

APPENDIX E
EXISTING WEEKDAY & SATURDAY INTERSECTION
ANALYSIS WORKSHEETS

Barstow Casinos Project - Weekday
Existing MD

Scenario Report

Existing MD
Command: Ex MD
Volume: Ex MD
Geometry: Existing
Impact Fee: Default Impact Fee
Trip Generation: None
Trip Distribution: none
Paths: Default Path
Routes: Default Route
Configuration: Default Configuration

Barstow Casinos Project - Weekday
Existing MD

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Lenwood/SR-58

Cycle (sec): 60 Critical Vol./Cap.(X): 0.290
Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 9.8
Optimal Cycle: 19 Level Of Service: A

Street Name: Lenwood SR-58
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Protected Protected
Rights: Include Include Include
Min. Green: 0
Lanes: 0 0 1 0 0 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1

Volume Module:
Base Vol: 23 17 10 30 32 8 13 293 21 14 184 19
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 23 17 10 30 32 8 13 293 21 14 184 19
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fun: 23 17 10 30 32 8 13 293 21 14 184 19
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86 0.86
PHF Volume: 27 20 12 50 53 13 14 320 23 14 184 19
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 27 20 12 50 53 13 14 320 23 14 184 19
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MNF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 27 20 12 50 53 13 14 335 24 14 184 19

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.48 0.33 0.19 0.44 0.45 0.11 0.44 0.45 0.11 0.44 0.45 0.11
Final Sat.: 806 596 351 752 803 201 1700 1800 1800 1700 1800 1800

Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.03 0.07 0.07 0.07 0.01 0.19 0.01 0.01 0.10 0.01
Crit Moves: *****
Green/Cycle: 0.23 0.23 0.23 0.23 0.23 0.23 0.05 0.64 0.05 0.03 0.62 0.62
Volume/Cap: 0.15 0.15 0.15 0.29 0.29 0.29 0.16 0.29 0.16 0.02 0.29 0.15
Delay/Veh: 19.2 19.2 19.2 20.9 20.9 20.9 31.3 5.3 3.9 43.1 5.7 4.4
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 19.2 19.2 19.2 20.9 20.9 20.9 31.3 5.3 3.9 43.1 5.7 4.4
LOS by Note: F B E C C C C A A D A A
HCM2kbyO: 1 1 1 2 2 2 0 3 0 3 0 1

Note: Queue reported is the number of cars per lane.

Barstow Casinos Project - Weekday Existing MD

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Lenwood/ Main St
Critical Vol./Cap. (X): 0.148
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 31.2
Optimal Cycle: 48 Level of Service: C

Street Name: Lenwood Main St
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 10 10 10 10 10 10 10 10
Lanes: 1 0 1 1 0 1 0 1 0 1 0 1 0 1 0 1

Volume Module:
Base Vol: 24 52 44 53 50 12 16 67 16 43 74 53
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 1.00 1.08 0.92 1.00 0.81 0.19 1.00 1.61 0.39 1.00 1.17 0.83
Final Sat.: 1700 1950 1650 1700 1452 348 1700 2906 694 1700 2098 1502

Capacity Analysis Module:
Vol/Sat: 0.02 0.04 0.04 0.03 0.04 0.04 0.01 0.03 0.03 0.03 0.04 0.04
Crit Moves: ****

Note: Queue reported is the number of cars per lane.

Barstow Casinos Project - Weekday Existing MD

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Main St/ SR-58 EB Ramps
Critical Vol./Cap. (X): 0.171
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 3.0
Optimal Cycle: 17 Level of Service: A

Street Name: SR-58 Main St
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 1 1 0 0 1 0 0 1 0 0 1 0 0 0

Volume Module:
Base Vol: 0 0 0 0 23 1 0 0 0 254 117 15 393 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Base: 0 0 0 0 23 1 0 0 0 254 117 15 393 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
User Adj: 1.00 1.00 1.00 1.00 0.64 0.64 0.64 0.82 0.82 0.82 0.99 0.99 0.90 0.90
PHF Adj: 1.00 1.00 1.00 1.00 0.56 2 0 0 311 143 17 435 0
PHF Volume: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
M/F Adj: 1.00 1.00 1.00 1.00 1.05 1.05 1.05 1.00 1.00 1.05 1.05 1.00 1.05 1.00
Final Volume: 0 0 0 0 38 2 0 0 326 150 17 457 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 0.00 1.37 0.63 0.63 1.00 2.00 0.00 0.00 0.00 0.00
Final Sat.: 0 0 0 0 3266 142 1800 0 2465 1135 1700 3600 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.01 0.01 0.00 0.00 0.00 0.13 0.13 0.01 0.13 0.00
Crit Moves: ****

Note: Queue reported is the number of cars per lane.

Barstow Casinos Project - Weekday Existing MD

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Level of Service Computation Report

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Main St/ SR-58 WB Ramps

Intersection #5 Lenwood/ I-15 SB Ramps

Cycle (sec): 60 Critical Vol./Cap. (X): 0.199

Cycle (sec): 60 Critical Vol./Cap. (X): 0.210

Loss Time (sec): 18 (Y+R=4.0 sec) Average Delay (sec/veh): 9.4

Loss Time (sec): 5 (Y+R=4.0 sec) Average Delay (sec/veh): 10.3

Optimal Cycle: 18 Level of Service: A

Optimal Cycle: 32 Level of Service: B

Street Name: North Bound South Bound East Bound West Bound

Street Name: North Bound South Bound East Bound West Bound

Approach: L - T - R L - T - R L - T - R L - T - R

Approach: L - T - R L - T - R L - T - R L - T - R

Movement: L - T - R L - T - R L - T - R L - T - R

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected

Control: Split Phase Split Phase Permitted Permitted

Rights: Include Include Include Include

Rights: Include Include Ignore Ignore

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 1 0 0 1 0 0 0 0 1 0 2 0 0 0 0 2 0 1

Lanes: 0 0 0 0 0 2 0 0 0 1 0 0 2 0 1 0 0 2 0 1

Volume Module:

Volume Module:

Base Vol: 127 0 13 0 0 0 0 269 0 0 287 38

Base Vol: 0 0 0 303 0 161 0 185 0 0 174 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Base: 127 0 13 0 0 0 0 269 0 0 287 38

Initial Base: 0 0 0 303 0 161 0 185 0 0 174 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 127 0 13 0 0 0 0 269 0 0 287 38

Initial Fut: 0 0 0 303 0 161 0 185 0 0 174 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.91 0.91 0.91 1.00 1.00 1.00 0.82 0.82 0.82 0.87 0.87 0.87

PHF Adj: 1.00 1.00 1.00 0.77 0.77 0.77 0.87 0.87 0.87 0.93 0.93 0.93

PHF Volume: 140 0 14 0 0 0 0 329 0 0 331 44

PHF Volume: 0 0 0 393 0 209 0 213 0 0 188 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 140 0 14 0 0 0 0 329 0 0 331 44

Reduced Vol: 0 0 0 393 0 209 0 213 0 0 188 0

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Final Volume: 140 0 14 0 0 0 0 345 0 0 348 44

Final Volume: 0 0 0 405 0 209 0 224 0 0 197 0

Saturation Flow Module:

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800

Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00

Adjustment: 0.89 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00

Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 1.00 2.00 0.00 1.00 2.00 1.00

Lanes: 2.00 0.00 0.00 2.00 0.00 0.00 2.00 0.00 2.00 2.00 0.00 2.00

Final Sat.: 1700 0 1800 0 0 0 1700 3600 0 0 3600 1800

Final Sat.: 0 0 0 3200 0 1800 0 3600 1800 0 3600 1800

Capacity Analysis Module:

Capacity Analysis Module:

Vol/Sat: 0.08 0.00 0.01 0.00 0.00 0.00 0.00 0.10 0.00 0.00 0.10 0.02

Vol/Sat: 0.00 0.00 0.00 0.13 0.00 0.12 0.00 0.06 0.00 0.00 0.06 0.00

Crit Moves: ****

Crit Moves: ****

Green/Cycle: 0.41 0.00 0.41 0.00 0.00 0.00 0.00 0.49 0.00 0.00 0.49 0.49

Green/Cycle: 0.00 0.00 0.00 0.47 0.00 0.47 0.00 0.43 0.00 0.00 0.43 0.00

Volume/Cap: 0.20 0.00 0.02 0.00 0.00 0.00 0.00 0.20 0.00 0.00 0.20 0.05

Volume/Cap: 0.00 0.00 0.00 0.27 0.00 0.25 0.00 0.14 0.00 0.00 0.13 0.00

Delay/Veh: 11.9 0.0 10.5 0.0 0.0 0.0 0.0 9.0 0.0 9.0 8.2

Delay/Veh: 0.0 0.0 0.0 10.2 0.0 10.4 0.0 10.5 0.0 0.0 10.4 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 11.9 0.0 10.5 0.0 0.0 0.0 0.0 9.0 0.0 9.0 8.2

AdjDel/Veh: 0.0 0.0 0.0 10.2 0.0 10.4 0.0 10.5 0.0 0.0 10.4 0.0

LOS by Move: B A B A A A A A A A A A A A A A A A A

LOS by Move: A A A A A A A A A A A A A A A A A A

HCM2kVQ: 2 0 0 0 0 0 0 2 0 2 0 0

HCM2kVQ: 0 0 0 0 0 0 0 0 0 0 0 0

Note: Queue reported is the number of cars per lane.

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Level of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #6 Lenwood/SR-15 NB Ramps/High Point Pkwy
 Cycle (sec): 60 Critical Vol./Cap. (X): 0.319
 Loss Time (sec): 8 (V+R=4.0 sec) Average Delay (sec/vch): 15.4
 Optimal Cycle: 24 Level of Service: B
 Street Name: I-15 Lenwood
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
 Rights: Include Ovl Ignore Include
 Lanes: 1 1 0 0 2 1 0 0 0 2 2 0 3 0 0 0 0 0 2 1 0
 Volume Module:
 Base Vol: 64 61 251 35 0 171 97 323 0 0 548 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 64 61 251 35 0 171 97 323 0 0 548 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fnt: 0 0 0 0 0 0 0 0 0 0 0 0
 User Adj: 64 61 251 35 0 171 97 323 0 0 548 0
 PHF Adj: 0.95 0.95 0.95 0.82 0.82 0.93 0.93 0.00 0.87 0.87 0.87
 PHF Volume: 67 64 264 43 0 209 93 346 0 0 629 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 67 64 264 43 0 209 93 346 0 0 629 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.05 1.05 1.13 1.00 1.00 1.13 1.03 1.10 0.00 1.00 1.10 1.10
 Final Volume: 71 67 299 43 0 236 96 381 0 0 692 0

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.89 1.00 1.00 0.94 1.00 1.00
 Lanes: 1.05 0.95 2.00 1.00 0.00 2.00 2.00 3.00 0.00 0.00 3.00 0.00
 Final Sat.: 1789 1705 3600 1700 0 3600 3200 5400 0 0 5400 0
 Capacity Analysis Module:
 Vel/Sat: 0.04 0.04 0.08 0.03 0.00 0.07 0.03 0.07 0.00 0.00 0.13 0.00
 Crit Moves: **** **** **** **** **** ****
 Green/Cycle: 0.26 0.26 0.26 0.11 0.00 0.21 0.09 0.50 0.00 0.00 0.40 0.00
 Volume/Cap: 0.15 0.15 0.32 0.23 0.00 0.32 0.32 0.14 0.00 0.00 0.32 0.00
 Delay/Veh: 17.5 17.5 18.8 27.0 0.0 21.4 28.2 8.3 0.0 0.0 12.7 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 17.5 17.5 18.8 27.0 0.0 21.4 28.2 8.3 0.0 0.0 12.7 0.0
 LOS by Move: B B C A A C A A 0 0 0 3 0
 HCM2AVGQ: 1 1 2 1 0 2 1 1 0 0 0 3 0

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
 2000 HCM Unsimplified Method (Future Volume Alternative)
 Intersection #7 Outlet Center Dr/ I-15 SB Ramps
 Average Delay (sec/vch): 6.3 Worst Case Level of Service: A [9.6]
 Street Name: I-15 West Bound East Bound West Bound
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 0 0 0 0 0 1 0 0 0 0 0 0 1 0 0 1 0 0 0 0
 Volume Module:
 Base Vol: 0 0 0 6 4 0 0 5 1 29 5 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 0 0 6 4 0 0 5 1 29 5 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fnt: 0 0 0 6 4 0 0 5 1 29 5 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 1.00 1.00 1.00 0.63 0.63 0.63 0.75 0.75 0.75 0.54 0.54 0.54
 PHF Volume: 0 0 0 10 6 0 0 7 1 53 9 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Final Volume: 0 0 0 10 6 0 0 7 1 53 9 0

Critical Gap Module:
 Critical Gap: 6.4 6.5 4.0 4.1
 FollowUpTime: 3.5 4.0 2.2
 Capacity Module:
 Chnlct Vol: 123 124 877 770 1635 1625
 Percent Cap.: 877 770 1635 1625
 Move Cap.: 854 744 1625 1625
 Volume/Cap: 0.01 0.01 0.03 0.03
 Level of Service Module:
 2Way95thQ: 123 124 877 770 1635 1625
 Control Del: 123 124 877 770 1635 1625
 LOS by Move: * * * * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: 807 807 1635 1625
 Shared Queue: 0.1 0.1 7.3 7.3
 Shrd ConDel: 9.6 9.6 7.3 7.3
 Shared LOS: * * A A
 ApproachDel: 9.6 9.6
 ApproachLOS: A A

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)
 Intersection #9 Lenwood/Westbound
 Average Delay (sec/veh): 8.2 Worst Case Level of Service: A
 Street Name: Lenwood Westbound
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Protected Include Ignored
 Rights: 10 26 26 10 26 26 10 28 28 10 28 28
 Lanes: 1 0 1 0 1 0 2 0 1 0 1 0 1 0 1 0 1
 Volume Module:
 Base Vol: 8 77 12 38 71 116 98 29 9 9 9 32
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Base: 8 77 12 38 71 116 98 29 9 9 9 32
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 8 77 12 38 71 116 98 29 9 9 9 32
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.87 0.87 0.87 0.87 0.87 0.87 0.84 0.84 0.00 0.82 0.82 0.82
 PHF Volume: 8 89 14 44 82 133 117 35 0 11 11 39
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 8 89 14 44 82 133 117 35 0 11 11 39
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MF Adj: 1.00 1.05 1.05 1.00 1.05 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 9 93 15 44 96 133 117 35 0 11 11 39
 Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adj: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
 Lanes: 1.00 1.73 0.27 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Sat: 1700 3115 485 1700 3600 1800 1700 1800 1800 1700 1800 1800
 Capacity Analysis Module:
 Vol/Sat: 0.01 0.03 0.03 0.03 0.02 0.07 0.07 0.02 0.00 0.01 0.01 0.02
 Crit Moves: ****
 Green/Cycle: 0.11 0.29 0.29 0.11 0.29 0.29 0.20 0.38 0.00 0.13 0.31 0.42
 Volume/Cap: 0.05 0.10 0.10 0.23 0.08 0.26 0.34 0.05 0.00 0.05 0.02 0.05
 Delay/Veh: 36.2 23.7 23.7 39.3 23.5 25.8 33.7 18.0 0.0 34.3 21.6 15.5
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 36.2 23.7 23.7 39.3 23.5 25.8 33.7 18.0 0.0 34.3 21.6 15.5
 LOS by Move: D C C C D C C C B A C B C B
 HOS by Move: 0 1 1 1 1 1 1 1 1 1 1 1
 Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)
 Intersection #8 Outlet Center Dr/ I-15 NB Ramps
 Average Delay (sec/veh): 5.8 Worst Case Level of Service: A
 Street Name: Outlet Center Dr
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Include Uncontrolled
 Rights: 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0
 Lanes: 0 1 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0
 Volume Module:
 Base Vol: 6 13 52 0 0 0 7 4 0 0 0 28 2
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Base: 6 13 52 0 0 0 7 4 0 0 0 28 2
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 6 13 52 0 0 0 7 4 0 0 0 28 2
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.88 0.88 0.88 1.00 1.00 1.00 0.63 0.63 0.63 0.78 0.78 0.78
 PHF Volume: 7 15 59 0 0 0 11 6 0 0 0 36 3
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Final Volume: 7 15 59 0 0 0 11 6 0 0 0 36 3
 Critical Gap Module:
 Critical Gap: 6.4 6.5 6.2 xxxxx xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxxx xxxxx
 Followup: 3.5 4.0 3.3 xxxxx xxxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxxx xxxxx
 Capacity Module:
 Conflict Vol: 67 6 xxxxx xxxxx xxxxx 39 xxxxx xxxxx xxxxx xxxxx xxxxx
 Potent Cap: 944 827 1062 xxxxx xxxxx xxxxx 1585 xxxxx xxxxx xxxxx xxxxx xxxxx
 Move Cap: 939 821 1062 xxxxx xxxxx xxxxx 1585 xxxxx xxxxx xxxxx xxxxx xxxxx
 Volume/Cap: 0.01 0.02 0.05 xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx
 Level of Service Module:
 2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx
 Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx 7.3 xxxxx xxxxx xxxxx xxxxx
 LOS by Move: * * * * *
 Movement: LT - ITR - RT LT - ITR - RT LT - ITR - RT
 Shared Cap: xxxxx 1010 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
 SharedQueue: xxxxx 0.3 xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx
 ShareDel: xxxxx 8.9 xxxxx xxxxx xxxxx xxxxx 7.3 xxxxx xxxxx xxxxx xxxxx
 Shared LOS: * * * * *
 ApproachDel: 8.9 xxxxxx
 ApproachLOS: * * * * *
 Note: Queue reported is the number of cars per lane.

