

Tysons Neighborhood Traffic Impact Study Preliminary Results

An Analysis of a Representative Sample of Nineteen Critical Intersections in Neighborhoods Surrounding Tysons

Presented at the May 12, 2010 PC Tysons Committee Meeting

1. The intersections analyzed do not represent all important intersections surrounding Tysons. The purpose of the study was to obtain an indication of the impact of the proposed Tysons Plan on a sample of intersections.
2. Community outreach is not part of this project.
3. The average peak hour traffic volume increase (2008 to 2030) at the 19 intersections are:

Morning peak existing Tysons Plan: 6%
Morning peak proposed Tysons Plan: 10%

Evening peak existing Tysons Plan: 4%
Evening peak proposed Tysons Plan: 9%

4. A summary of the conditions at the intersections are as follows:

Existing conditions (2008):
number of intersections that fail (level of service E and F) = 11

Existing Tysons Plan (2030):
number of intersections that fail (level of service E and F) = 11

Proposed Tysons Plan (2030):
number of intersections that fail (level of service E and F) = 11

5. The cost of mitigation measures at the failing intersections are:

Existing Tysons Plan: \$49 million (\$20 million if the cost of road improvements related to the existing Tyson Plan is excluded)

Proposed Tysons Plan: \$51 million (\$22 million if the cost of road improvements related to the proposed Tyson Plan is excluded)

6. A sum of \$70 million have been added to the Tysons transportation costs for 2010 to 2030 for neighborhood mitigation measures, Tysons Metrorail station access improvements, and bike access point improvements.

**Level of Service (LOS) for a Representative Sample of Nineteen Critical Intersections in
Neighborhoods Surrounding Tysons**

	2008 (AM/PM)	2030 Existing Tysons Comp Plan		2030 Proposed Tysons Comp Plan	
		No Mitigation (AM/PM)	Mitigation (AM/PM)	No Mitigation (AM/PM)	Mitigation (AM/PM)
1. Route 123 (Dolley Madison Boulevard) at Lewinsville Road/Great Falls Street	D/E	E/E	D/D	E/E	D/D
2. Route 123 (Dolley Madison Boulevard) at Old Dominion Drive	E/D	F/D	D/D	F/D	D/D
3. Lewinsville Road at Route 7	C/E	D/F	D/D	C/F	C/C
4. Lewinsville Road at Spring Hill Road	D/E	D/D	-/-	D/D	-/-
5. Lewinsville Road at Swinks Mill Road (4-way stop)	-/-	-/-	-/-	-/-	-/-
6. Lewinsville Road at Balls Hill Road	B/A	B/A	-/-	B/A	-/-
7. Great Falls Street at Chain Bridge Road	D/E	C/D	-/-	D/D	-/-
8. Great Falls Street at Magarity Road	B/C	B/B	-/-	C/D	-/-
9. Magarity Road at Route 7	D/D	F/F	D/D	F/F	D/D
10. Idylwood Road at Route 7	E/D	F/F	D/D	F/F	D/D
11. Idylwood Road at Gallows Road	D/C	F/E	D/D	F/E	D/D
12. Georgetown Pike at Swinks Mill Road (non-signalized)	-/F	F/F	B/C	F/F	C/C
13. Georgetown Pike at Balls Hill Road	C/C	C/C	-/-	C/C	-/-
14. Gallows Road at Cedar Lane/Oak Street	D/C	F/C	D/C	F/D	D/C
15. Route 123 at Old Courthouse Road	F/E	F/E	E/E	F/F	E/D
16. Maple Avenue at Beulah Road (Vienna)	C/F	C/D	-/-	C/D	-/-
17. Maple Avenue at Lawyers Road (Vienna)	F/F	F/F	D/D	F/E	D/D
18. Old Courthouse Road at Westbriar Drive (Vienna) (non-signalized)	-/F	E/F	B/B	F/F	D/B
19. Old Courthouse Road at Creek Crossing (non-signalized)	-/-	-/-	-/-	-/-	-/-

Intersections that fail (LOS E or F)

11	11	1	11	1
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Notes:

- 1.) The same intersections that fail with traffic from existing Tysons Plan text also fail with proposed Tysons Plan text
- 2.) 11 intersections fail in 2008 and in 2030

Mitigation Measures For a Representative Sample of Nineteen Critical Intersections in Neighborhoods Surrounding Tysons

