

Appendix D: Multimodal Measures of Effectiveness



Figure 1: Representative Transit Travel Time Routes

Table 1: Travel Speed of Representative Transit Routes

Representative Transit Routes	Travel Time (minutes)		Route Length (VISSIM - feet)		Travel Speed (mph)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
ART 45 – Northbound & Southbound	24	12	6340	6340	3.0	6.0
Metrobus 4A – Eastbound & Westbound	30	11	7690	7690	2.9	7.9
Metrobus 5A – Eastbound & Westbound*	25	11	13780	13780	6.3	14.2
Metrobus 10E – Northbound (AM) & Southbound (PM)	23	12	14040	13920	6.9	13.2
DC Circulator Dupont-Rosslyn	12	12	6350	6350	6.0	6.0
LCT - Loudoun Dulles North to Rosslyn/DC – Eastbound (AM) & Westbound (PM)	17	9	12400	10490	8.3	13.2

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Table 2: Pedestrian Crossing Distance, Required Times, and Provided Times

Int	Cross Streets	PM Peak Hour Pedestrian Counts	Leg	Crossing Distance [ft]	Walking Speed [ft/s]	Required Time [s]	Provided Time - AM [s]	Provided Time - PM [s]	Median Refuge	Sufficient	Walking Speed [ft/s]	Required Time [s]	Sufficient
1	N. Fort Myer Dr. & Lee Hwy. (WB)	689	N	48	3.5	14	27	27	No	Yes	3	16	Yes
			S	64	3.5	18	27	27	No	Yes	3	21	Yes
			E	41	3.5	12	23	23	No	Yes	3	14	Yes
			W	57	3.5	16	23	23	No	Yes	3	19	Yes
2	N. Lynn St. & Lee Hwy. (WB)	671	N	66	3.5	19	21	19	No	Yes	3	22	No
			S	69	3.5	20	21	19	No	No	3	23	No
			E	43	3.5	12	21	21	No	Yes	3	14	Yes
			W	41	3.5	12	21	21	No	Yes	3	14	Yes
3	N. Lynn St. & Lee Hwy. (EB)	131	N	-	3.5	-	-	-	-	-	-	-	-
			S	52	3.5	15	22	22	No	Yes	3	17	Yes
			E	27	3.5	8	20	20	No	Yes	3	9	Yes
			W	43	3.5	12	20	20	No	Yes	3	14	Yes
4	N. Fort Myer Dr. & Lee Hwy. (EB)	499	N	63	3.5	18	25	25	No	Yes	3	21	Yes
			S	53	3.5	15	25	25	No	Yes	3	18	Yes
			E	55	3.5	16	23	23	No	Yes	3	18	Yes
			W	40	3.5	11	23	23	No	Yes	3	13	Yes
5	N. Fort Myer Dr. & 19th St. N.	1153	N	49	3.5	14	32	32	No	Yes	3	16	Yes
			S	81	3.5	23	32	32	No	Yes	3	27	Yes
			E	47	3.5	13	30	30	No	Yes	3	16	Yes
			W	59	3.5	17	30	30	No	Yes	3	20	Yes
6	N. Moore St. & 19th St. N.	1478	N	50	3.5	14	23	23	No	Yes	3	17	Yes
			S	49	3.5	14	23	23	No	Yes	3	16	Yes
			E	66	3.5	19	27	27	No	Yes	3	22	Yes
			W	58	3.5	17	27	27	No	Yes	3	19	Yes
7	N. Lynn St. & 19th St. N.	2273	N	59	3.5	17	22	22	No	Yes	3	20	Yes
			S	55	3.5	16	26	26	No	Yes	3	18	Yes
			E	55	3.5	16	26	26	No	Yes	3	18	Yes
			W	44	3.5	13	26	26	No	Yes	3	15	Yes

Int	Cross Streets	PM Peak Hour Pedestrian Counts	Leg	Crossing Distance [ft]	Walking Speed [ft/s]	Required Time [s]	Provided Time - AM [s]	Provided Time - PM [s]	Median Refuge	Sufficient	Walking Speed [ft/s]	Required Time [s]	Sufficient	
8	N Lynn St mid-block	200	N	65	3.5	19	22	22	No	Yes	3	22	Yes	
			S	-	-	-	-	-	-	-	-	-	-	-
			E	-	-	-	-	-	-	-	-	-	-	-
			W	-	-	-	-	-	-	-	-	-	-	-
9	N. Lynn St. & Wilson Blvd	1609	N	50	3.5	14	18	18	No	Yes	3	17	Yes	
			S	97	3.5	28	32	32	No	Yes	3	32	No	
			E	96	3.5	27	29	29	Yes	Yes	3	32	No	
			W	72	3.5	21	29	29	No	Yes	3	24	Yes	
10	N. Fort Myer Dr. & Wilson Blvd	2206	N	90	3.5	26	25	23	Yes	No	3	30	No	
			S	102	3.5	29	25	23	Yes	No	3	34	No	
			E	79	3.5	23	32	32	No	Yes	3	26	Yes	
			W	93	3.5	27	32	32	No	Yes	3	31	Yes	
11	N. Nash St. & Clarendon Blvd. & Wilson Blvd	1105	N	38	3.5	11	20	20	No	Yes	3	13	Yes	
			S	46	3.5	13	20	20	No	Yes	3	15	Yes	
			E	94	3.5	27	36	36	No	Yes	3	31	Yes	
			W	100	3.5	29	36	36	Yes	Yes	3	33	Yes	
12	N. Oak St. & Wilson Blvd	1653	N	41	3.5	12	22	22	No	Yes	3	14	Yes	
			S	44	3.5	13	21	21	No	Yes	3	15	Yes	
			E	47	3.5	13	21	19	No	Yes	3	16	Yes	
			W	51	3.5	15	21	19	No	Yes	3	17	Yes	
13	N. Oak St. & Clarendon Blvd.	216	N	-	-	-	-	-	-	-	-	-	-	
			S	46	3.5	13	21	21	No	Yes	3	15	Yes	
			E	49	3.5	14	21	19	No	Yes	3	16	Yes	
			W	58	3.5	17	21	19	No	Yes	3	19	No	

Table 3: Pedestrian Delay Level of Service (LOS) Criteria

Level of Service	Pedestrian delay at signalized intersections (seconds)	Likelihood of Non-Compliance
A	≤ 10	Low
B	> 10 – 20	Low to Moderate
C	> 20 – 30	Moderate
D	> 30 – 40	Moderate to High
E	> 40 – 60	High
F	> 60	Very High

Source: Highway Capacity Manual (2000)

Table 4: Bicycle Level of Service at Signalized Intersections

Level of Service	Bicycle delay at signalized intersections (seconds)
A	≤ 10
B	> 10 – 20
C	> 20 – 30
D	> 30 – 40
E	> 40 – 60
F	> 60

Source: Highway Capacity Manual (2000)