Barstow Casinos Project - Weekday Existing MD

Level of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #11 Mercantile Way/Factory Outlet Ave

Average Delay (sec/voh): 6.4 Worst Case Level of Service: A [8.5]

Street Name: Factory Outlet Mercantile

Approach: North Bound South Bound East Bound West Bound

Movement: L-T-R L-T-R L-T-R L-T-R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 0 0 1 1 0 2 0 0 0 0 0 0 1 0

Volume Module:

Base Vol: 0 0 0 0 0 0 25 24 5 0 0 0 0 0 0 0 0 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 0 0 0 0 0 25 24 5 0 0 0 0 0 0 0 0 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 0 0 0 25 24 5 0 0 0 0 0 0 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 0.57 0.64 0.64 0.64 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67 0.67

PHF Volume: 0 0 0 0 0 0 0 0 43 38 8 0 0 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 0 0 0 43 38 8 0 0 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gap: xxxxx xxxxx xxxxx xxxxx xxxxx 6.2 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx

FollowUpTime: xxxxx xxxxx xxxxx xxxxx xxxxx 3.3 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:

Challenger Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 10 12 xxxxx xxxxx xxxxx xxxxx xxxxx

Potential Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 1078 1620 xxxxx xxxxx xxxxx xxxxx xxxxx

Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 1078 1620 xxxxx xxxxx xxxxx xxxxx xxxxx

Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.04 0.02 xxxxx xxxxx xxxxx xxxxx xxxxx

Level of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx

Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx 8.5 7.3 xxxxx xxxxx xxxxx xxxxx xxxxx

LOS by Move: A

Movement: LT-LTR-RT LT-LTR-RT LT-LTR-RT LT-LTR-RT LT-LTR-RT

Shared Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: A

ApproachDel: xxxxxx 8.5 xxxxxx xxxxxx xxxxxx

ApproachLOS: A

Note: Queue reported is the number of cars per lane.

Barstow Casinos Project - Weekday Existing MD

Level of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Lenwood/Project Access

Average Delay (sec/voh): 1.7 Worst Case Level of Service: A [9.3]

Street Name: Lenwood Project Access

Approach: North Bound South Bound East Bound West Bound

Movement: L-T-R L-T-R L-T-R L-T-R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 1 0 0 0 0 1 1 0 1 0 0 0 0 1 0 0 0 0 0

Volume Module:

Base Vol: 1 55 0 0 57 29 29 0 1 1 0 0 0 0 0 0 0 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 1 55 0 0 57 29 29 0 1 1 0 0 0 0 0 0 0 0 0 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 1 55 0 0 57 29 29 0 1 1 0 0 0 0 0 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 1 55 0 0 57 29 29 0 1 1 0 0 0 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 1 55 0 0 57 29 29 0 1 1 0 0 0 0 0 0 0 0 0

Critical Gap Module:

Critical Gap: 4.1 xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx

FollowUpTime: 2.2 xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx

Capacity Module:

Challenger Vol: 86 xxxxx xxxxx xxxxx xxxxx 129 xxxxx 43 xxxxx xxxxx xxxxx

Potential Cap.: 1523 xxxxx xxxxx xxxxx xxxxx 871 xxxxx 1033 xxxxx xxxxx xxxxx

Move Cap.: 1523 xxxxx xxxxx xxxxx xxxxx 870 xxxxx 1033 xxxxx xxxxx xxxxx

Volume/Cap: 0.0 xxxxx xxxxx xxxxx xxxxx 0.03 xxxxx 0.00 xxxxx xxxxx xxxxx

Level of Service Module:

2Way95thQ: 0.0 xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx 0.0 xxxxx xxxxx xxxxx

Control Del: 7.4 xxxxx xxxxx xxxxx xxxxx 9.3 xxxxx 8.5 xxxxx xxxxx xxxxx

LOS by Move: A

Movement: LT-LTR-RT LT-LTR-RT LT-LTR-RT LT-LTR-RT

Shared Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel: 7.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: A

ApproachDel: xxxxxx 9.3 xxxxxx xxxxxx

ApproachLOS: A

Note: Queue reported is the number of cars per lane.

Scenario: Existing PM
 Command: Ex PM
 Volume: Existing
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: None
 Trip Distribution: none
 Paths: Default Path
 Routes: Default Route
 Configuration: Default Configuration

Scenario Report
 Existing PM
 Ex PM
 Existing
 Default Impact Fee
 None
 none
 Default Path
 Default Route
 Default Configuration

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #1 Lemwood/SR-56
 Cycle (sec): 60 Critical Vol./Cap. (X): 0.254
 Loss Time (sec): 6 (Y+R-4.0 sec) Average Delay (sec/veh): 7.6
 Optimal Cycle: 19 Level Of Service: A
 Street Name: Lemwood SR-56
 Approach: North Bound South Bound East Bound West Bound
 Movement: L T R L T R L T R L T R

Control: Permitted Protected Protected
 Rights: Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 0 1 0 0 0 1 0 0 1 0 0 1 1 0 0 1 0 0 1

Volume Module:

| | | | | | | | | | | | | |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol: | 14 | 7 | 8 | 19 | 16 | 25 | 9 | 269 | 26 | 13 | 265 | 23 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Req: | 14 | 7 | 8 | 19 | 16 | 25 | 9 | 269 | 26 | 13 | 266 | 23 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PassesByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 14 | 7 | 8 | 19 | 16 | 25 | 9 | 269 | 26 | 13 | 266 | 23 |
| Req Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.64 | 0.64 | 0.64 | 0.78 | 0.78 | 0.78 | 0.89 | 0.89 | 0.89 | 0.86 | 0.86 | 0.86 |
| PHF Volume: | 22 | 11 | 13 | 24 | 21 | 32 | 10 | 301 | 29 | 15 | 308 | 27 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MIF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Volume: | 22 | 11 | 13 | 24 | 21 | 32 | 10 | 316 | 31 | 15 | 308 | 27 |

Saturation Flow Module:

| | | | | | | | | | | | | |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Sat/Lane: | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Adj/Adjustment: | 0.94 | 1.00 | 1.00 | 0.94 | 1.00 | 1.00 | 0.94 | 1.00 | 1.00 | 0.94 | 1.00 | 1.00 |
| Lanes: | 0.50 | 0.23 | 0.27 | 0.33 | 0.26 | 0.41 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 845 | 422 | 483 | 560 | 471 | 736 | 1700 | 1800 | 1800 | 1700 | 1800 | 1800 |

Capacity Analysis Module:

| | | | | | | | | | | | | |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vol/Sat: | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.01 | 0.18 | 0.02 | 0.01 | 0.17 | 0.01 |
| Crit Waves: | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.02 | 0.69 | 0.69 | 0.03 | 0.70 | 0.70 |
| Volume/Cycle: | 0.15 | 0.15 | 0.15 | 0.25 | 0.25 | 0.25 | 0.24 | 0.25 | 0.02 | 0.25 | 0.24 | 0.02 |
| Delay/Veh: | 22.2 | 22.2 | 22.2 | 23.5 | 23.5 | 23.5 | 42.2 | 3.9 | 2.9 | 38.2 | 3.6 | 2.7 |
| User Delay: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 22.2 | 22.2 | 22.2 | 23.5 | 23.5 | 23.5 | 42.2 | 3.9 | 2.9 | 38.2 | 3.6 | 2.7 |
| LOS by Move: | C | C | C | C | C | C | D | A | A | D | A | A |
| HCM2AVGQ: | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 0 | 1 | 2 | 0 |

Note: Queue reported is the number of cars per lane.
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Barstow Casinos - Weekday
Existing PM

Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Lenwood/ Main St
Cycle (sec): 100 Critical Vol./Cap.(X): 0.161
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 28.3
Optimal Cycle: 48 Level of Service: C

Street Name: Lenwood Main St
Approach: North Bound South Bound East Bound West Bound
Movement: L T R L T R L T R L T R

Control: Protected Protected Protected Protected Protected
Rights: Include Include Include Include Include
Min. Green: 10 10 10 10 10 10 10 10 10 10 10 10
Lanes: 1 0 1 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 35 48 50 47 46 32 7 58 26 38 145 40
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 35 48 50 47 46 32 7 58 26 38 145 40
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 35 48 50 47 46 32 7 58 26 38 145 40
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.78 0.78 0.78 0.80 0.80 0.80 0.73 0.73 0.73 0.86 0.86 0.86
PHF Volume: 45 62 64 58 57 40 10 79 35 44 168 46
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 45 62 64 58 57 40 10 79 35 44 168 46
PCF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.05 1.05 1.00 1.00 1.00 1.00 1.05 1.05 1.00 1.05 1.05
Final Volume: 45 65 67 58 57 40 10 83 37 44 176 49

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 1.00 1.00 1.00 1.00 0.99 0.41 1.00 1.38 0.62 1.00 1.57 0.43
Final Sat.: 1700 1800 1800 1700 1062 738 1700 2486 1114 1700 2822 778

Capacity Analysis Module:
Vol/Sat: 0.03 0.04 0.04 0.03 0.05 0.05 0.01 0.03 0.03 0.03 0.06 0.06
Crit Moves: ****
Green/Cycle: 0.15 0.23 0.23 0.17 0.17 0.17 0.10 0.23 0.23 0.23 0.36 0.36
Volume/Cap: 0.17 0.16 0.16 0.15 0.17 0.17 0.06 0.15 0.15 0.11 0.17 0.17
Delay/Veh: 38.4 31.1 31.2 31.5 25.9 25.9 41.4 31.1 31.1 31.1 22.2 22.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 38.4 31.1 31.2 31.5 25.9 25.9 41.4 31.1 31.1 31.1 22.2 22.2
LOS by Move: D C C C C C D C D C C
HCM/KvG: 1 2 2 2 2 2 2 2 2 2 2 2
Note: Queue reported is the number of cars per lane.

Barstow Casinos - Weekday
Existing PM

Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Main St/ SR-58 EB Ramps
Cycle (sec): 60 Critical Vol./Cap.(X): 0.180
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 2.4
Optimal Cycle: 17 Level of Service: A

Street Name: SR-58 Main St West Bound
Approach: North Bound South Bound East Bound West Bound
Movement: L T R L T R L T R L T R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 1 0 0 1 0 0 1 0 1 0 2 0 0

Volume Module:
Base Vol: 0 0 0 0 19 0 3 0 201 90 12 497 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 0 19 0 3 0 201 90 12 497 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 19 0 3 0 201 90 12 497 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.75 0.75 0.75 0.84 0.84 0.84 0.84 0.84 0.84
PHF Volume: 0 0 0 0 25 0 4 0 239 107 13 528 0
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 0 25 0 4 0 239 107 13 528 0
PCF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.05 1.05 1.05 1.00 1.05 1.05 1.05 1.05 1.05
Final Volume: 0 0 0 0 27 0 4 0 251 113 13 554 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 1.38 0.62 1.00 2.00 0.00
Final Sat.: 0 0 0 0 3400 0 1800 0 2487 1113 1700 3600 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.01 0.00 0.00 0.00 0.10 0.10 0.10 0.15 0.15
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.04 0.00 0.04 0.00 0.80 0.80 0.80 0.86 0.86
Volume/Cap: 0.00 0.00 0.00 0.18 0.00 0.05 0.00 0.13 0.13 0.13 0.18 0.18
Delay/Veh: 0.0 0.0 0.0 30.3 0.0 28.7 0.0 1.5 1.5 29.3 0.9 0.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 30.3 0.0 28.7 0.0 1.5 1.5 29.3 0.9 0.9
LOS by Move: A A C C A C A A A C A
HCM/KvG: 0 0 0 0 0 0 0 1 1 1 1 1
Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #4 Main St/ SR-58 WB Ramps
 Cycle (sec): 60 Critical Vol./Cap.(X): 0.283
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 12.1
 Optimal Cycle: 19 Level of Service: B
 Street Name: SR-58 Main St
 Approach: North Bound South Bound East Bound West Bound
 Movement: L T R L T R L T R L T R

Control: Split Phase Split Phase Protected Protected
 Rights: Include Include Include Include
 Min. Green: 0
 Lanes: 0 1 0 0 1 0 0 0 0 0 1 0 2 0 0 0 0 2 0 1
 Volume Module:
 Base Vol: 206 0 12 0 0 0 6 215 0 0 320 29
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 206 0 12 0 0 0 6 215 0 0 320 29
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 206 0 12 0 0 0 6 215 0 0 320 29
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.85 0.85 0.85 1.00 1.00 1.00 0.95 0.95 0.95 0.86 0.86 0.86
 PHF Volume: 242 0 14 0 0 0 6 226 0 0 371 34
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 242 0 14 0 0 0 6 226 0 0 371 34
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MUF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.05 1.00 1.00 1.05 1.00
 Final Volume: 242 0 14 0 0 0 6 237 0 0 389 34

