGES

DIRECT ACCESS  
MANAGED LANES

END PROJECT  
R-3329/R-2559

74

74

485

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
U-2509 RE-EVALUATION  
US 74 (INDEPENDENCE BOULEVARD)  
FROM IDLEWILD ROAD TO  
I-485 (CHARLOTTE OUTER LOOP)

DIVISION 10 FIGURE 7

DRAWN BY :  
CHECKED BY :  
DATE :  
DATE :

REVISIONS						SHEET
NO	BY	DATE	NO	BY	DATE	
1			3			SCALE 1" = 90'
2			4			

