

**APPENDIX D:
OTHER MAJOR
THOROUGHFARE
INPUTS**

Appendix D1: Urban Streets – Arterials and Collectors/Locals (also used for On-Ramps and Off Ramps, not normally associated in systems planning)

The equation below is an approximation of the “ultimate capacity” (LOS E) of an urban street (arterial). However, HCM does not provide a single equation which estimates the capacity of urban streets at other Levels of Service (e.g. at LOS D). Instead, the detailed procedures and equations described in HCM Chapters 15 and 16 must be used in order to manually calculate urban street capacity. The equation for estimating “ultimate capacity” (LOS E) of urban streets is provided below because it shows the factors which influence capacity of these facilities. Following the equation and table of adjustment factors, the HCM 2000 Urban Street Worksheet is provided because it lists additional factors which influence capacity, such as Arrival Type and Urban Street Class. See **Exhibit 3**.

NOTE: Two-way daily capacity = One-way hourly capacity/K /D.

The following equation is used to estimate the hourly one-way ultimate capacity (LOS E) of arterials and collectors.

$$c = s_o * N * f_W * f_{HV} * f_g * f_p * f_{bb} * f_a * f_{LU} * f_{LT} * f_{RT} * f_{Lpb} * f_{Rpb} * PHF * g/C$$

Where

- c = Capacity (veh/hr), by direction.
- s_o = Base saturation flow rate – the maximum steady traffic flow rate for a signalized intersection approach in pc/hr/ln under ideal conditions, assuming all green time is available & no lost time is experienced. *HCM 2000, p. 10-24, Exhibit 10-12.*
 - 1,900 pc/hr/ln assumed for arterials
 - 1,805 pc/hr/ln assumed for collectors/locals
- N = Number of useable through lanes **at the intersection approach** per direction (excludes exclusive turn lanes, or lanes assumed unusable due to parking, transit operations, etc.)
- PHF = Peak-hour factor. Default = 0.92, *HCM 2000, p. 10-8*
- g/C = Effective green ratio, or the proportion of effective green time available to a given approach. Larger ratios are associated with higher volume/priority facilities.

See **Exhibit 2** for other adjustment factors for urban streets

For NCDOT – TPB Level of Service D for Systems Level Planning, the NCLOS 2.1 program was used in developing the boulevard, major thoroughfares, and minor thoroughfares capacity tables.

Appendix D1: Urban Streets – Arterials and Collectors/Locals

(also used for On-Ramps and Off Ramps, not normally associated in systems planning)

Exhibit 2: Adjustment Factors for Urban Streets

Factor	Formula	Definitions of Variables	Defaults / Notes
Lane width	$f_w = 1 + [(W - 12) / 30]$	W = lane width	Assume 1.0 <i>Exhibit 10-12</i>
Heavy vehicles	$f_{HV} = 100 / [100 + \%HV(E_T - 1)]$	$\%HV$ = % heavy vehicles for lane group volume	$E_T = 2.0$ pc/HV <i>Exhibit 10-12</i>
Approach grade	$f_g = 1 - [\%G / 200]$	$\%G$ = % grade on lane group approach	0% - flat 3% - moderate grades <i>p. 10-25</i>
Parking	$f_p = [N - 0.1 - (18N_m / 3600)] / N$	N = # through lanes in lane group N_m = # parking maneuvers/hour	$f_p \geq 0.050$ $f_p = 1.00$ for no parking <i>See Exhibit 10-20 for N_m</i>
Bus blockage	$f_{bb} = [N - 14.4N_B / 3600] / N$	N_B = # buses stopping/hour	$f_{bb} \geq 0.050$ <i>See Exhibit 10-21 for N_B</i>
Area type	$f_a = 0.900$ in CBD $f_a = 1.00$ in all other areas		
Lane utilization	$f_{LU} = v_g / (v_{g1}N)$	v_g = unadjusted demand flow rate for the lane group, veh/h v_{g1} = unadjusted demand flow rate on the single lane in the lane group with the highest volume N = number of lanes in the lane group	Assume 1.00 for exclusive left turn <i>See Exhibit 10-23 for other default values</i>
Left turns	Protected phasing Exclusive lane: $f_{LT} = 0.95$ Shared lane: $f_{LT} = 1 / [1.0 + 0.05P_{LT}]$	P_{LT} = proportion of left turns in lane group	<i>See Exhibit C16-1, Appendix C, for nonprotected phasing alternatives, p. 16-122</i>
Right turns	Exclusive lane: $f_{RT} = 0.85$ Shared lane: $f_{RT} = 1.0 - (0.15)P_{RT}$ Single lane: $f_{RT} = 1.0 - (0.135)P_{RT}$	P_{RT} = proportion of right turns in lane group	Assume 0.985 (Unless exclusive right turn lane is provided)
Pedestrian-bicycle (Left turns)	$F_{Lpb} = 1.0 - P_{LT}(1 - A_{pbT})(1 - P_{LTA})$	P_{LT} = proportion of left turns in lane group A_{pbT} = permitted phase adjustment P_{LTA} = ratio of left turn protected green to total left turn green	Assume 1.00 <i>Refer to Appendix D for detailed procedure</i>
Pedestrian-bicycle (Right turns)	$F_{Rpb} = 1.0 - P_{RT}(1 - A_{pbT})(1 - P_{RTA})$	P_{RT} = proportion of right turns in lane group A_{pbT} = permitted phase adjustment P_{RTA} = ratio of right turns protected green to total right turns green	Assume 1.00 <i>Refer to Appendix D for detailed procedure</i>