Saturation Flow Module:
 Sec/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
 Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 1.00 2.00 0.00 0.00 2.00 1.00
 Final Sat.: 1700 0 1800 0 0 0 1700 3600 0 0 3600 1800
 Capacity Analysis Module:
 Vol/Sat: 0.14 0.00 0.01 0.00 0.00 0.00 0.00 0.07 0.00 0.00 0.11 0.02
 Crit Moves: ****
 Green/Cycle: 0.50 0.00 0.50 0.00 0.00 0.01 0.40 0.00 0.00 0.38 0.38
 Volume/Cap: 0.28 0.00 0.02 0.00 0.00 0.00 0.28 0.17 0.00 0.00 0.28 0.05
 Delay/Veh: 9.4 0.0 7.5 0.0 0.0 0.0 58.4 12.0 0.0 0.0 13.3 11.8
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 9.4 0.0 7.5 0.0 0.0 0.0 58.4 12.0 0.0 0.0 13.3 11.8
 LOS by Move: A A A A A A E B A A B B
 HCM/kwgt: 3 0 0 0 0 0 1 0 0 1 0 3 0
 Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #5 Lenwood/ I-15 SB Ramps
 Cycle (sec): 60 Critical Vol./Cap.(X): 0.178
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 10.1
 Optimal Cycle: 32 Level of Service: B
 Street Name: I-15 Lenwood
 Approach: North Bound South Bound East Bound West Bound
 Movement: L T R L T R L T R L T R

Control: Split Phase Split Phase Permitted Permitted
 Rights: Include Include Ignore Ignore
 Min. Green: 0 0 0 0 0 0 0 0 0 0 26 26 26 26
 Lanes: 0 0 0 0 2 0 0 1 0 0 2 0 1 0 0 2 0 1
 Volume Module:
 Base Vol: 0 0 0 0 310 0 165 0 162 0 0 145 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 0 0 0 310 0 165 0 162 0 0 145 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 0 0 0 0 310 0 165 0 162 0 0 145 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 1.00 1.00 1.00 0.94 0.94 0.94 0.95 0.95 0.00 0.79 0.79 0.00
 PHF Volume: 0 0 0 0 331 0 176 0 171 0 0 164 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 0 0 0 0 331 0 176 0 171 0 0 164 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MUF Adj: 1.00 1.00 1.00 1.03 1.00 1.00 1.00 1.05 0.00 1.00 1.05 0.00
 Final Volume: 0 0 0 0 341 0 176 0 179 0 0 193 0

Saturation Flow Module:
 Sec/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.89 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
 Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 2.00 1.00
 Final Sat.: 0 0 0 3200 0 1800 0 3600 1800 0 3600 1800
 Capacity Analysis Module:
 Vol/Sat: 0.00 0.00 0.00 0.11 0.00 0.10 0.00 0.05 0.00 0.00 0.05 0.00
 Crit Moves: ****
 Green/Cycle: 0.00 0.00 0.00 0.47 0.00 0.47 0.00 0.43 0.00 0.00 0.43 0.00
 Volume/Cap: 0.00 0.00 0.00 0.23 0.00 0.21 0.00 0.12 0.00 0.00 0.12 0.00
 Delay/Veh: 0.0 0.0 0.0 9.9 0.0 10.0 0.0 10.3 0.0 0.0 10.3 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 0.0 0.0 0.0 9.9 0.0 10.0 0.0 10.3 0.0 0.0 10.3 0.0
 LOS by Move: A A A A A A A B A B A B
 HCM/kwgt: 0 0 0 2 0 2 0 1 0 0 1 0
 Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #6 Lenwood/SR-15 NB Ramps/High Point Pkwy
 Cycle (sec): 60 Critical Vol./Cap. (X): 0.221
 Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 14.4
 Optimal Cycle: 21 Level of Service: B
 Street Name: North Bound I-15 South Bound East Bound West Bound
 Approach: Lenwood Lenwood
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Split Phase Split Phase Protected Protected
 Rights: Include Ovl Ignore Include Include
 Min. Green: 1 1 0 0 1 0 0 0 2 0 3 0 0 0 0 2 1 0
 Lanes: 1 1 0 0 2 1 0 0 0 2 2 0 3 0 0 0 0 2 1 0
 Volume Module:
 Base Vol: 60 56 147 29 0 144 95 304 0 0 403 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 60 56 147 29 0 144 95 304 0 0 403 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PassesByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 User Adj: 60 56 147 29 0 144 95 304 0 0 403 0
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PEF Volume: 67 63 165 33 0 166 100 319 0 0 433 0
 Reduced Vol: 67 63 165 33 0 166 100 319 0 0 433 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MUF Adj: 1.05 1.05 1.13 1.00 1.00 1.13 1.03 1.10 0.00 1.00 1.10 1.10
 Final Volume: 71 66 186 33 0 187 103 351 0 0 476 0
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00
 Lanes: 1.06 0.94 2.00 1.00 0.00 2.00 2.00 3.00 0.00 0.00 3.00 0.00
 Final Sat.: 1807 1687 3600 1700 0 3600 3200 5400 0 0 5400 0
 Capacity Analysis Module:
 Vel/Sat: 0.04 0.04 0.05 0.02 0.00 0.05 0.03 0.07 0.00 0.00 0.09 0.00
 Crit Moves: ****
 Green/Cycle: 0.23 0.23 0.09 0.00 0.23 0.15 0.54 0.00 0.00 0.40 0.00
 Volume/Cap: 0.17 0.17 0.22 0.22 0.00 0.22 0.22 0.12 0.00 0.00 0.22 0.00
 Delay/Veh: 18.8 18.8 19.2 28.6 0.0 19.1 23.8 6.8 0.0 0.0 12.2 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 ActDel/Veh: 18.8 18.8 19.2 28.6 0.0 19.1 23.8 6.8 0.0 0.0 12.2 0.0
 LOS by Move: B C C A B C C A B C C A B
 HCM2AVGQ: 1 1 2 1 0 2 1 1 0 2 1 0 2 0
 Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)
 Intersection #7 Outlet Center Dr/ I-15 SB Ramps
 Average Delay (sec/veh): 7.3 Worst Case Level of Service: A (9.8)
 Street Name: North Bound I-15 South Bound East Bound West Bound
 Approach: Lenwood Lenwood
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 0 0 0 0 0 0 1 0 0 0 0 0 1 0 0 1 0 0 0 0
 Volume Module:
 Base Vol: 0 0 0 5 10 2 0 2 1 62 2 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 0 0 5 10 2 0 2 1 62 2 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PassesByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 1.00 1.00 1.00 0.61 0.61 0.61 0.38 0.38 0.38 0.90 0.90 0.90
 PEF Volume: 0 0 0 8 16 3 0 0 0 0 0 0
 Reduced Vol: 0 0 0 8 16 3 0 0 0 0 0 0
 Final Volume: 0 0 0 8 16 3 0 0 0 0 0 0
 Critical Gap Module:
 Critical Gap: 6.4 6.5 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2 6.2
 FollowUpTime: 3.5 4.0 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5
 Capacity Module:
 Chnlct Vol: 147 148 2 2 2 2 2 2 2 2 2 2
 Percent Cap.: 850 747 1088 821 714 1088 821 714 1088 821 714 1088
 Move Cap.: 0.01 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 Volume/Cap: 0.01 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 Level of Service Module:
 2Way95thQ: 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1
 Control Del: 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3
 LOS by Move: A A A A A A A A A A A A
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: 775 775 775 775 775 775 775 775 775 775 775 775
 Shared Queue: 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1
 Shared ConDel: 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3
 Shared LOS: A A A A A A A A A A A A
 ApproachDel: 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3 7.3
 ApproachLOS: A A A A A A A A A A A A
 Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #8 Outlet Center Dr/ I-15 NB Ramps
Average Delay (sec/veh): 3.3 Worst Case Level of Service: A [8.6]
Cycle Time (sec): 90 Critical Vol./Cap. (%): 0.154
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 25.9
Optimal Cycle: 82 Level of Service: C
Street Name: I-15 South Bound East Bound West Bound
Approach: L - T - R L - T - R L - T - R L - T - R
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Stop Sign Stop Sign Uncontrolled Uncontrolled
Lanes: 0 0 1 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0

Volume Module:
Base Vol: 2 3 25 0 0 0 0 3 4 0 0 0 0 61 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 2 3 25 0 0 0 0 3 4 0 0 0 0 61 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 2 3 25 0 0 0 0 3 4 0 0 0 0 61 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.73 0.73 0.73 1.00 1.00 1.00 0.58 0.58 0.92 0.92 0.92
PHF Volume: 3 4 34 0 0 0 0 5 7 0 0 0 0 66 0
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Volume: 3 4 34 0 0 0 0 5 7 0 0 0 0 66 0

Critical Gap Module:
Critical Gap: 6.4 6.5 6.2 xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTime: 3.5 4.0 3.3 xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:
Conflict Vol: 83 83 7 xxxxx xxxxx xxxxx 66 xxxxx xxxxx xxxxx xxxxx xxxxx
Percent Cap.: 923 811 1081 xxxxx xxxxx xxxxx 1548 xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: 921 808 1081 xxxxx xxxxx xxxxx 1548 xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.00 0.01 0.03 xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx xxxxx xxxxx xxxxx

Level of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.3 xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 1034 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd CombDel: xxxxx 8.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: A
ApproachDel: 8.6 xxxxx xxxxx xxxxx xxxxx xxxxx
ApproachLOS: A

Notes: Queue reported is the number of cars per lane.

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Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #9 Lenwood/ Mercantile
Cycle (sec): 90 Critical Vol./Cap. (%): 0.154
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 25.9
Optimal Cycle: 82 Level of Service: C
Street Name: Lenwood Mercantile
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Protected Protected Protected Protected
Lanes: 1 0 1 0 1 0 2 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module:
Base Vol: 4 64 3 16 101 97 114 17 12 5 9 35
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 4 64 3 16 101 97 114 17 12 5 9 35
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 4 64 3 16 101 97 114 17 12 5 9 35
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.74 0.74 0.74 0.93 0.93 0.93 0.94 0.94 0.00 0.69 0.69 0.69
PHF Volume: 5 87 4 17 109 105 121 18 0 7 13 51
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Volume: 5 87 4 17 109 105 121 18 0 7 13 51

Critical Gap Module:
Critical Gap: 6.4 6.5 6.2 xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTime: 3.5 4.0 3.3 xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:
Conflict Vol: 83 83 7 xxxxx xxxxx xxxxx 66 xxxxx xxxxx xxxxx xxxxx xxxxx
Percent Cap.: 923 811 1081 xxxxx xxxxx xxxxx 1548 xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: 921 808 1081 xxxxx xxxxx xxxxx 1548 xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: 0.00 0.01 0.03 xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx xxxxx xxxxx xxxxx

Level of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.3 xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 1034 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd CombDel: xxxxx 8.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: A
ApproachDel: 8.6 xxxxx xxxxx xxxxx xxxxx xxxxx
ApproachLOS: A

Notes: Queue reported is the number of cars per lane.

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Barstow Casinos - Weekday Existing PM

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Lenwood/Project Access

Average Delay (sec/veh): 2.0 Worst Case Level of Service: A [9.3]

Street Name: Lenwood South Bound Project Access

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Rights: Include Include Include Include

Lanes: 0 1 0 0 0 0 1 0 1 0 0 0 1 0 0 0 0 0

Volume Module: Base Vol: 2 27 0 0 79 37 37 0 2 0 0 0 0 0 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 2 27 0 0 79 37 37 0 2 0 0 0 0 0 0 0 0 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 2 27 0 0 79 37 37 0 2 0 0 0 0 0 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 2 27 0 0 79 37 37 0 2 0 0 0 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 2 27 0 0 79 37 37 0 2 0 0 0 0 0 0 0 0 0

Critical Gap Module: Critical Gap: 6.4 6.4 6.2 6.2 6.4 6.2 6.4 6.2 6.4 6.2 6.4 6.2 6.4 6.2 6.4 6.2 6.4

FollowupFlm: 3.5 3.5 3.3 3.3 3.5 3.3 3.5 3.3 3.5 3.3 3.5 3.3 3.5 3.3 3.5 3.3 3.5

Capacity Module: Chflet Vol: 116 129 871 1014 871 1014 871 1014 871 1014 871 1014 871 1014 871 1014 871 1014

Potent Cap: 1485 1485 870 870 1485 1485 870 870 1485 1485 870 870 1485 1485 870 870 1485 1485

Move Cap: 1485 1485 870 870 1485 1485 870 870 1485 1485 870 870 1485 1485 870 870 1485 1485

Volume/Cap: 0.00 0.00 0.04 0.04 0.00 0.00 0.04 0.04 0.00 0.00 0.04 0.04 0.00 0.00 0.04 0.04 0.00

Barstow Casinos - Weekday Existing PM

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #11 Mercantile Way/Factory Outlet

Average Delay (sec/veh): 6.0 Worst Case Level of Service: A [8.5]

Street Name: Factory Outlet

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 2 0 0 1 0 2 0 0 0 0

Volume Module: Base Vol: 0 0 0 1 0 31 21 3 0 0 10 0 0 10 0 0 0

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 0 0 1 0 31 21 3 0 0 10 0 0 10 0 0 0 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 1 0 31 21 3 0 0 10 0 0 10 0 0 0 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 0.78 0.78 0.57 0.57 0.57 0.57 0.50 0.50 0.50 0.50 0.50 0.50 0.50 0.50

PHF Volume: 0 0 0 1 0 40 37 5 0 0 0 0 0 0 0 0 0 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 0 0 1 0 40 37 5 0 0 0 0 0 0 0 0 0 0

Critical Gap Module: Critical Gap: 6.4 6.5 6.2 4.1 6.4 6.5 6.2 4.1 6.4 6.5 6.2 4.1 6.4 6.5 6.2 4.1 6.4

FollowupFlm: 3.5 4.0 3.3 2.2 3.5 4.0 3.3 2.2 3.5 4.0 3.3 2.2 3.5 4.0 3.3 2.2 3.5

Capacity Module: Chflet Vol: 96 98 909 796 1064 1609 1064 1609 1064 1609 1064 1609 1064 1609 1064 1609 1064

Potent Cap: 96 98 909 796 1064 1609 1064 1609 1064 1609 1064 1609 1064 1609 1064 1609 1064

Move Cap: 96 98 909 796 1064 1609 1064 1609 1064 1609 1064 1609 1064 1609 1064 1609 1064

Volume/Cap: 0.00 0.00 0.04 0.04 0.00 0.00 0.04 0.04 0.00 0.00 0.04 0.04 0.00 0.00 0.04 0.04 0.00

Scenario: Existing MD Sat
 Command: Ex MD Sat
 Volume: Ex MD Sat
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: none
 Trip Distribution: none
 Paths: Default Path
 Routes: Default Route
 Configuration: Default Configuration

Scenario Report
 Existing MD Sat
 Ex MD Sat
 Ex MD Sat
 Existing
 Default Impact Fee
 none
 none
 Default Path
 Default Route
 Default Configuration

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #1 Lenwood/SR-58
 Cycle (sec): 60 Critical Vel./Cap.(X): 0.300
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 7.4
 Optimal Cycle: 20 Level Of Service: A
 Street Name: Lenwood
 Approach: North Bound South Bound East Bound SR-58 West Bound
 Movement: L T R L T R L T R L T R

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #1 Lenwood/SR-58
 Cycle (sec): 60 Critical Vel./Cap.(X): 0.300
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 7.4
 Optimal Cycle: 20 Level Of Service: A
 Street Name: Lenwood
 Approach: North Bound South Bound East Bound SR-58 West Bound
 Movement: L T R L T R L T R L T R

| Control: | Permitted | Include | Protected | Include | Protected |
|-------------|-----------|-----------|-----------|-----------|-----------|
| Rights: | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 |
| Min. Green: | 0 0 1 0 0 | 0 0 1 0 0 | 1 0 0 1 1 | 1 0 0 1 1 | 0 0 0 0 |

| Volume Module: | 20 | 15 | 12 | 19 | 18 | 11 | 7 | 328 | 8 | 15 | 324 | 22 |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol: | 20 | 15 | 12 | 19 | 18 | 11 | 7 | 328 | 8 | 15 | 324 | 22 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bsc: | 20 | 15 | 12 | 19 | 18 | 11 | 7 | 328 | 8 | 15 | 324 | 22 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 20 | 15 | 12 | 19 | 18 | 11 | 7 | 328 | 8 | 15 | 324 | 22 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.87 | 0.87 | 0.87 | 0.85 | 0.85 | 0.85 |
| PHF Volume: | 28 | 21 | 17 | 27 | 26 | 16 | 8 | 379 | 9 | 18 | 382 | 26 |
| Rechnet Vel: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 28 | 21 | 17 | 27 | 26 | 16 | 8 | 379 | 9 | 18 | 382 | 26 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.05 | 1.05 | 1.00 | 1.00 | 1.00 |
| Final Volume: | 28 | 21 | 17 | 27 | 26 | 16 | 8 | 396 | 10 | 18 | 382 | 26 |