	2030 Existing Tysons Comp Plan		2030 Proposed Tysons Comp Plan	
	Measures Included in Transportation Plan	Existing Tysons Comp Plan New Mitigation	Measures Included in Transportation Plan	Proposed Tysons Comp Plan New Mitigation
1. Route 123 (Dolley Madison Boulevard) at Lewinsville Road/Great Falls Street	-	NB through lane/SB through lane	-	-
2. Route 123 (Dolley Madison Boulevard) at Old Dominion Drive	-	-	-	-
3. Lewinsville Road at Route 7	NB through lane/SB through lane	-	NB through lane/SB through lane	NB acceleration lane
4. Lewinsville Road at Spring Hill Road	-	-	-	-
5. Lewinsville Road at Swinks Mill Road (4-way stop)	-	-	-	-
6. Lewinsville Road at Balls Hill Road	-	-	-	-
7. Great Falls Street at Chain Bridge Road	-	-	-	-
8. Great Falls Street at Magarity Road	NB approach lane/SB receiving lane	-	NB approach lane/SB receiving lane	-
9. Magarity Road at Route 7	EB through lane/WB through lane	SB RT lane	EB through lane/WB through lane	SB RT lane/NB RT lane
10. Idylwood Road at Route 7	EB through lane/WB through lane	EB/WB RT and LT lanes // NB/SB RT lanes	EB through lane/WB through lane	EB/WB RT and LT lanes // NB/SB RT lanes
11. Idylwood Road at Gallows Road	NB through lane/SB through lane	-	NB through lane/SB through lane	-
12. Georgetown Pike at Swinks Mill Road (non-signalized)	-	NB right turn lane/traffic signal	-	NB right turn lane/traffic signal
13. Georgetown Pike at Balls Hill Road	-	-	-	-
14. Gallows Road at Cedar Lane/Oak Street	NB through lane/SB through lane	-	NB through lane/SB through lane	-
15. Route 123 at Old Courthouse Road	WB through lane	EB/WB LT lanes // SB through lane	WB through lane	EB/WB LT lanes // SB through lane
16. Maple Avenue at Beulah Road (Vienna)	-	-	-	-
17. Maple Avenue at Lawyers Road (Vienna)	-	NB/WB/SB right turn lanes	-	SB/EB/NB/WB RT lanes//WB LT lane//SB T lane
18. Old Courthouse Road at Westbriar Drive (Vienna) (non-signalized)	-	Traffic signal	-	Traffic signal
19. Old Courthouse Road at Creek Crossing (non-signalized)	-	-	-	-

Cost of Mitigation Measures For a Representative Sample of Nineteen Critical Intersections in Neighborhoods Surrounding Tysons

	2030 Traffic Level (Existing Tysons Comp Plan)		2030 Traffic Level (Proposed Tysons Comp Plan)	
	Cost of Mitigation Measures Included in Transportation Plan	Cost of Additional Measures to Achieve LOS D	Cost of Mitigation Measures Included in Transportation Plan	Cost of Additional Measures to Achieve LOS D
1. Route 123 (Dolley Madison Boulevard) at Lewinsville Road/Great Falls St		\$2,767,500		
2. Route 123 (Dolley Madison Boulevard) at Old Dominion Drive				
3. Lewinsville Road at Route 7	\$4,151,250		\$4,151,250	\$742,500
4. Lewinsville Road at Spring Hill Road				
5. Lewinsville Road at Swinks Mill Road (4-way stop)				
6. Lewinsville Road at Balls Hill Road				
7. Great Falls Street at Chain Bridge Road				
8. Great Falls Street at Magarity Road	\$2,767,500*		\$2,767,500*	
9. Magarity Road at Route 7	\$4,151,250*	\$742,500	\$4,151,250*	\$1,485,000
10. Idylwood Road at Route 7	\$7,661,250*	\$5,557,500	\$7,661,250*	\$5,557,500
11. Idylwood Road at Gallowes Road	\$6,277,500*		\$6,277,500*	
12. Georgetown Pike at Swinks Mill Road (non-signalized)		\$1,362,500		\$1,362,500
13. Georgetown Pike at Balls Hill Road				
14. Gallowes Road at Cedar Lane/Oak Street	\$5,535,000*		\$5,535,000*	
15. Route 123 at Old Courthouse Road	\$2,868,750*	\$2,587,500	\$2,868,750*	\$2,587,500
16. Maple Avenue at Beulah Road (Vienna)				
17. Maple Avenue at Lawyers Road (Vienna)		\$2,227,500		\$5,276,250
18. Old Courthouse Road at Westbriar Drive (Vienna) (non-signalized)		\$620,000		\$620,000
19. Old Courthouse Road at Creek Crossing (non-signalized)				
TOTAL	\$33,412,500	\$15,865,000	\$33,412,500	\$17,631,250
Total cost to mitigate to Level of Service D	\$49,277,500		\$51,043,750	
Total cost to mitigate to Level of Service D excluding costs already included as part of other necessary Tysons transportation projects	\$20,016,250		\$21,782,500	

Footnote: * Included in Tysons transportation costs