Figure adapted from HCM 2000 Exhibit 16-7

Appendix D1: Urban Streets – Arterials and Collectors/Locals (also used for On-Ramps and Off Ramps, not normally associated in systems planning)

Exhibit 3: HCM 2000 Urban Streets Worksheet

EXHIBIT 15-14. URBAN STREET WORKSHEET

URBAN STREET WORKSHEET								
General Information				Site Information				
Analyst	_____			Urban Street	_____			
Agency or Company	_____			Direction of Travel	_____			
Date Performed	_____			Jurisdiction	_____			
Analysis Time Period	_____			Analysis Year	_____			
<input type="checkbox"/> Operational (LOS)		<input type="checkbox"/> Design (v_p)		<input type="checkbox"/> Planning (LOS)		<input type="checkbox"/> Planning (v_p)		Analysis Period, T = _____ h
Input Parameters								
	Segments							
	1	2	3	4	5	6	7	8
Cycle length, C (s)								
Effective green-to-cycle-length ratio, g/C								
v/c ratio for lane group, X								
Capacity of lane group, c (veh/h)								
Arrival type, AT								
Length of segment, L (mi)								
Initial queue, Q_b (veh)								
Urban street class, SC (Exhibit 10-3)								
Free-flow speed, FFS (mi/h) (Exhibit 15-2)								
Running time, T_R (s) (Exhibit 15-3)								
Delay Computation								
Uniform delay, d_1 (s) $d_1 = \frac{0.5C[(1 - g/C)^2]}{1 - [(g/C)\min(X, 1.0)]}$								
Signal control adjustment factor, k (Exhibit 15-6)								
Upstream filtering/metering adjustment factor, I (Exhibit 15-7)								
Incremental delay, d_2 (s) $d_2 = 900T \left[(X - 1) + \sqrt{(X - 1)^2 + \frac{8kIX}{cT}} \right]$								
Initial queue delay, d_3 (s) (Ch. 16 Appendix F)								
Progression adjustment factor, PF (Exhibit 15-5)								
Control delay, d (s) $d = (d_1 * PF) + d_2 + d_3$								
Segment LOS Determination								
Segment travel time, ST (s) $ST = T_R + d + \text{Other delay}$								
Segment travel speed, S_A (mi/h) $S_A = \frac{3600(L)}{ST}$								
Segment LOS (Exhibit 15-2)								
Urban Street LOS Determination								
Total travel time = $\sum ST$	_____			s				
Total length = $\sum L$	_____			mi				
Total travel speed, $S_A = \frac{3600 * \text{Total length}}{\text{Total travel time}}$	_____			mi/h				
Total urban street LOS (Exhibit 15-2)	_____							

Appendix D2: Coastal Major Thoroughfares Inputs - 55 MPH

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	12	12	12	11	11	11
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	13000	13500	14000	15100	15800	16400	16500	17200	17800

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	13	14	12	12	12	11	11	11
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	14300	14800	15300	16600	17200	17800	18100	18800	19500

* PAHSI = Principal Arterial - High Speed (I)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D2: Coastal Major Thoroughfares Inputs - 55 MPH

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	12	12	12	11	11	11
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	26000	27000	28100	30400	31600	32800	33100	34500	35700

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	12	12	12	11	11	11
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	28600	29600	30600	33300	34500	35700	36300	37600	39000

* PAHSI = Principal Arterial - High Speed (I)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D2: Coastal Major Thoroughfares Inputs - 45 MPH

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	13	13	14	12	12	13	11	11	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	12200	12700	13600	13200	13800	14600	14500	15000	15900

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	13	13	14	12	12	13	11	11	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	13300	13800	14900	14500	14900	16000	15800	16300	17300