Saturation Flow Module:

| | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Sat/Lane: | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Adjustment: | 0.94 | 1.00 | 1.00 | 0.94 | 1.00 | 1.00 | 0.94 | 1.00 | 1.00 | 0.94 | 1.00 | 1.00 |
| Lanes: | 0.44 | 0.31 | 0.25 | 0.41 | 0.37 | 0.22 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 747 | 560 | 448 | 696 | 660 | 403 | 1700 | 1800 | 1800 | 1700 | 1800 | 1800 |

Capacity Analysis Module:

| | | | | | | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vo./Sat: | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.00 | 0.22 | 0.01 | 0.01 | 0.21 | 0.01 |
| Crit Moves: | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.02 | 0.74 | 0.74 | 0.03 | 0.75 | 0.75 |
| Volume/Cap: | 0.29 | 0.29 | 0.29 | 0.30 | 0.30 | 0.30 | 0.28 | 0.30 | 0.01 | 0.30 | 0.28 | 0.02 |
| Delay/Veh: | 26.9 | 26.9 | 26.9 | 27.0 | 27.0 | 27.0 | 52.1 | 3.3 | 2.1 | 40.8 | 2.8 | 1.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.9 | 26.9 | 26.9 | 27.0 | 27.0 | 27.0 | 52.1 | 3.3 | 2.1 | 40.8 | 2.8 | 1.9 |
| LOS by Move: | C | C | C | C | C | C | D | A | D | A | D | A |
| HCM2KavgQ: | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 0 | 1 | 2 | 0 | 1 |

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #2 Lenwood/ Main St
 Cycle (sec): 100 Critical Vol./Cap. (X): 0.129
 Loss Time (sec): 48 (Y+R=4.0 sec) Average Delay (sec/veh): 28.7
 Optimal Cycle: 48 Level Of Service: C

Street Name: Lenwood Main St
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

| Control: | Protected | Protected | Protected | Protected |
|-------------|---|---|---|---|
| Rights: | Include | Include | Include | Include |
| Min. Green: | 10 10 10 10 10 10 10 10 10 10 10 10 | 10 10 10 10 10 10 10 10 10 10 10 10 | 10 10 10 10 10 10 10 10 10 10 10 10 | 10 10 10 10 10 10 10 10 10 10 10 10 |
| Lanes: | 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 | 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 | 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 | 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 |

Volume Module:
 Base Vol: 24 60 49 40 50 11 8 72 17 28 95 52
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 24 60 49 40 50 11 8 72 17 28 95 52
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 24 60 49 40 50 11 8 72 17 28 95 52
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.84 0.84 0.84 0.78 0.78 0.78 0.90 0.90 0.90 0.90 0.95 0.95
 PHF Volume: 29 72 58 51 64 14 9 80 19 30 100 55
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 29 72 58 51 64 14 9 80 19 30 100 55
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MFL Adj: 1.00 1.05 1.05 1.00 1.00 1.00 1.00 1.05 1.05 1.00 1.05 1.05
 FinalVolume: 29 75 61 51 64 14 9 84 20 30 105 58

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
 Lanes: 1.00 1.10 0.90 1.00 0.82 0.18 1.00 1.62 0.38 1.00 1.25 0.71
 Final Sat.: 1700 1992 1618 1700 1475 325 1700 2912 688 1700 2327 1273

Capacity Analysis Module:
 Vol/Sat: 0.02 0.04 0.04 0.03 0.04 0.04 0.01 0.03 0.03 0.02 0.05 0.05
 Crit Moves: 0.25 0.27 0.27 0.22 0.25 0.25 0.10 0.21 0.21 0.21 0.33 0.33
 Green/Cycle: 0.07 0.14 0.14 0.14 0.18 0.18 0.05 0.13 0.13 0.08 0.14 0.14
 Volume/Cap: 29.2 27.6 27.6 32.3 30.6 30.6 41.3 32.2 32.2 31.9 23.9 23.9
 Delay/Veh: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 User DelAdj: 29.2 27.6 27.6 32.3 30.6 30.6 41.3 32.2 32.2 31.9 23.9 23.9
 AdjDel/Veh: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 LOS by Move: C C C C C C C C C C C C
 HCM2AVG: 1 2 2 1 2 2 2 1 1 1 1 2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #3 Main St/ SR-58 EB Ramps
 Cycle (sec): 60 Critical Vol./Cap. (X): 0.122
 Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 3.2
 Optimal Cycle: 16 Level Of Service: A

Street Name: SR-58 Main St
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

| Control: | Protected | Protected | Protected | Protected |
|-------------|---|---|---|---|
| Rights: | Include | Include | Include | Include |
| Min. Green: | 0 | 0 | 0 | 0 |
| Lanes: | 0 | 0 | 0 | 0 |

Volume Module:
 Base Vol: 0 0 0 0 21 1 2 0 195 87 12 313 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 0 0 0 21 1 2 0 195 87 12 313 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 0 0 0 0 21 1 2 0 195 87 12 313 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 1.00 1.00 1.00 0.72 0.72 0.72 0.91 0.91 0.91 0.91 0.91 0.91 0.91
 PHF Volume: 0 0 0 0 29 1 3 0 215 96 13 345 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 0 0 0 0 29 1 3 0 215 96 13 345 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MFL Adj: 1.00 1.00 1.00 1.05 1.05 1.05 1.00 1.05 1.05 1.05 1.00 1.05 1.00
 FinalVolume: 0 0 0 0 31 1 3 0 225 101 13 362 0

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00
 Lanes: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 Final Sat.: 0 0 0 0 3254 155 1800 0 2489 1111 1700 3600 0

Capacity Analysis Module:
 Vol/Sat: 0.00 0.00 0.00 0.01 0.01 0.00 0.00 0.09 0.09 0.01 0.10 0.00 0.00
 Crit Moves: 0.00 0.00 0.00 0.08 0.08 0.08 0.00 0.76 0.76 0.07 0.82 0.00
 Green/Cycle: 0.00 0.00 0.00 0.12 0.12 0.12 0.00 0.12 0.12 0.12 0.12 0.00
 Volume/Cap: 0.00 0.00 0.00 0.26 0.26 0.26 0.00 0.20 0.20 0.20 0.20 0.00
 Delay/Veh: 0.00 0.00 0.00 26.7 26.7 25.9 0.00 2.0 2.0 2.0 2.0 0.00
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 0.00 0.00 0.00 26.7 26.7 25.9 0.00 2.0 2.0 2.0 2.0 0.00
 LOS by Move: A A A C C C C C C C C C C
 HCM2AVG: 0 0 0 0 0 0 0 1 1 1 1 0 1

Note: Queue reported is the number of cars per lane.

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Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #5 Lenwood/I-15 SB Ramps
Cycle (sec): 60 Critical Vol./Cap.(X): 0.219
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 10.3
Optimal Cycle: 32 Level of Service: B

Street Name: I-15 North Bound South Bound East Bound West Bound
Approach: L T R L T R L T R L T R
Movement: L T R L T R L T R L T R
Control: Split Phase Split Phase Permitted Ignored Permitted
Rights: Include Include Ignore Ignored Ignored
Min. Green: 0 0 0 0 0 0 0 0 0 0 26 26 0 26 26
Lanes: 0 0 0 0 0 0 0 0 0 0 2 0 1 0 0 2 0 1

Volume Module:
Base Vol: 0 0 383 0 157 0 178 0 0 184 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 0 0 0 0 0 0 0 178 0 0 184 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 383 0 157 0 178 0 0 184 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 0.97 0.97 0.97 0.81 0.81 0.00 0.77 0.77 0.00
PHF Volume: 0 0 395 0 162 0 219 0 0 238 0
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.03 1.00 1.00 1.00 1.03 1.05 0.00 1.00 1.05 0.00 1.00 1.05 0.00 1.00
Final Volume: 0 0 0 407 0 162 0 230 0 250 0

Saturation Flow Module:
Vol/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.89 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 1.00 0.00 2.00 1.00 0.00 2.00 1.00 0.00 2.00 1.00
Final Sat.: 0 0 0 3200 0 1800 0 3600 1800 0 3600 1800 0 3600 1800 0 3600 1800

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.13 0.00 0.09 0.00 0.06 0.00 0.00 0.07 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.47 0.00 0.47 0.00 0.43 0.00 0.00 0.43 0.00
Volume/Cap: 0.00 0.00 0.00 0.27 0.00 0.19 0.00 0.15 0.00 0.00 0.16 0.00
Delay/Veh: 0.0 0.0 0.0 10.2 0.0 9.9 0.0 10.5 0.0 0.0 10.6 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 10.2 0.0 9.9 0.0 10.5 0.0 0.0 10.6 0.0
LOS by Move: A A A A A A A A A A A A A A A A A
HCM/kvgo: 0 0 0 3 0 2 0 1 0 0 1 0 0 1 0 0 1 0
Note: Queue reported is the number of cars per lane.

Barstow Casinos Project - Saturday Existing MD

Level of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #4 Main St/ SR-58 WB Ramps
Cycle (sec): 60 Critical Vol./Cap.(X): 0.172
Loss Time (sec): 17 (Y+R=4.0 sec) Average Delay (sec/veh): 9.8
Optimal Cycle: 17 Level of Service: A

Street Name: SR-58 North Bound South Bound East Bound West Bound
Approach: L T R L T R L T R L T R
Movement: L T R L T R L T R L T R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 1 0 0 0 0 1 0 2 0 0 0 0 2 0 1

Volume Module:
Base Vol: 106 5 16 0 0 0 0 213 0 0 242 32
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 106 5 16 0 0 0 0 213 0 0 242 32
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 106 5 16 0 0 0 0 213 0 0 242 32
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.86 0.86 0.86 1.00 1.00 1.00 0.94 0.94 0.94 0.89 0.89 0.89
PHF Volume: 124 6 19 0 0 0 0 226 0 0 271 36
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.03 1.05 1.00 1.03 1.05 1.00
Final Volume: 124 6 19 0 0 0 0 237 0 0 285 36

Saturation Flow Module:
Vol/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.96 0.04 1.00 0.00 0.00 0.00 1.00 2.00 0.00 0.00 2.00 1.00
Final Sat.: 1627 77 1800 0 0 0 1700 3600 0 0 3600 1800

Capacity Analysis Module:
Vol/Sat: 0.08 0.08 0.01 0.00 0.00 0.00 0.00 0.07 0.00 0.00 0.08 0.02
Crit Moves: ****
Green/Cycle: 0.44 0.44 0.00 0.00 0.00 0.00 0.46 0.00 0.00 0.46 0.46
Volume/Cap: 0.17 0.17 0.02 0.00 0.00 0.00 0.00 0.14 0.00 0.00 0.17 0.04
Delay/Veh: 10.6 10.6 9.5 0.0 0.0 0.0 9.6 0.0 0.0 9.8 9.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 10.6 10.6 9.5 0.0 0.0 0.0 9.6 0.0 0.0 9.8 9.1
LOS by Move: B B A A A A A A A A A A A A A A A
HCM/kvgo: 2 2 0 0 0 0 1 0 0 1 0 2 0
Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)
 Intersection #7 Outlet Center Dr/ I-15 SB Ramps
 Cycle (sec): 60 Critical Vol./Cap. (X): 0.482
 Lost time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 17.6
 Optimal Cycle: 30 Level of Service: B
 Street Name: North Bound South Bound East Bound West Bound
 Approach: L - T - R L - T - R L - T - R L - T - R
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 1 1 0 0 2 1 0 0 0 2 2 0 3 0 0 0 0 0 2 1 0

Volume Module:
 Base Vol: 62 71 460 23 0 230 94 408 0 0 670 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Base: 62 71 460 23 0 230 94 408 0 0 670 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PassenByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 62 71 460 23 0 230 94 408 0 0 670 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.77 0.77 0.77 0.82 0.82 0.89 0.89 0.00 0.97 0.97 0.97
 PHF Volume: 81 92 599 28 0 282 106 461 0 0 692 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 81 92 599 28 0 282 106 461 0 0 692 0
 PCF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MAF Adj: 1.05 1.05 1.13 1.09 1.00 1.13 1.03 1.10 0.00 1.00 1.10 1.10
 Final Volume: 85 97 677 28 0 319 109 507 0 0 781 0

Saturation Flow Module:
 Vol/Sat: 0.05 0.05 0.19 0.02 0.00 0.09 0.03 0.09 0.00 0.00 0.14 0.00
 Crit Moves: ****
 Green/Cycle: 0.39 0.39 0.39 0.11 0.00 0.18 0.07 0.36 0.00 0.00 0.29 0.00
 Volume/Cap: 0.13 0.14 0.48 0.15 0.00 0.48 0.48 0.26 0.00 0.00 0.48 0.00
 Delay/Veh: 11.9 12.0 14.9 25.6 0.0 24.4 34.0 13.7 0.0 0.0 18.5 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 11.9 12.0 14.9 25.6 0.0 24.4 34.0 13.7 0.0 0.0 18.5 0.0
 LOS by Move: B C A C A C 2 2 A 0 A 4 A
 HCM3Aveq: 1 1 5 1 0 3 2 2 0 0 4 0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)
 Intersection #7 Outlet Center Dr/ I-15 SB Ramps
 Cycle (sec): 60 Critical Vol./Cap. (X): 0.482
 Lost time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 17.6
 Optimal Cycle: 30 Level of Service: B
 Street Name: North Bound South Bound East Bound West Bound
 Approach: L - T - R L - T - R L - T - R L - T - R
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 1 1 0 0 2 1 0 0 0 2 2 0 3 0 0 0 0 0 2 1 0

Volume Module:
 Base Vol: 62 71 460 23 0 230 94 408 0 0 670 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Base: 62 71 460 23 0 230 94 408 0 0 670 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PassenByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 62 71 460 23 0 230 94 408 0 0 670 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.77 0.77 0.77 0.82 0.82 0.89 0.89 0.00 0.97 0.97 0.97
 PHF Volume: 81 92 599 28 0 282 106 461 0 0 692 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 81 92 599 28 0 282 106 461 0 0 692 0
 PCF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MAF Adj: 1.05 1.05 1.13 1.09 1.00 1.13 1.03 1.10 0.00 1.00 1.10 1.10
 Final Volume: 85 97 677 28 0 319 109 507 0 0 781 0

Saturation Flow Module:
 Vol/Sat: 0.05 0.05 0.19 0.02 0.00 0.09 0.03 0.09 0.00 0.00 0.14 0.00
 Crit Moves: ****
 Green/Cycle: 0.39 0.39 0.39 0.11 0.00 0.18 0.07 0.36 0.00 0.00 0.29 0.00
 Volume/Cap: 0.13 0.14 0.48 0.15 0.00 0.48 0.48 0.26 0.00 0.00 0.48 0.00
 Delay/Veh: 11.9 12.0 14.9 25.6 0.0 24.4 34.0 13.7 0.0 0.0 18.5 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 11.9 12.0 14.9 25.6 0.0 24.4 34.0 13.7 0.0 0.0 18.5 0.0
 LOS by Move: B C A C A C 2 2 A 0 A 4 A
 HCM3Aveq: 1 1 5 1 0 3 2 2 0 0 4 0

