



## 2025 BUILD CONDITION

<b>SIGNALIZED INTERSECTION</b>	<b>HCM LEVEL OF SERVICE (LOS) AM/PM</b>
SH 16 & NB I-25 Ramps	D/D
SH 16 & Bandlely	C/D
SH 16 WB & SH 85	B/B
SH 16 EB & SH 85	B/B
SH 16 & Syracuse	D/C

For intersections with LOS D, E, or F, the intersection geometries are listed below. The HCM signalized intersection capacity analyses for these intersections are included in Appendix A. The signal timing data reports for these intersections are located in Appendix B.

### EXISTING GEOMETRY

#### SH 16 & SB I-25 Ramps:

North ramp has 2 left turn lanes, and 1 shared through-right lane.  
Eastbound leg has 1 through lane and 1 right turn lane.  
Westbound leg has 1 left turn lane and 1 through lane.

### NO BUILD GEOMETRY

#### SH 16 & SB I-25 Ramps:

North ramp has 2 left turn lanes and 1 shared through-right lane.  
Eastbound leg has 1 through lane and 1 right turn lane.  
Westbound leg has 1 left turn lane and 1 through lane.

#### SH 16 & NB I-25 Ramps:

South ramp has 1 left turn lane and 1 shared through-right lane  
Eastbound leg has 1 through lane and 1 left turn lane  
Westbound leg has 1 through lane and 1 right turn lane

#### SH 16 & Bandlely

Northbound leg has 1 left turn lane and 1 shared through-right lane  
Southbound leg has 1 shared left-through-right lane  
Eastbound leg has 1 left turn lane and 1 shared through-right lane  
Westbound leg has 1 left turn lane and 1 shared through-right lane

## **BUILD GEOMETRY**

### **SH 16 & NB I-25 Ramps**

Northbound ramp has 1 shared left-through lane and 1 right-turn lane

Eastbound leg has 1 left-turn lane and 3 through lanes

Westbound leg has 1 through lane, 1 shared through-right lane, and 1 right-turn lane

### **SH 16 & Bandlely**

Northbound leg has 2 left-turn lanes, 1 through lane, and 1 right-turn lane

Southbound leg has 1 left-turn lane, 1 through lane, and 1 right-turn lane

Eastbound leg has 1 left turn lane, 2 through lanes, and 1 right-turn lane

Westbound leg has 1 left turn lane, 2 through lanes, and 1 shared through-right lane

Appendix A

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HCM Signalized Intersection Analysis

HCM Signalized Intersection Capacity Analysis  
 1: SH 16 & SB I-25 Ramps

3/17/2004



Movement	EBL	EBR	SBL 2	SBL	SBR	NWL	NWS	SWL	SWR
Lane Configurations									
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	0.88			1.00	1.00
Fr <sub>t</sub>	1.00	0.85		1.00	0.85			1.00	0.85
Fl <sub>t</sub> Protected	0.95	1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)	1770	1583		1770	2787			1770	1583
Fl <sub>t</sub> Permitted	0.95	1.00		0.95	1.00			0.15	1.00
Satd. Flow (perm)	1770	1583		1770	2787			272	1583
Volume (vph)	630	90	660	1	30	0	0	80	200
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	700	100	733	1	33	0	0	89	222
Lane Group Flow (vph)	700	100	0	734	33	0	0	89	222
Turn Type		Prot	Split		Prot			Perm	
Protected Phases	2	2	4	4	4				6
Permitted Phases								6	
Actuated Green, G (s)	61.0	61.0		59.0	59.0			61.0	61.0
Effective Green, g (s)	62.0	62.0		60.0	60.0			62.0	62.0
Actuated g/C Ratio	0.48	0.48		0.46	0.46			0.48	0.48
Clearance Time (s)	5.0	5.0		5.0	5.0			5.0	5.0
Lane Grp Cap (vph)	844	755		817	1286			130	755
v/s Ratio Prot	0.40	0.06		0.41	0.01				0.14
v/s Ratio Perm								0.33	
v/c Ratio	0.83	0.13		0.90	0.03			0.68	0.29
Uniform Delay, d1	29.4	19.0		32.2	19.1			26.4	20.7
Progression Factor	1.00	1.00		1.00	1.00			1.53	1.57
Incremental Delay, d2	9.3	0.4		14.7	0.0			25.2	1.0
Delay (s)	38.7	19.3		46.9	19.1			65.6	33.4
Level of Service	D	B		D	B			E	C
Approach Delay (s)	36.3			45.7		0.0		42.6	
Approach LOS	D			D		A		D	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	E

c Critical Lane Group