* PAHSI = Principal Arterial - High Speed (I)

* PASII = Principal Arterial - Suburban (II)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D2: Coastal Major Thoroughfares Inputs - 45 MPH

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	13	13	14	12	12	13	11	11	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	24600	25500	27300	26700	27600	29300	29100	30200	31800

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	13	13	14	12	12	13	11	11	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	0.5	3	2	1
Maximum AADT	26800	27600	29700	29000	29900	32000	31700	32600	34700

* PAHSI = Principal Arterial - High Speed (I)

* PASII = Principal Arterial - Suburban (II)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D2: Coastal Major Thoroughfares Inputs - 35 MPH

	MINIMUM		STANDARD		MAXIMUM	
	1 Lane Per Direction					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type*	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	IV	II	IV	II	IV	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	13	11	12	10	11
D Factor	60	60	60	60	60	60
Arrival Type	4	3	4	3	4	3
Left Turn %	8	5	8	5	8	5
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	10100	11600	11100	12600	12200	13700

	MINIMUM		STANDARD		MAXIMUM	
	1 Lane Per Direction WCLTL					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type*	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	IV	II	IV	II	IV	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	13	11	12	10	11
D Factor	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4
Left Turn %	20	10	20	10	20	10
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	11700	12900	12700	14000	14000	15300

* PASII = Principal Arterial - Suburban (II)

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D2: Coastal Major Thoroughfares Inputs - 35 MPH

	MINIMUM		STANDARD		MAXIMUM	
	2 Lanes Per Direction					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type*	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	IV	II	IV	II	IV	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	13	11	12	10	11
D Factor	60	60	60	60	60	60
Arrival Type	4	3	4	3	4	3
Left Turn %	8	5	8	5	8	5
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	20300	23500	22200	25500	24500	27800

	MINIMUM		STANDARD		MAXIMUM	
	2 Lane Per Direction WCLTL					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type*	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	IV	II	IV	II	IV	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	13	11	12	10	11
D Factor	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4
Left Turn %	16	10	16	10	16	10
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	22300	26000	24300	28100	26800	30700

* PASII = Principal Arterial - Suburban (II)

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D2: Coastal Major Thoroughfares Inputs - 25 MPH

	MINIMUM	STANDARD	MAXIMUM
	1 Lane Per Direction		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	8	8	8
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	10100	11000	12100

	MINIMUM	STANDARD	MAXIMUM
	1 Lane Per Direction WCLTL		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	20	20	20
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	11600	12700	14000

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D2: Coastal Major Thoroughfares Inputs - 25 MPH

	MINIMUM	STANDARD	MAXIMUM
	2 Lanes Per Direction		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	8	8	8
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	20300	22100	24400

	MINIMUM	STANDARD	MAXIMUM
	2 Lane Per Direction WCLTL		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	16	16	16
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	35	35	35
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	22200	24200	26700

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D3: Piedmont Major Thoroughfares Inputs - 55 MPH

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	65	60	60	65	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	12000	13500	14000	12900	14600	15100	15100	15800	16400

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	65	60	60	65	60	60	60	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	13200	14800	15300	14200	15900	16500	16600	17200	17800

* PAHSI = Principal Arterial - High Speed (I)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D3: Piedmont Major Thoroughfares Inputs - 55 MPH

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	65	60	60	65	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	24000	27000	28100	25800	29100	30200	30400	31600	32800

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	65	60	60	65	60	60	60	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	26400	29600	30600	28400	31800	33000	33300	34500	35700

* PAHSI = Principal Arterial - High Speed (I)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D3: Piedmont Major Thoroughfares Inputs - 45 MPH

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	13	14	14	12	13	13	11	12	12
D Factor	65	60	60	65	60	60	65	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	11300	11800	13600	12200	12700	14600	13400	13800	15900

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	13	14	14	12	13	13	11	12	12
D Factor	65	60	60	65	60	60	65	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	12300	12800	14900	13300	13800	16000	14600	14900	17300

* PAHSI = Principal Arterial - High Speed (I)

* PASII = Principal Arterial - Suburban (II)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D3: Piedmont Major Thoroughfares Inputs - 45 MPH

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	13	14	14	12	13	13	11	12	12
D Factor	65	60	60	65	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	22700	23700	27300	24600	25500	29300	26900	27600	31800

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	13	14	14	12	13	13	11	12	12
D Factor	65	60	60	65	60	60	65	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	24700	25600	29700	26800	27600	32000	29200	29900	34700

* PAHSI = Principal Arterial - High Speed (I)