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #9 Lenwood/Mercantile
 Cycle (sec): 90 Critical Vel./Cap.(X): 0.250
 Loss Time (sec): 8 (Y=4.0 see) Average Delay (sec/veh): 28.6
 Optimal Cycle: 82 Level of Service: C

Street Name: Lenwood Mercantile
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Protected Protected Protected Protected
 Rights: Include Include Ignore Ovl
 Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module:
 Base Vol: 10 94 7 56 87 178 165 26 10 3 18 34
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Base: 10 94 7 56 87 178 165 26 10 3 18 34
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 10 94 7 56 87 178 165 26 10 3 18 34
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.93 0.93 0.93 0.97 0.97 0.97 0.94 0.94 0.00 0.85 0.65 0.65
 PHF Volume: 11 101 8 58 90 184 176 26 0 5 28 52
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 11 101 8 58 90 184 176 26 0 5 28 52
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 M/F Adj: 1.00 1.05 1.05 1.00 1.05 1.00 1.00 1.00 0.00 1.00 1.00 1.00
 Final Volume: 11 106 8 58 95 184 176 26 0 5 28 52

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adj: 0.94 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Adj: 1.00 1.86 0.14 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Sat.: 1700 3350 250 1700 3600 1800 1700 1800 1800 1700 1800 1800
 Capacity Analysis Module:
 Vol/Sat: 0.01 0.03 0.03 0.03 0.03 0.10 0.10 0.02 0.00 0.00 0.02 0.03
 Crit Moves: ****
 Green/Cycle: 0.11 0.29 0.29 0.11 0.29 0.29 0.20 0.38 0.00 0.13 0.31 0.42
 Volume/Cap: 0.05 0.11 0.11 0.31 0.09 0.35 0.52 0.04 0.00 0.02 0.05 0.07
 Delay/Veh: 36.4 23.7 41.0 23.5 27.2 37.7 37.9 0.0 34.0 21.9 15.6
 User Delay: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 36.4 23.7 41.0 23.5 27.2 37.7 37.9 0.0 34.0 21.9 15.6
 LOS by Move: D C C D C C C D B A C C B
 RCZKXVQ: 0 1 1 1 2 1 4 5 0 0 0 1
 Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)
 Intersection #8 Outlet Center Dr/ I-15 NB Ramps
 Average Delay (sec/veh): 3.5 Worst Case Level of Service: A [9.2]

Street Name: Outlet Center Dr
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Volume Module:
 Base Vol: 10 8 39 0 0 0 18 10 0 0 97 8
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Base: 10 8 39 0 0 0 18 10 0 0 97 8
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 10 8 39 0 0 0 18 10 0 0 97 8
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.83 0.83 0.83 1.00 1.00 1.00 0.58 0.58 0.82 0.82 0.82 0.82
 PHF Volume: 12 10 47 0 0 0 31 17 0 0 119 10
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Final Volume: 12 10 47 0 0 0 31 17 0 0 119 10

Critical Gap Module:
 Critical Gap: 6.4 6.5 6.2 XXXXX XXXX XXXXX 4.1 XXXX XXXXX XXXXX XXXX XXXX
 Followup: 3.5 4.0 3.3 XXXXX XXXX XXXXX 2.2 XXXX XXXXX XXXXX XXXX XXXX
 Capacity Module:
 Conflict Vol: 203 207 17 XXXX XXXX XXXXX 129 XXXX XXXXX XXXX XXXX XXXXX
 Patent Cap.: 751 693 1068 XXXX XXXX XXXXX 1470 XXXX XXXXX XXXX XXXX XXXXX
 Move Cap.: 778 678 1068 XXXX XXXX XXXXX 1470 XXXX XXXXX XXXX XXXX XXXXX
 Volume/Cap: 0.02 0.01 0.04 XXXX XXXX XXXX 0.02 XXXX XXXX XXXX XXXX XXXX
 Level of Service Module:
 2WayStHQ: XXXX XXXX XXXXX XXXX XXXX XXXXX 0.1 XXXX XXXXX XXXX XXXX XXXXX
 Control Del.: XXXX XXXX XXXXX XXXX XXXX XXXXX 7.5 XXXX XXXXX XXXX XXXXX
 LOS by Move: * * * * * A * * * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: XXXX 932 XXXXX XXXX XXXX XXXXX XXXX XXXX XXXXX XXXX XXXXX
 Shared Queue: XXXXX 0.2 XXXXX XXXXX XXXX XXXXX 0.1 XXXX XXXXX XXXXX XXXX XXXXX
 Shared Delay: XXXXX 9.2 XXXXX XXXXX XXXX XXXXX 7.5 XXXX XXXXX XXXXX XXXX XXXXX
 Shared LOS: * A * * * * * A * * * * *
 Approach Del: 9.2 XXXXX * * * * * XXXXX * * * * *
 Approach LOS: * A * * * * * * * * * *
 Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #10 Lenwood/Project Access

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: [9.8]

Street Name: Lenwood Project Access
Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include

Lanes: 0 1 0 0 0 0 1 0 1 0 1 0 0 0 0 0

Volume Module:
Base Vol: 2 72 0 0 103 35 28 0 1 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Critical Gap Module:
Critical Gap: 4.1 xxx xxx xxx xxx xxx 6.4 xxx 6.2 xxx xxx xxx xxx xxx
FollowupPfm: 2.2 xxx xxx xxx xxx xxx 3.5 xxx 3.5 xxx xxx xxx xxx xxx

Capacity Module:
Charlet Vol: 150 xxx xxx xxx xxx xxx 214 xxx 75 xxx xxx xxx xxx
Petent Cap: 1444 xxx xxx xxx xxx xxx 778 xxx 92 xxx xxx xxx xxx

Level Of Service Module:
2Way5thQ: 0.0 xxx xxx xxx xxx xxx 0.1 xxx 0.0 xxx xxx xxx xxx
Control Del: 7.5 xxx xxx xxx xxx xxx 9.8 xxx 8.6 xxx xxx xxx xxx

Movement: L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R
Shared Cap: 0.0 xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx

Shared Queue: 0.0 xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx

Shared LOS: A * * * * * 9.8 * * * * *

ApproachDel: xxxxxx
ApproachLOS: A

Note: Queue reported is the number of cars per lane.

Barstow Casinos Project - Saturday Existing MD

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #11 Mercantile Way/Factory Outlet Ave

Average Delay (sec/veh): 6.1 Worst Case Level Of Service: [8.5]

Street Name: Factory Outlet Mercantile
Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include

Lanes: 0 0 0 0 0 0 1 0 1 0 1 0 2 0 0 0 0 0 0

Volume Module:
Base Vol: 0 0 0 1 0 32 34 5 0 0 11 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Critical Gap Module:
Critical Gap: 6.4 6.5 6.2 4.1 xxx xxx xxx xxx xxx xxx xxx xxx
FollowupPfm: 3.5 4.0 3.3 2.2 xxx xxx xxx xxx xxx xxx xxx xxx

Capacity Module:
Charlet Vol: xxx xxx xxx xxx xxx 124 128 18 18 xxx xxx xxx xxx
Petent Cap: xxx xxx xxx xxx xxx 876 766 1067 1613 xxx xxx xxx xxx

Level Of Service Module:
2Way5thQ: xxx xxx xxx xxx xxx xxx xxx xxx xxx 0.1 xxx xxx xxx xxx
Control Del: xxx xxx xxx xxx xxx xxx xxx xxx 7.3 xxx xxx xxx xxx

Movement: L - T - R L - T - R L - T - R L - T - R L - T - R L - T - R
Shared Cap: xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx

Shared Queue: xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx xxx

Shared LOS: * * * * * 8.5 * * * * *

ApproachDel: xxxxxx
ApproachLOS: A

Note: Queue reported is the number of cars per lane.

Scenario: Existing PM Sat
 Command: Ex PM Sat
 Volume: Ex PM Sat
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: none
 Trip Distribution: none
 Paths: Default Path
 Routes: Default Route
 Configuration: Default Configuration

Scenario Report
 Existing PM Sat
 Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #1 Lenwood/SR-58
 Cycle (sec): 60 Critical Vol./Cap. (%): 0.215
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 7.9
 Optimal Cycle: 18 Level Of Service: J

Street Name: Lenwood
 Approach: North Bound South Bound East Bound SR-58 West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Permitted Permitted Protected Protected
 Rights: Include Include Include Include
 Min. Green: 0 0 1 0 0 0 1 0 0 0 0 0 0 0 0 0
 Max. Green: 0 0 1 0 0 0 0 1 0 0 1 0 0 1 1 0 0 1 0 1
 Volume Module:
 Base Vol: 11 6 8 14 16 12 13 201 12 13 203 14
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Base: 11 6 8 14 16 12 13 201 12 13 203 14
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserbyVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 11 6 8 14 16 12 13 201 12 13 203 14
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.86 0.86 0.86 0.66 0.66 0.66 0.78 0.78 0.78 0.78 0.97 0.97
 PHF Volume: 13 7 9 21 24 18 17 258 15 13 209 14
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 13 7 9 21 24 18 17 258 15 13 209 14
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 M/F Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.05 1.05 1.05 1.00 1.00
 Final Volume: 13 7 9 21 24 18 17 271 16 13 209 14

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
 Lane: 0.46 0.23 0.31 0.35 0.37 0.28 1.00 1.00 1.00 1.00 1.00 1.00
 Final Sat.: 772 421 561 588 673 504 1700 1800 1800 1700 1800 1800
 Capacity Analysis Module:
 Vol./Sat: 0.02 0.02 0.02 0.04 0.04 0.04 0.01 0.15 0.01 0.01 0.12 0.01
 Crit Moves: ****
 Green/Cycle: 0.17 0.17 0.17 0.17 0.17 0.17 0.06 0.70 0.70 0.04 0.68 0.68
 Volume/Cap: 0.10 0.10 0.10 0.22 0.22 0.22 0.17 0.22 0.01 0.22 0.17 0.01
 Delay/Veh: 21.8 21.8 21.8 23.2 23.2 23.2 30.8 3.6 2.8 35.9 3.9 3.2
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 21.8 21.8 21.8 23.2 23.2 23.2 30.8 3.6 2.8 35.9 3.9 3.2
 LOS by Move: C C C C C C C C C C A A D A A
 HCM2Kargo: 1 1 1 1 1 1 1 1 1 1 1 1
 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #3 Main St/ SR-58 BB Ramps
 Cycle (sec): 60 Critical Vol./Cap.(X): 0.135
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 2.2
 Original Cycle: 16 Level Of Service: A

Street Name: SR-58 Main St
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Split Phase Split Phase Protected Protected
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 1 0 0 1 0 0 1 0 0 0 0 0
 Lanes: 0 0 0 0 1 1 0 0 1 0 0 1 0 1 0 2 0 0

Volume Module:
 Base Vol: 0 0 0 0 9 0 3 0 200 98 14 307 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bsc: 0 0 0 0 9 0 3 0 200 98 14 307 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 0 0 0 0 9 0 3 0 200 98 14 307 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 1.00 1.00 1.00 0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.95 0.95 0.95
 PHF Volume: 0 0 0 0 12 0 4 0 252 123 15 325 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 0 0 0 0 12 0 4 0 252 123 15 325 0
 PCB Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MFL Adj: 1.00 1.00 1.00 1.05 1.05 1.00 1.00 1.05 1.05 1.00 1.00 1.05 1.00
 FinalVolume: 0 0 0 0 13 0 4 0 264 130 15 341 0

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
 Lanes: 0.00 0.00 0.00 2.00 0.00 1.00 0.00 1.34 0.66 1.00 2.00 0.00
 Final Sat.: 0 0 0 3400 0 1800 0 2416 1184 1700 3600 0

Capacity Analysis Module:
 Vol/Sat: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.11 0.11 0.01 0.09 0.00
 Crit Moves: ****
 Green/Cycle: 0.00 0.00 0.00 0.03 0.00 0.03 0.00 0.81 0.81 0.06 0.87 0.00
 Volume/Cap: 0.00 0.00 0.00 0.14 0.00 0.08 0.00 0.14 0.14 0.14 0.11 0.00
 Delay/Veh: 0.0 0.0 0.0 31.5 0.0 31.6 0.0 1.3 1.3 29.1 0.6 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 0.0 0.0 0.0 31.5 0.0 31.6 0.0 1.3 1.3 29.1 0.6 0.0
 LOS by Move: A A A C A C A C A C A C A
 HCM3-AGG: *****

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #2 Lenwood/ Main St
 Cycle (sec): 100 Critical Vol./Cap.(X): 0.083
 Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 27.9
 Original Cycle: 48 Level Of Service: C

Street Name: Lenwood Main St
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Protected Protected Protected Protected
 Rights: Include Include Include Include
 Min. Green: 10 10 10 10 10 10 10 10 10 10 10 10
 Lanes: 1 0 1 0 1 0 0 1 0 1 0 1 0 1 0

Volume Module:
 Base Vol: 23 39 45 46 46 6 16 62 15 42 68 47
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bsc: 23 39 45 46 46 6 16 62 15 42 68 47
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 23 39 45 46 46 6 16 62 15 42 68 47
 User Adj: 0.84 0.84 0.84 0.88 0.88 0.87 0.87 0.87 0.84 0.94 0.94
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Volume: 19 33 38 40 40 5 14 54 13 39 64 44
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 19 33 38 40 40 5 14 54 13 39 64 44
 PCB Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MFL Adj: 1.00 1.05 1.05 1.00 1.00 1.00 1.00 1.05 1.05 1.00 1.05 1.05
 FinalVolume: 19 34 40 40 40 5 14 56 14 39 67 46

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
 Lanes: 1.00 1.00 1.00 1.00 0.88 0.12 1.00 1.61 0.39 1.00 1.18 0.82
 Final Sat.: 1700 1800 1800 1700 1592 208 1700 2899 701 1700 2129 1471

Capacity Analysis Module:
 Vol/Sat: 0.01 0.02 0.02 0.02 0.03 0.03 0.01 0.02 0.02 0.02 0.03 0.03
 Crit Moves: ****
 Green/Cycle: 0.14 0.22 0.22 0.22 0.31 0.31 0.10 0.24 0.24 0.24 0.38 0.38
 Volume/Cap: 0.08 0.09 0.10 0.11 0.08 0.08 0.08 0.08 0.08 0.10 0.08 0.08
 Delay/Veh: 38.4 31.1 31.3 31.7 25.0 25.0 41.8 29.7 29.7 30.1 20.1 20.1
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 38.4 31.1 31.3 31.7 25.0 25.0 41.8 29.7 29.7 30.1 20.1 20.1
 LOS by Move: D C C C C D C D C C C C
 HCM3-AGG: *****

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #4 Main St/ SR-58 WB Ramps
 Cycle (sec): 60 Critical Vel./Cap. (X): 0.171
 Loss Time (sec): 17 (Y+R=4.0 sec) Average Delay (sec/veh): 10.6
 Optimal Cycle: 17 Level Of Service: B
 Street Name: SR-58 South Bound East Bound West Bound
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Protected Protected
 Rights: Include Include Include
 Min. Green: 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 1 0 1 0 0 0 0 1 0 2 0 0 0 0 2 0 1

