



Existing Traffic Characteristics

Traffic Volumes - Average Daily Traffic (ADT)

- Existing (2008) ADT: 16,900
- Estimated Future (2033) ADT: 21,200

Speed Limit

- Posted Speed 35-40 mph
- Refined section encourages a consistent speed; helps reduce speeding and excessive speeding (more than 10 mph over)

Traffic Analysis Summary

Level of Service (LOS), Volume to Capacity Ratios (V/C), and Queue Lengths were examined at the following high-volume, critical intersections:

- Harvey Road
- Commonwealth Avenue
- Governor Printz Boulevard

Preliminary Queue and Gap Assessment

- 95th percentile queues in 2008 rarely extend through adjacent minor side streets
- 95th percentile queues in 2033 projected to possibly extend through some intersections; points to need for access management and land use coordination
- Off-peak volumes are much less than peak volumes; potential impacts on driveways/side streets are small
- Signal spacing will create gaps for vehicles entering the Pike from driveways and side streets

Level of Service Explanation

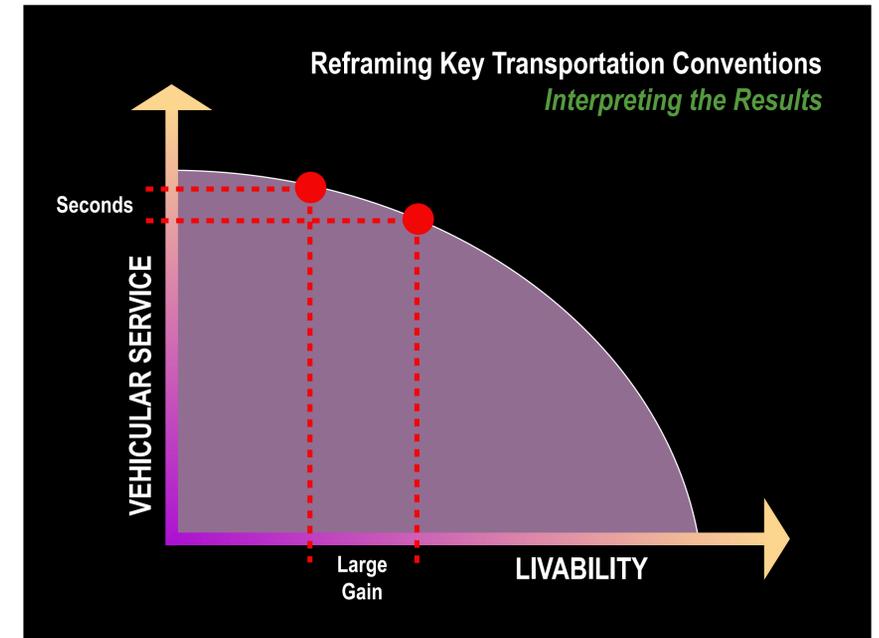
What is Level of Service?

Level of Service (LOS) is a grading system for intersections and other transportation components (freeways, ramps, etc.). Like school, LOS A indicates the best conditions, while LOS F indicates the worst conditions.

<p>LOS A (Avg. Vehicle Delay 0-10 sec.)</p> <p>With LOS A, motorists experience virtually no delay. Most vehicles pass through the intersection without stopping. This is indicative of very low volume compared to high capacity and good signal coordination.</p>	<p>LOS B (Avg. Vehicle Delay 10-20 sec.)</p> <p>With slightly more delay than LOS A, LOS B still maintains excellent operating conditions. Some vehicles must stop for relatively short periods of time.</p>
<p>LOS C (Avg. Vehicle Delay 20-35 sec.)</p> <p>At LOS C, delays are longer than LOS B, but operations would still be considered quite good. Short to moderate queue lengths form during the red phase of the signal. In rare cases, a vehicle may have to wait through more than one signal cycle to proceed.</p>	<p>LOS D (Avg. Vehicle Delay 35-55 sec.)</p> <p>At LOS D, delays start to become more noticeable, and longer queue lengths start to become apparent at intersections. Still, the majority of vehicles have to wait no more than one signal cycle to clear the intersection.</p>
<p>LOS E (Avg. Vehicle Delay 55-80 sec.)</p> <p>At LOS E, intersection volume is at or slightly under capacity. Nearly all vehicles have to stop. Many vehicles may have to wait for more than one signal cycle to proceed. However, back-ups generally do not affect nearby intersections.</p>	<p>LOS F (Avg. Vehicle Delay > 80 sec.)</p> <p>Volumes exceed capacity at LOS F. Delays are long, and virtually all vehicles must wait through several signal cycles to proceed. Extensive queues frequently back-up through adjacent intersections, potentially creating gridlock conditions.</p>

Most Designers Typically Aim for LOS C-D

Livability Considerations



***** Large gains in livability can be achieved through small reductions in vehicular service**

Volume to Capacity Ratio (V/C)

	2008 No Build		2008 Proposed		2033 Proposed	
	Max V/C (Lane Group)		Max V/C (Lane Group)		Max V/C (Lane Group)	
	AM	PM	AM	PM	AM	PM
Harvey	0.82 (SBTR)	0.83 (NBL)	0.81 (SBTR)	0.82 (SBTR)	1.12 (EBL)	1.09 (EBL)
Commonwealth	0.67 (EBTR)	0.69 (EBT)	0.76 (SBTR)	0.94 (SBTR)	0.96 (SBTR)	1.23 (SBTR)
Gov. Printz	0.56 (NBTL)	0.57 (NBT)	0.68 (SBT)	0.76 (SBT)	0.87 (SBT)	0.98 (SBT)

Notes:
 The "Existing" column shows the existing condition (including Darley Green development)
 The "Proposed" column shows the Existing Condition with the proposed improvements
 The "2033" column shows the proposed improvements in the future with an estimated growth factor
 Results are preliminary and based on the methodologies of the 2000 Highway Capacity Manual.
 The V/C ratio indicates the amount of congestion for each lane group. A V/C ≥ 1 indicates approach is above capacity.
 The V/C ratios in the table represent the maximum V/C ratio for each intersection.

Level of Service (LOS) and Delay

	2008 No Build		2008 Proposed		2033 Proposed	
	LOS (Seconds Delay)		LOS (Seconds Delay)		LOS (Seconds Delay)	
	AM	PM	AM	PM	AM	PM
Harvey	C (26)	C (25)	C (26)	C (32)	E (58)	E (56)
Commonwealth	B (15)	B (10)	C (20)	C (21)	C (27)	D (41)
Gov. Printz	C (21)	C (22)	C (20)	C (24)	C (26)	F (88)

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 Results are preliminary and based on a Simulation Model (SimTraffic) of the corridor.

Average Queue Lengths

	2008 No Build		2008 Proposed		2033 Proposed	
	Northbound (Southbound)		Northbound (Southbound)		Northbound (Southbound)	
	AM	PM	AM	PM	AM	PM
Harvey	100' (190')	120' (200')	185' (170')	250' (200')	330' (260')	490' (270')
Commonwealth	120' (100')	80' (80')	210' (220')	230' (260')	270' (300')	360' (420')
Gov. Printz	200' (120')	210' (180')	150' (200')	170' (260')	260' (300')	260' (700')

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