* PASII = Principal Arterial - Suburban (II)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D3: Piedmont Major Thoroughfares Inputs - 35 MPH

	MINIMUM		STANDARD		MAXIMUM	
	1 Lane Per Direction					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	II	II	II	II	II	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	14	11	13	10	12
D Factor	60	60	60	60	60	60
Arrival Type	4	3	4	3	4	3
Left Turn %	8	5	8	5	8	5
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	10100	10700	11100	11600	12200	12600

	MINIMUM		STANDARD		MAXIMUM	
	1 Lane Per Direction WCLTL					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	II	II	II	II	II	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	14	11	13	10	12
D Factor	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4
Left Turn %	20	10	20	10	20	10
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	11700	12000	12700	12900	14000	14000

PASII = Principal Arterial - Suburban (II)

PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D3: Piedmont Major Thoroughfares Inputs - 35 MPH

	MINIMUM		STANDARD		MAXIMUM	
	2 Lanes Per Direction					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	II	II	II	II	II	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	14	11	13	10	12
D Factor	60	60	60	60	60	60
Arrival Type	4	3	4	3	4	3
Left Turn %	8	5	8	5	8	5
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	20300	21800	22200	23500	24500	25500

	MINIMUM		STANDARD		MAXIMUM	
	2 Lane Per Direction WCLTL					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	II	II	II	II	II	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	14	11	13	10	12
D Factor	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4
Left Turn %	16	10	16	10	16	10
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	22300	24100	24300	26000	26800	28100

PASII = Principal Arterial - Suburban (II)

PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D3: Piedmont Major Thoroughfares Inputs - 25 MPH

	MINIMUM	STANDARD	MAXIMUM
	1 Lane Per Direction		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	8	8	8
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	10100	11000	12100

	MINIMUM	STANDARD	MAXIMUM
	1 Lane Per Direction WCLTL		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	20	20	20
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	11600	12700	14000

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D3: Piedmont Major Thoroughfares Inputs - 25 MPH

	MINIMUM	STANDARD	MAXIMUM
	2 Lanes Per Direction		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	8	8	8
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	20300	22100	24400

	MINIMUM	STANDARD	MAXIMUM
	2 Lane Per Direction WCLTL		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	16	16	16
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	22200	24200	26700

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D4: Mountain Major Thoroughfares Inputs - 55 MPH

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	13000	13500	14000	14000	14600	15100	15100	15800	16400

	MINIMUM			STANDARD			MAXIMUM		
	1 Lane Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	14300	14800	15300	15300	15900	16500	16600	17200	17800

* PAHSI = Principal Arterial - High Speed (I)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D4: Mountain Major Thoroughfares Inputs - 55 MPH

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	26000	27000	28100	28000	29100	30200	30400	31600	32800

	MINIMUM			STANDARD			MAXIMUM		
	2 Lanes Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	I	I	I	I	I	I	I	I	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	200	200	200	200	200	200	200	200	200
g/C Ratio	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
FFS	55	55	55	55	55	55	55	55	55
Total Segment Length	3	3	3	3	3	3	3	3	3
Signals Per Mile	2	1.5	1	2	1.5	1	2	1.5	1
Maximum AADT	28600	29600	30600	30800	31800	33000	33300	34500	35700

* PAHSI = Principal Arterial - High Speed (I)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D4: Mountain Major Thoroughfares Inputs - 45 MPH

	MINIMUM			DEFAULT			MAXIMUM		
	1 Lane Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	11300	11800	13600	12200	12700	14600	13200	13800	15900

	MINIMUM			DEFAULT			MAXIMUM		
	1 Lane Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4	4	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	12400	12800	14900	13300	13800	16000	14500	14900	17300

* PAHSI = Principal Arterial - High Speed (I)

* PASII = Principal Arterial - Suburban (II)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D4: Mountain Major Thoroughfares Inputs - 45 MPH

	MINIMUM			DEFAULT			MAXIMUM		
	2 Lanes Per Direction								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	3	3	3	3	3	3	3	3	3
Left Turn %	5	5	5	5	5	5	5	5	5
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	22800	23700	27300	24600	25500	29300	26700	27600	31800