Volume Module:
 Base Vol: 122 0 5 0 0 0 1 191 0 0 194 21
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 122 0 5 0 0 0 1 191 0 0 194 21
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 122 0 5 0 0 0 1 191 0 0 194 21
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.90 0.90 0.90 1.00 1.00 0.76 0.76 0.89 0.89 0.89
 PHF Volume: 136 0 6 0 0 0 1 252 0 0 217 24
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vel: 136 0 6 0 0 0 1 252 0 0 217 24
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MUF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 136 0 6 0 0 0 1 252 0 0 217 24

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
 Lanes: 1.00 0.00 1.00 0.00 0.00 1.00 2.00 0.00 0.00 2.00 0.00 1.00
 Final Sat.: 1700 0 1800 0 0 0 1700 3600 0 0 3600 1800

Capacity Analysis Module:
 Vol/Sat: 0.08 0.00 0.00 0.00 0.00 0.00 0.07 0.00 0.00 0.06 0.01
 Crit Moves: ****
 Green/Cycle: 0.47 0.00 0.00 0.00 0.01 0.43 0.00 0.00 0.43 0.00 0.43
 Volume/Cap: 0.17 0.00 0.01 0.00 0.00 0.15 0.17 0.00 0.00 0.15 0.03
 Delay/Veh: 9.7 0.0 8.5 0.0 0.0 62.5 10.7 0.0 0.0 10.8 10.1
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 9.7 0.0 8.5 0.0 0.0 62.5 10.7 0.0 0.0 10.8 10.1
 LOS by Move: A A A A A E B A E B
 HCM2AveC: 2 0 0 0 0 0 2 0 0 0 1 0

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #5 Lenwood/ I-15 SB Ramps
 Cycle (sec): 60 Critical Vel./Cap. (X): 0.152
 Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 9.9
 Optimal Cycle: 32 Level Of Service: A
 Street Name: I-15 South Bound East Bound West Bound
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Permitted Permitted
 Rights: Include Include Ignore Ignore
 Min. Green: 0 0 0 0 0 0 0 0 0 26 26 0 26 26
 Lanes: 0 0 0 0 0 0 0 0 1 0 0 2 0 1 0 0 2 0 1

Volume Module:
 Base Vol: 0 0 0 239 0 122 0 141 0 0 137 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 0 0 239 0 122 0 141 0 0 137 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 0 0 0 239 0 122 0 141 0 0 137 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 1.00 1.00 1.00 0.85 0.85 0.85 0.90 0.90 0.89 0.89 0.89 0.89
 PHF Volume: 0 0 0 281 0 144 0 157 0 0 154 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vel: 0 0 0 281 0 144 0 157 0 0 154 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MUF Adj: 1.00 1.00 1.00 1.03 1.00 1.00 1.00 1.03 1.05 0.00 1.00 1.05 0.00
 FinalVolume: 0 0 0 230 0 144 0 165 0 0 162 0

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.94 1.00 1.00 0.89 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
 Lanes: 2.00 0.00 1.00 0.00 0.00 2.00 0.00 1.00 0.00 2.00 0.00 1.00
 Final Sat.: 0 0 0 3200 0 1800 0 3600 1800 0 3600 1800

Capacity Analysis Module:
 Vol/Sat: 0.00 0.00 0.00 0.09 0.00 0.08 0.00 0.05 0.00 0.04 0.00
 Crit Moves: ****
 Green/Cycle: 0.00 0.00 0.00 0.47 0.00 0.47 0.00 0.43 0.00 0.00 0.43 0.00
 Volume/Cap: 0.00 0.00 0.00 0.19 0.00 0.17 0.00 0.11 0.00 0.00 0.10 0.00
 Delay/Veh: 0.0 0.0 0.0 9.7 0.0 9.7 0.0 10.2 0.0 0.0 10.2 0.0
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 0.0 0.0 0.0 9.7 0.0 9.7 0.0 10.2 0.0 0.0 10.2 0.0
 LOS by Move: A A A A A A A A A A A A
 HCM2AveC: 0 0 0 2 0 2 0 1 0 0 1 0

Note: Queue reported is the number of cars per lane.

Intersection #6 Lenwood/SR-15 NB Ramps/High Point Pkwy

Cycle (sec): 60 Critical Vol./Cap. (X): 0.259

Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 14.0

Optimal Cycle: 22 (Y+R=4.0 sec) Level of Service: B

Street Name: North Bound South Bound East Bound West Bound

Approach: I-15

Movement: L T R L T R L T R L T R L T R

Control: Split Phase Split Phase Protected Protected

Rights: Include Include Ignore Ignore

Min. Green: 1 1 0 2 1 0 0 2 2 0 3 0 0 0 2 1 0

Lanes: 1 1 0 2 1 0 0 2 2 0 3 0 0 0 2 1 0

Volume Module: 50 38 199 15 0 99 56 258 0 0 500 0

Base Vol: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Base: 50 38 199 15 0 99 56 258 0 0 500 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 50 38 199 15 0 99 56 258 0 0 500 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.84 0.84 0.84 0.80 0.80 0.80 0.91 0.91 0.91 0.91 0.91 0.91

PHF Volume: 59 45 237 19 0 124 62 284 0 0 549 0

Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PCF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MUF Adj: 1.05 1.05 1.13 1.00 1.00 1.13 1.03 1.10 0.00 1.00 1.10 1.10

Final Volume: 62 47 267 19 0 140 64 313 0 0 604 0

Saturation Flow Module: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800

Set/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800

Adj/Adj: 0.94 1.00 2.00 1.00 0.99 1.00 1.00 1.00 0.94 1.00 1.00

Lanes: 1.16 0.84 2.00 1.00 0.00 2.00 2.00 3.00 0.00 0.00 3.00 0.00

Final Sat: 1979 1504 3600 1700 0 3600 3200 5400 0 0 5400 0

Capacity Analysis Module: Vol/Sat: 0.03 0.03 0.07 0.01 0.00 0.04 0.02 0.06 0.00 0.00 0.11 0.00

Crit Moves: 0.29 0.29 0.29 0.07 0.00 0.15 0.08 0.51 0.00 0.00 0.43 0.00

Green/Cycle: 0.11 0.11 0.26 0.15 0.00 0.26 0.26 0.11 0.00 0.00 0.26 0.00

Volume/Cap: 16.0 16.0 17.1 28.6 0.0 23.7 28.7 7.8 0.0 0.0 11.2 0.0

Delay/Veh: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

User Delay: 16.0 16.0 17.1 28.6 0.0 23.7 28.7 7.8 0.0 0.0 11.2 0.0

Adj Delay/Veh: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

LOS By Move: E E C C A C C C A C C A A A B A

HCM Avg: 1 1 2 0 0 1 1 1 1 1 0 0 2 0

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Outlet Center Dr/ I-15 SB Ramps

Average Delay (sec/veh): 6.5 Worst Case Level of Service: E [10.3]

Street Name: North Bound South Bound East Bound West Bound

Approach: I-15

Movement: L T R L T R L T R L T R L T R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled

Rights: Include Include Include Include

Lanes: 0 0 0 0 0 1 0 0 0 0 0 1 0 0 1 0 0 0

Volume Module: 0 0 0 5 3 0 0 4 2 55 2 0

Base Vol: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Growth Adj: 0 0 0 5 3 0 0 4 2 55 2 0

Initial Base: 0 0 0 5 3 0 0 4 2 55 2 0

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 0 0 5 3 0 0 4 2 55 2 0

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 0.87 0.87 0.87 0.38 0.38 0.38 0.84 0.54 0.54

PHF Volume: 0 0 0 7 4 0 0 0 0 11 5 102 4 0

Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Final Volume: 0 0 0 7 4 0 0 0 0 11 5 102 4 0

Critical Gap Module: Critical Gap: 6.4 6.5 XXXXX XXXXX XXXXX XXXXX XXXXX 4.1 XXXX XXXXX

FollowUpGap: XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX 2.2 XXXX XXXXX

Capacity Module: Conflict Vol: XXXX XXXX XXXXX 221 223 XXXXX XXXXX XXXXX XXXXX 16 XXXX XXXXX

Potent Cap: XXXX XXXX XXXXX 772 679 XXXXX XXXXX XXXXX XXXXX 1615 XXXX XXXXX

Move Cap: XXXX XXXX XXXXX 732 634 XXXXX XXXXX XXXXX XXXXX 1615 XXXX XXXXX

Volume/Cap: XXXX XXXX XXXXX 0.01 0.01 XXXXX XXXXX XXXXX XXXXX 0.06 XXXX XXXXX

Level of Service Module: 2May95HQ: XXXX XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX 0.2 XXXX XXXXX

Control Del: XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX 7.4 XXXX XXXXX

LOS By Move: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap: XXXX XXXX XXXXX 692 XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX

Shared Queue: XXXX XXXX XXXXX 0.1 XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX

Shared Control: XXXX XXXXX XXXXX 10.3 XXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX

Shared LOS: XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX

Approach LOS: XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)
 Intersection #8 Outlet Center Dr/ I-15 NB Ramps
 Average Delay (sec/vch): 2.6 Worst Case Level of Service: A [8, 8]
 Street Name: North Bound I-15 South Bound East Bound West Bound
 Approach: L - T - R L - T - R L - T - R L - T - R
 Movement: L - T - R L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include
 Lanes: 0 0 1 0 0 0 0 0 0 1 0 0 0 0 0 0 1 0
 Volume Module:
 Base Vol: 4 7 28 0 0 0 6 10 0 0 54 5
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bsc: 4 7 28 0 0 0 6 10 0 0 54 5
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PassesByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 4 7 28 0 0 0 6 10 0 0 54 5
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.90 0.90 0.90 1.00 1.00 1.00 1.00 1.00 0.55 0.55 0.55 0.55
 PPHF Volume: 4 8 31 0 0 0 6 10 0 0 99 9
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 FinalVolume: 4 8 31 0 0 0 6 10 0 0 99 9
 Critical Gap Module:
 Critical Gap: 6.4 6.5 6.2 xxxxxx xxxx xxxxx 4.1 xxxx xxxxxx xxxxx xxxx xxxxx
 FollowupPrm: 3.5 4.0 3.3 xxxxxx xxxx xxxxxx 2.2 xxxxx xxxxxx xxxxx xxxxx xxxxx
 Capacity Module:
 Conflict Vol: 125 130 10 xxxxx xxxxx xxxxxx 108 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Potential Cap.: 875 765 1077 xxxxx xxxxx xxxxxx 1496 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Move Cap.: 872 762 1077 xxxxx xxxxx xxxxxx 1496 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Volume/Cap: 0.01 0.01 0.03 xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx xxxxx xxxxx xxxxx
 Level Of Service Module:
 2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.0 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxxx 7.4 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 LOS by Move: A * * * * * A * * * * * A * * * * * A * * * * * A * * * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 SharedCap.: xxxxx 981 xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
 SharedQueue: xxxxxx 0.1 xxxxxx xxxxx xxxxx xxxxxx 0.0 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Share Del: xxxxx 8.8 xxxxxx xxxxx xxxxx xxxxxx 7.4 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Shared LOS: A * * * * * A * * * * * A * * * * * A * * * * * A * * * * *
 ApproachDel: 8.8 * * * * * xxxxxx * * * * * xxxxxx * * * * *
 ApproachLOS: A * * * * * A * * * * * A * * * * * A * * * * * A * * * * *
 Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
 2000 HCM Operations Method (Future Volume Alternative)
 Intersection #9 Lenwood/ Mercantile
 Cycle (sec): 90 Critical Vol./Cap. (X): 0.191
 Loss Time (sec): 8 (Y-R=4.0 sec) Average Delay (sec/vch): 28.1
 Optimal Cycle: 82 Level Of Service: C
 Street Name: North Bound Lenwood South Bound East Bound West Bound
 Approach: L - T - R L - T - R L - T - R L - T - R
 Movement: L - T - R L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include
 Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 1 0 1 0 1 0 1
 Volume Module:
 Base Vol: 7 71 4 31 45 88 130 35 14 9 11 29
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bsc: 7 71 4 31 45 88 130 35 14 9 11 29
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PassesByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 7 71 4 31 45 88 130 35 14 9 11 29
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.90 0.90 0.90 0.76 0.76 0.76 0.78 0.78 0.00 0.60 0.80 0.80
 PPHF Volume: 8 79 4 41 59 115 166 45 0 11 14 36
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 FinalVolume: 8 79 4 41 59 115 166 45 0 11 14 36
 Critical Gap Module:
 Critical Gap: 6.4 6.5 6.2 xxxxxx xxxx xxxxx 4.1 xxxx xxxxxx xxxxx xxxx xxxxx
 FollowupPrm: 3.5 4.0 3.3 xxxxxx xxxx xxxxxx 2.2 xxxxx xxxxxx xxxxx xxxxx xxxxx
 Capacity Module:
 Conflict Vol: 125 130 10 xxxxx xxxxx xxxxxx 108 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Potential Cap.: 875 765 1077 xxxxx xxxxx xxxxxx 1496 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Move Cap.: 872 762 1077 xxxxx xxxxx xxxxxx 1496 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Volume/Cap: 0.01 0.01 0.03 xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx xxxxx xxxxx xxxxx
 Level Of Service Module:
 2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.0 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxxx 7.4 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 LOS by Move: A * * * * * A * * * * * A * * * * * A * * * * * A * * * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 SharedCap.: xxxxx 981 xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
 SharedQueue: xxxxxx 0.1 xxxxxx xxxxx xxxxx xxxxxx 0.0 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Share Del: xxxxx 8.8 xxxxxx xxxxx xxxxx xxxxxx 7.4 xxxxx xxxxxx xxxxx xxxxx xxxxxx
 Shared LOS: A * * * * * A * * * * * A * * * * * A * * * * * A * * * * *
 ApproachDel: 8.8 * * * * * xxxxxx * * * * * xxxxxx * * * * *
 ApproachLOS: A * * * * * A * * * * * A * * * * * A * * * * * A * * * * *
 Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #10 Lenwood/Project Access
Average Delay (sec/veh): 1.9 Worst Case Level of Service: A [9.1]
Street Name: Lenwood Project Access
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

| Control: | Uncontrolled | | Stop Sign | | Uncontrolled | |
|----------|--------------|---------|-----------|---------|--------------|---------|
| | Include | Exclude | Include | Exclude | Include | Exclude |
| Rights: | 0 | 1 | 0 | 0 | 1 | 0 |
| Lanes: | 0 | 1 | 0 | 0 | 1 | 0 |

| Volume Module: | | | | | | |
|----------------|-------------|---------------|------------|--------------|--------------|-----------|
| Base Vol: | Growth Adj: | Initial Base: | Added Vol: | PasserByVol: | Initial Fut: | User Adj: |
| 2 | 43 | 0 | 0 | 0 | 35 | 28 |
| 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 43 | 0 | 0 | 0 | 35 | 28 |
| 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| 2 | 47 | 0 | 0 | 0 | 38 | 30 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 47 | 0 | 0 | 0 | 38 | 30 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Critical Gap Module:
Critical Gap: 6.4 XXXX XXXX XXXX XXXX 6.2 XXXX XXXX XXXX XXXX
FollowUpTime: 2.2 XXXX XXXX XXXX XXXX 3.5 XXXX 3.3 XXXX XXXX XXXX
Capacity Module:
Chillict Vol: 76 XXXX XXXX XXXX XXXX 108 XXXX 38 XXXX XXXX XXXX
Percent Cap: 1536 XXXX XXXX XXXX XXXX 894 XXXX 1040 XXXX XXXX XXXX
Move Cap: 1536 XXXX XXXX XXXX XXXX 893 XXXX 1040 XXXX XXXX XXXX
Volume/Cap: 0.00 XXXX XXXX XXXX XXXX 0.03 XXXX 0.00 XXXX XXXX XXXX