	MINIMUM			DEFAULT			MAXIMUM		
	2 Lanes Per Direction WCLTL								
	Urban	Suburban	Rural	Urban	Suburban	Rural	Urban	Suburban	Rural
Arterial Type*	PASII	PASII	PAHSI	PASII	PASII	PAHSI	PASII	PASII	PAHSI
LOS	D	D	D	D	D	D	D	D	D
Street Class	II	II	I	II	II	I	II	II	I
PHF	0.92	0.9	0.88	0.92	0.9	0.88	0.92	0.9	0.88
Driver Pop Factor	1	1	1	1	1	1	1	1	1
K Factor	14	14	14	13	13	13	12	12	12
D Factor	60	60	60	60	60	60	60	60	60
Arrival Type	3	4	4	3	4	4	3	4	4
Left Turn %	10	10	10	10	10	10	10	10	10
Cycle Length	150	150	200	150	150	200	150	150	200
g/C Ratio	0.55	0.55	0.6	0.55	0.55	0.6	0.55	0.55	0.6
FFS	45	45	45	45	45	45	45	45	45
Total Segment Length	2	2	3	2	2	3	2	2	3
Signals Per Mile	3	2	1	3	2	1	3	2	1
Maximum AADT	24800	25600	29700	26800	27600	32000	29000	29900	34700

* PAHSI = Principal Arterial - High Speed (I)

* PASII = Principal Arterial - Suburban (II)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D4: Mountain Major Thoroughfares Inputs - 35 MPH

	MINIMUM		STANDARD		MAXIMUM	
	1 Lane Per Direction					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type*	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	II	II	II	II	II	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	14	11	13	10	12
D Factor	60	60	60	60	60	60
Arrival Type	4	3	4	3	4	3
Left Turn %	8	5	8	5	8	5
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	10100	10700	11100	11600	12200	12600

	MINIMUM		STANDARD		MAXIMUM	
	1 Lane Per Direction WCLTL					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type*	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	II	II	II	II	II	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	14	11	13	10	12
D Factor	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4
Left Turn %	20	10	20	10	20	10
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	11700	12000	12700	12900	14000	14000

* PASII = Principal Arterial - Suburban (II)

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D4: Mountain Major Thoroughfares Inputs - 35 MPH

	MINIMUM		STANDARD		MAXIMUM	
	2 Lanes Per Direction					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type*	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	II	II	II	II	II	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	14	11	13	10	12
D Factor	60	60	60	60	60	60
Arrival Type	4	3	4	3	4	3
Left Turn %	8	5	8	5	8	5
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	20300	21800	22200	23500	24500	25500

	MINIMUM		STANDARD		MAXIMUM	
	2 Lane Per Direction WCLTL					
	Urban	Suburban	Urban	Suburban	Urban	Suburban
Arterial Type*	PAUIV	PASII	PAUIV	PASII	PAUIV	PASII
LOS	D	D	D	D	D	D
Street Class	II	II	II	II	II	II
PHF	0.92	0.9	0.92	0.9	0.92	0.9
Driver Pop Factor	1	1	1	1	1	1
K Factor	12	14	11	13	10	12
D Factor	60	60	60	60	60	60
Arrival Type	4	4	4	4	4	4
Left Turn %	16	10	16	10	16	10
Cycle Length	120	150	120	150	120	150
g/C Ratio	0.42	0.55	0.42	0.55	0.42	0.55
FFS	35	35	35	35	35	35
Total Segment Length	1	2	1	2	1	2
Signals Per Mile	6	3	6	3	6	3
Maximum AADT	22300	24100	24300	26000	26800	28100

* PASII = Principal Arterial - Suburban (II)

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D4: Mountain Major Thoroughfares Inputs - 25 MPH

	MINIMUM	STANDARD	MAXIMUM
	1 Lane Per Direction		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	8	8	8
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	10100	11000	12100

	MINIMUM	STANDARD	MAXIMUM
	1 Lane Per Direction WCLTL		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	20	20	20
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	11600	12700	14000

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred

Appendix D4: Mountain Major Thoroughfares Inputs - 25 MPH

	MINIMUM	STANDARD	MAXIMUM
	2 Lanes Per Direction		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	8	8	5
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	20300	22100	24400

	MINIMUM	STANDARD	MAXIMUM
	2 Lane Per Direction WCLTL		
	Urban	Urban	Urban
Arterial Type*	PAUIV	PAUIV	PAUIV
LOS	D	D	D
Street Class	IV	IV	IV
PHF	0.92	0.92	0.92
Driver Pop Factor	1	1	1
K Factor	12	11	10
D Factor	60	60	60
Arrival Type	4	4	4
Left Turn %	16	16	16
Cycle Length	120	120	120
g/C Ratio	0.42	0.42	0.42
FFS	30	30	30
Total Segment Length	1	1	1
Signals Per Mile	6	6	6
Maximum AADT	22200	24200	26700

* PAUIV = Principal Arterial - Urban (IV)

NOTE: Inputs assume 12-foot lanes. To adjust lane-width downward, subtract 3.33% per foot of pavement and round to the nearest hundred