Level of Service Module:
2Way95thQ: 0.0 XXXX XXXX XXXX XXXX 0.1 XXXX 0.0 XXXX XXXX XXXX
Control Del: 7.3 XXXX XXXX XXXX XXXX 9.2 XXXX 8.5 XXXX XXXX XXXX
LOS by Move: A A A A A A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
SharedQueue: 0.0 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX
Shrd ConDel: 7.3 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX
Shared LOS: A A A A A A
ApproachDel: XXXXXX
ApproachLOS: A
Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #11 Mercantile Way/Factory Outlet Ave
Average Delay (sec/veh): 6.7 Worst Case Level of Service: A [8.5]
Street Name: Factory Outlet Mercantile
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

| Control: | Uncontrolled | | Stop Sign | | Uncontrolled | |
|----------|--------------|---------|-----------|---------|--------------|---------|
| | Include | Exclude | Include | Exclude | Include | Exclude |
| Rights: | 0 | 0 | 0 | 0 | 1 | 0 |
| Lanes: | 0 | 0 | 0 | 0 | 1 | 0 |

| Volume Module: | | | | | | |
|----------------|-------------|---------------|------------|--------------|--------------|-----------|
| Base Vol: | Growth Adj: | Initial Base: | Added Vol: | PasserByVol: | Initial Fut: | User Adj: |
| 0 | 0 | 0 | 0 | 0 | 31 | 25 |
| 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 31 | 25 |
| 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 0.68 | 0.68 | 0.68 | 0.68 | 0.72 | 0.72 | 0.72 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Critical Gap Module:
Critical Gap: 4.1 XXXX XXXX XXXX XXXX 6.2 4.1 XXXX XXXX XXXX XXXX
FollowUpTime: 2.2 XXXX XXXX XXXX XXXX 3.3 2.2 XXXX XXXX XXXX XXXX
Capacity Module:
Chillict Vol: XXXX XXXX XXXX XXXX XXXX XXXX 10 12 XXXX XXXX XXXX
Percent Cap: XXXX XXXX XXXX XXXX XXXX XXXX 1078 1620 XXXX XXXX
Move Cap: XXXX XXXX XXXX XXXX XXXX XXXX 1078 1620 XXXX XXXX
Volume/Cap: XXXX XXXX XXXX XXXX XXXX XXXX 0.04 0.02 XXXX XXXX

Level of Service Module:
2Way95thQ: XXXX XXXX XXXX XXXX XXXX XXXX 0.1 XXXX XXXX XXXX
Control Del: XXXX XXXX XXXX XXXX XXXX XXXX 8.5 7.3 XXXX XXXX
LOS by Move: A A A A A A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
SharedQueue: XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX
Shrd ConDel: XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX
Shared LOS: A A A A A A
ApproachDel: XXXXXX
ApproachLOS: A
Note: Queue reported is the number of cars per lane.

APPENDIX F

TRIP GENERATION RATES FROM INSTITUTE OF TRANSPORTATION ENGINEERS, TRIP GENERATION, 8TH EDITION, 2008 AND THE SHINGLE SPRINGS RANCHERIA INTERCHANGE TRANSPORTATION/CIRCULATION REPORT DATED APRIL 2002

Hotel (310)

Average Vehicle Trip Ends vs: Occupied Rooms
On a: Saturday,
Peak Hour of Generator

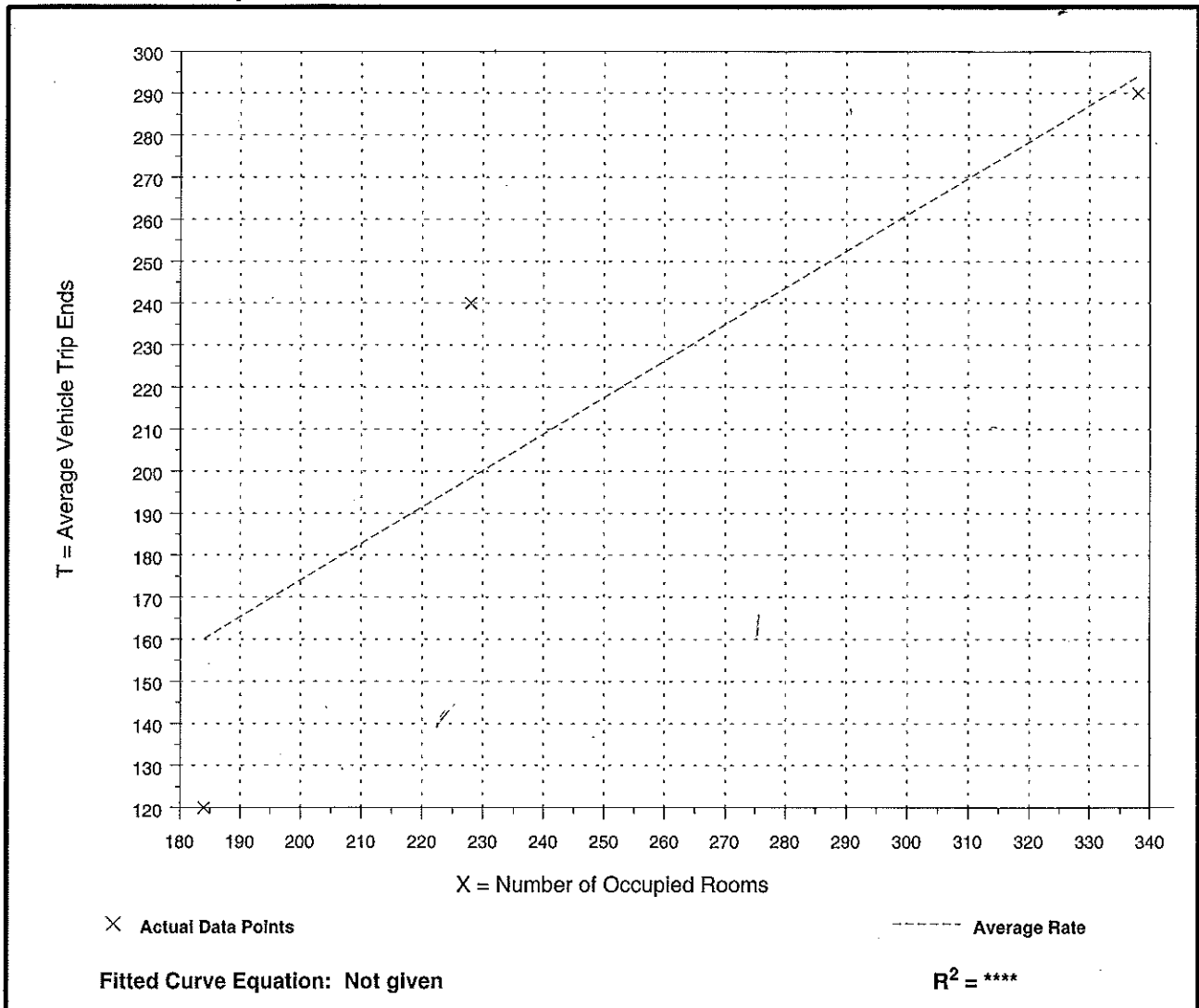
Number of Studies: 3
 Average Number of Occupied Rooms: 250
 Directional Distribution: Not available

Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.87 | 0.65 - 1.05 | 0.94 |

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Hotel (310)

Average Vehicle Trip Ends vs: Occupied Rooms
On a: **Saturday**

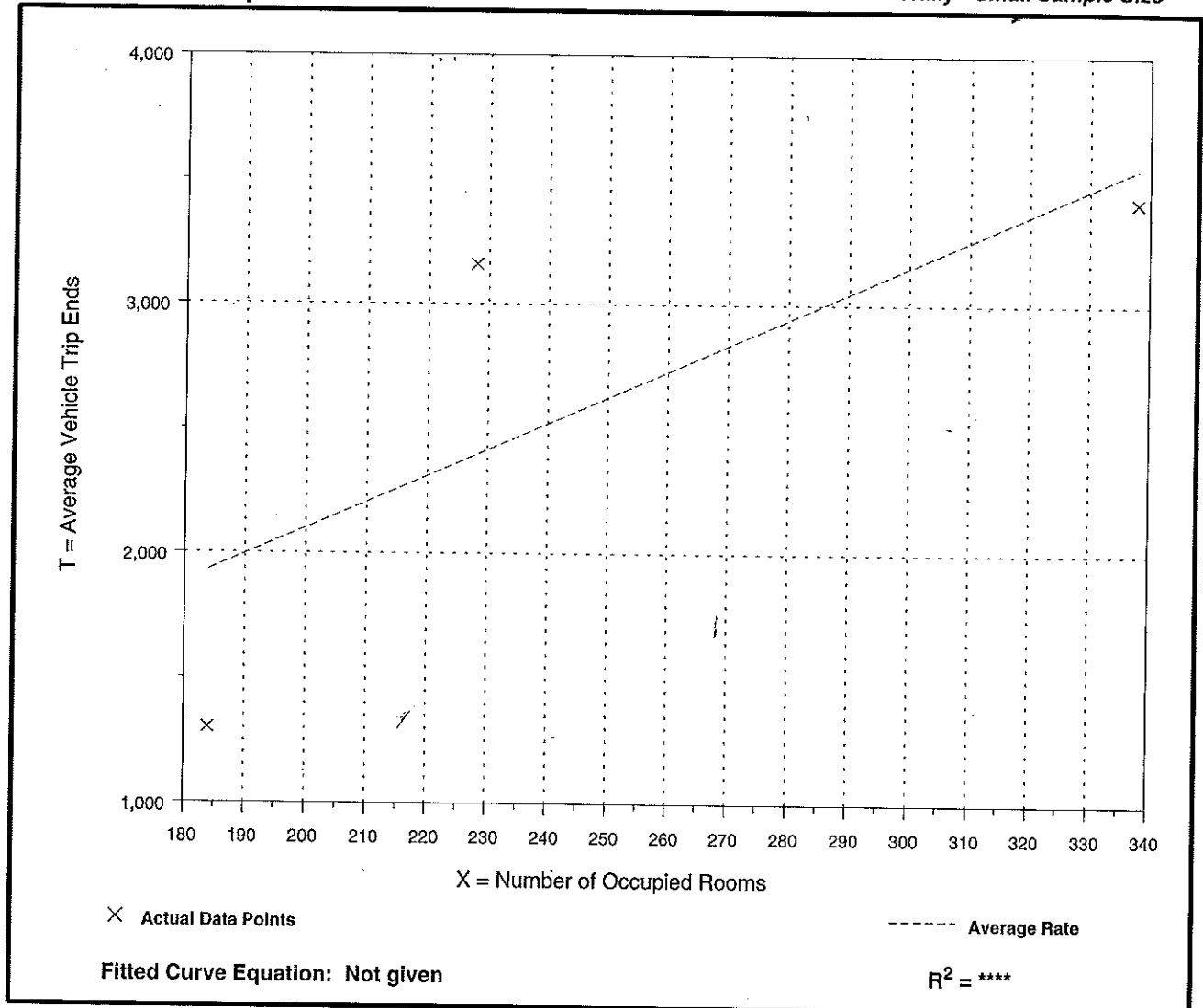
Number of Studies: 3
Average Number of Occupied Rooms: 250
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 10.50 | 7.07 - 13.86 | 4.11 |

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Hotel (310)

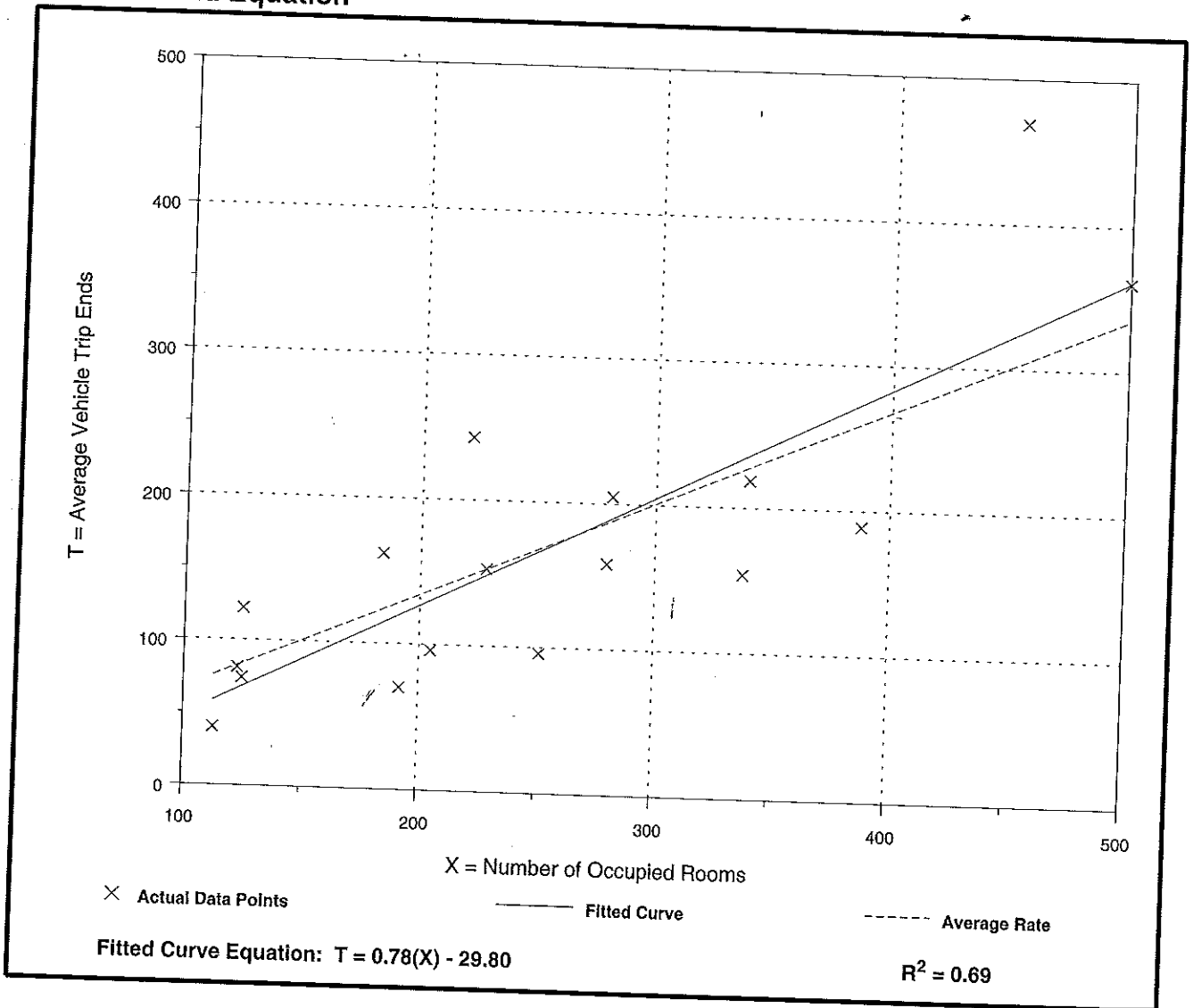
Average Vehicle Trip Ends vs: Occupied Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 17
 Average Number of Occupied Rooms: 256
 Directional Distribution: 58% entering, 42% exiting

Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.67 | 0.35 - 1.10 | 0.84 |

Data Plot and Equation



Hotel (310)

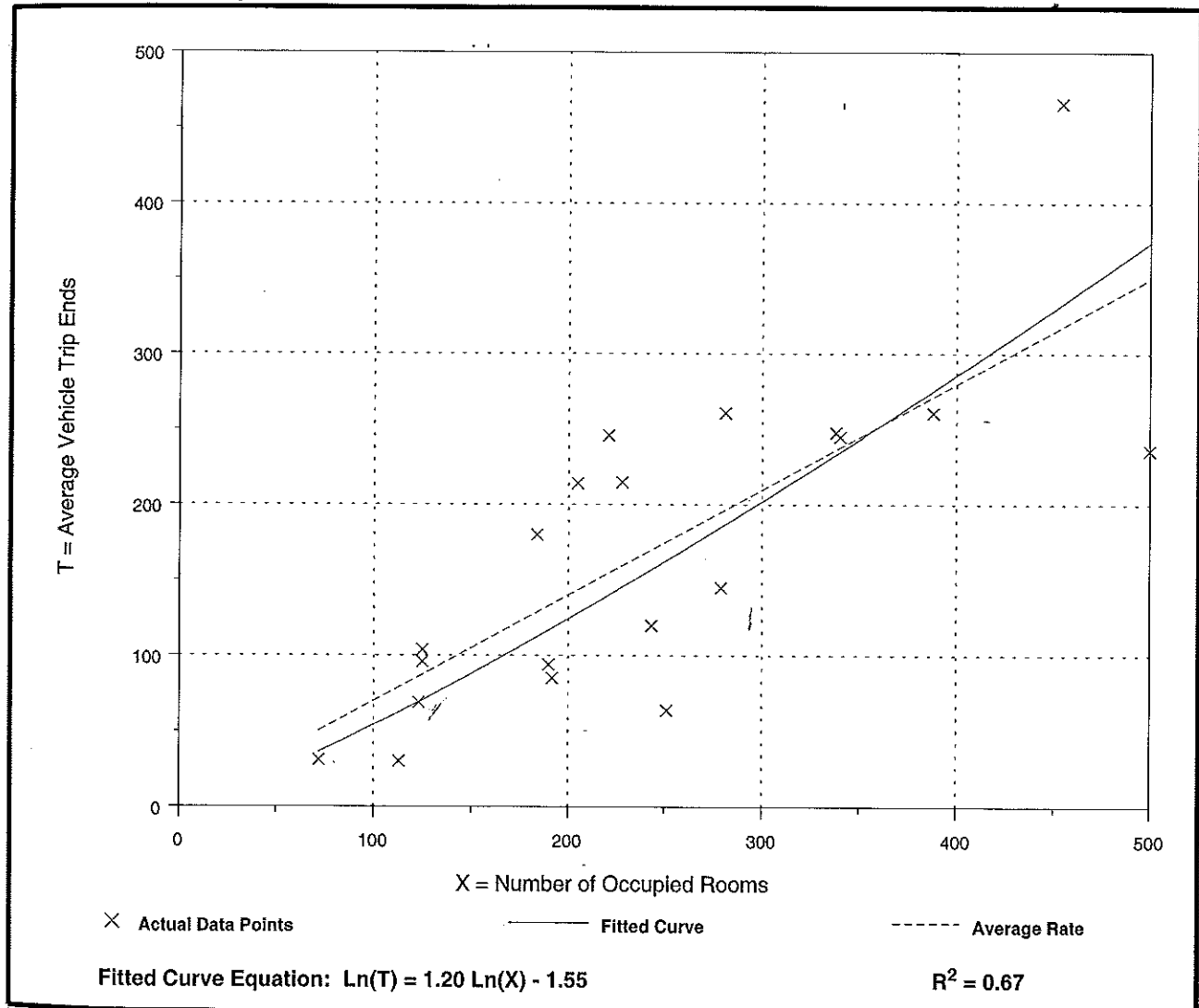
Average Vehicle Trip Ends vs: Occupied Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 20
 Average Number of Occupied Rooms: 243
 Directional Distribution: 49% entering, 51% exiting

Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 0.70 | 0.25 - 1.11 | 0.87 |

Data Plot and Equation



Hotel (310)

Average Vehicle Trip Ends vs: Occupied Rooms On a: Weekday

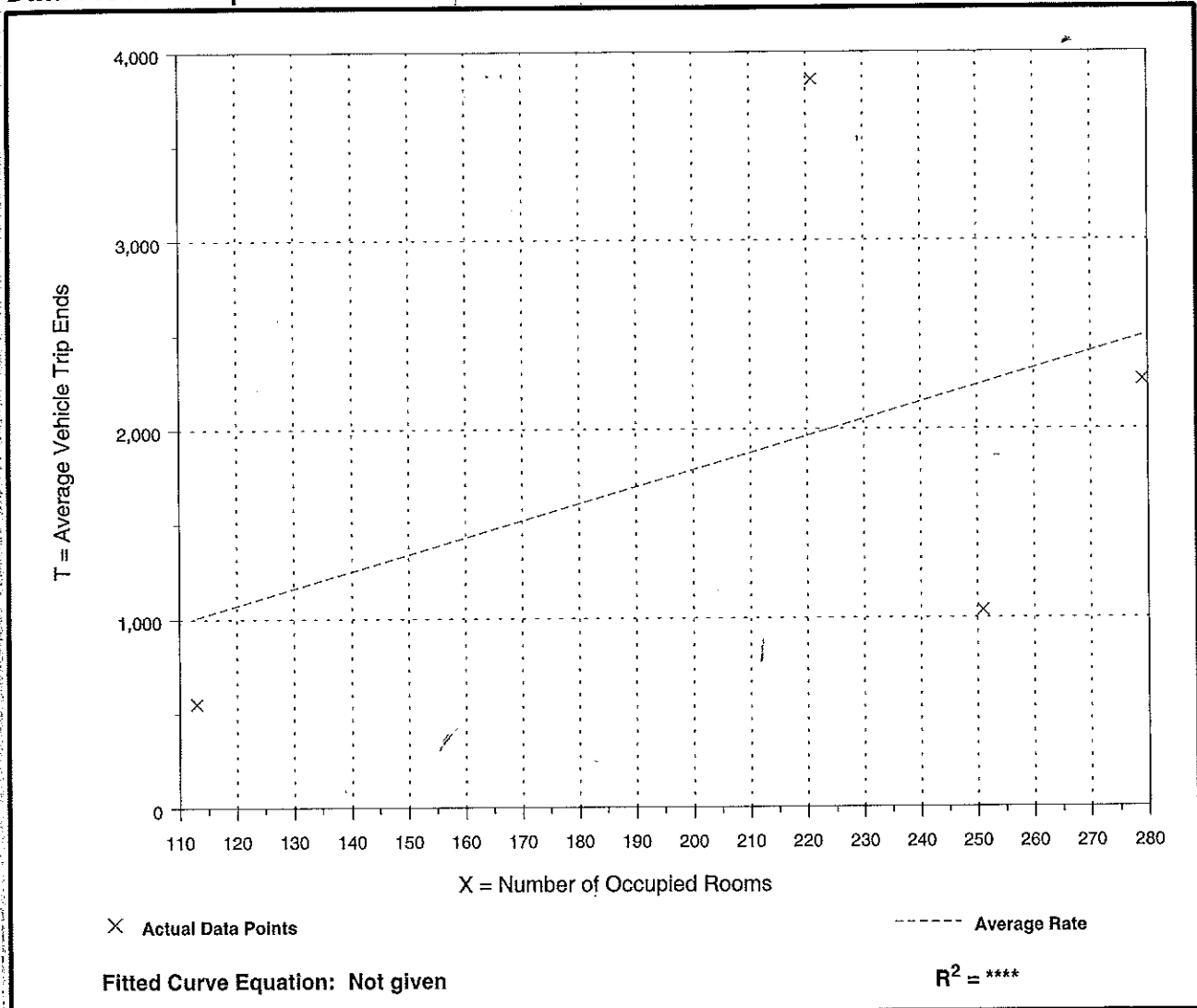
Number of Studies: 4
 Average Number of Occupied Rooms: 216
 Directional Distribution: 50% entering, 50% exiting

Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 8.92 | 4.14 - 17.44 | 6.04 |

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Land Use: 310 Hotel

Description

Hotels are places of lodging that provide sleeping accommodations and supporting facilities such as restaurants; cocktail lounges; meeting and banquet rooms or convention facilities; limited recreational facilities (pool, fitness room); and/or other retail and service shops. Some of the sites included in this land use category are actually large motels providing the hotel facilities noted above. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320) and resort hotel (Land Use 330) are related uses.

Additional Data

Studies of hotel employment density indicate that, on the average, a hotel will employ 0.9 employees per room.¹

Thirty studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 83 percent.

The hotels surveyed were primarily located outside central business districts in suburban areas.

The sites were surveyed between the late 1960s and the 2000s throughout the United States.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Source Numbers

4, 5, 12, 13, 18, 55, 72, 170, 187, 254, 260, 262, 277, 280, 301, 306, 357, 422, 436, 507, 577

¹ Buttke, Carl H. Unpublished studies of building employment densities, Portland, Oregon.

corner of the US-50/E. Shingle Springs Drive interchange). Some of the analysis included within this report is based on information obtained for earlier versions of the proposed casino project.

Casino Project Trip Generation Methodology

Trip generation relates land uses to the number of persons or vehicles entering or exiting the site. To estimate the amount of traffic which would be added to roadways surrounding and serving the casino project site, the trip generation (in terms of vehicles) is established by multiplying some measurable aspect of the site (i.e. square footage, employees) by corresponding trip generation rates established for similar land uses. The directional split of traffic between inbound and outbound traffic is also quantified.

Although there is significant information available regarding trip generation for casinos, most of this information is for more traditional casinos such as those found in Reno, Las Vegas, or Atlantic City. The best reference from which to determine trip generation, The Institute of Transportation Engineers (ITE) *Trip Generation Manual*, does include trip generation information for casinos, however they are based on only a few locations, and casinos significantly different in nature than the proposed project.

Trip generation information for Indian gaming style casinos are not readily available due to their unique trip generation characteristics compared to those of more traditional casinos. These differences are due to the type of gaming, isolated locations, etc. Although trip generation characteristics for non Indian gaming casinos were not used directly to establish trip generation for the proposed project, information from these sources were utilized to verify trip generation assumptions.

Two very different approaches were used to establish the trip generation for the proposed casino. The first approach was to review the marketing study performed for an earlier, and larger, version of the project by Urban Systems. The marketing study established potential trips to the originally proposed casino to provide a basis from which potential casino revenues could be generated. These potential trips were factored down within this analysis to account for the reduced square footage currently proposed. Although it would be unwise to use these estimates alone from a traffic impact analysis perspective, they are useful for providing a baseline from which trip generation numbers from other means of analysis can be compared. The second approach for establishing trip generation rates for the casino is to investigate trip generation characteristics at other casinos, including both information within traffic studies for other Casinos, and the results of surveys conducted at two northern California Indian gaming casinos for this project.

To establish a trip generation rate at existing casinos, vehicular traffic both entering and exiting the sites are counted during the peak time periods for which a peak hour rate is desired. To account for the seasonal variations experienced by casinos, these rates require adjustment to establish trip generation for peak month conditions. The March 1999 ITE Journal article titled "Gaming Casino Traffic" (authored by Paul C. Box and William Bunte) summarizes the results of year long traffic counts at St Louis, Missouri area casinos. This article provides for the factoring of traffic counts or trip generation rates collected during an off-peak month to a peak month condition. Although some variations may occur from region to region, they do seem to reasonably reflect seasonal variations which would be experienced at northern California casinos.

According to these factors, the peak months for a casino are generally the summer months of May through August. Counts collected during the remaining months are factored up by 1.1-1.3 to convert values to peak month conditions. Casino patronage is particularly low during the winter months between October and February when a 1.2-1.3 factor is required to convert to peak month conditions.

Available traffic studies which provided useful trip generation survey results for existing casinos were:

- 1) *Mississippi Gulf Coast Transportation Management Plan for Waterfront Development*, Gulf Regional Planning Commission, Gulfport, MS, June, 1993.
- 2) *Auburn Rancheria Gaming Facility Traffic Study*, Fehr and Peers, June 1, 1999.

Independent Variable

To establish trip generation rates for any type of development, it is necessary to establish the variable against which actual trip volumes will be compared to establish trip generation rates. For casinos, trip generation is typically calculated based on one of the following variables:

- Entire Casino square footage
- Casino Gaming Floor square footage
- Gaming positions
- Employees

Available trip generation information from available sources use primarily the square footage of the entire casino or the square footage of the gaming floor area itself. Unfortunately, some trip generation information is not clear regarding whether trip generation rates were derived using the square footage for the entire casino, only the gaming portion of the casino, or other fractional parts of the casino or casino-hotel complex. Therefore, great care must be used when reviewing other studies. The traffic studies for the Mississippi Casino calculated trip generation based on only the gaming floor area. Although trip generation from the Auburn Rancheria Gaming Facility Traffic Study Information might erroneously be construed as using only the square footage of the gaming floor area to establish casino trip generation rates, in reality it established rates using the assumed entire square footage of the casino. Unfortunately, it is difficult to establish with complete certainty the square footage of other casinos due to the reluctance of casinos to divulge this information, and the lack of public information such as building plans since the casinos are on sovereign rancherias. A best estimate of the square footages of the casinos surveyed were established based on all available information and contacts with the respective casinos.

Casino Project Trip Generation Rates

As described earlier, two very different approaches were used to establish trip generation rates for the project.

Marketing Study

The first approach used to establish trip generation rates was a review of data within the Urban Systems Marketing Study. Although the market study established potential trips to the casino to provide a basis from which potential casino revenues could be generated, these rates provide a baseline for comparison with other trip generation rates established through actual traffic counts at other casinos.

As previously described, the marketing study was conducted for a slightly different project consisting of a slightly larger casino complex at a different location. The following details the trip generation established for the earlier version of the project, and the adjustments to convert trip generation to the smaller facility currently proposed.

Table 12a provides a summary of the trips which were projected by the marketing study for the previously proposed casino development during a weekday, weekday PM peak hour, Saturday, and Saturday peak hour during both an average month and the peak month. Trip generation rates are based on the total size of the previously proposed casino (282,600 square feet) which excludes the 250 room hotel and convention/event center development. The trip generation associated with these ancillary uses are described later in this section.

Table 12a
Trip Generation from Marketing Study
 (for previously proposed 282,600 sq. ft. Casino)

| Trip Type | Weekday | | Saturday | |
|------------------------------|--------------|---------------|---------------|---------------|
| | Average | Peak Month | Average | Peak Month |
| Daily Vehicle Trips | | | | |
| Visitors & Employees | 8,326 | 11,102 | 13,878 | 16,652 |
| Buses & Deliveries | 40 | 40 | 40 | 40 |
| TOTAL TRIPS | 8,366 | 11,142 | 13,918 | 16,692 |
| DAILY | | | | |
| TRIP GENERATION RATE | 29.60 | 39.43 | 49.25 | 59.07 |
| TRIPS/ksf | | | | |
| PM Peak Hour Trips | | | | |
| Visitors & Employees | 830 - 970 | 1,110 - 1,390 | 1,390 - 1,530 | 1,660 - 1,940 |
| Buses & Deliveries | 10 | 10 | 10 | 10 |
| TOTAL TRIPS (Maximum) | 980 | 1,400 | 1,540 | 1,950 |
| PM PEAK HOUR | | | | |
| TRIP GENERATION RATE | 3.47 | 4.95 | 5.45 | 6.90 |
| TRIPS/ksf | | | | |

Notes: ksf = 1,000 square feet
 Source: Urban Systems Marketing Study

It was assumed that a total of 20 buses and deliveries would be generated by the site on an average day, which accounts for an additional 40 trips per day (1 trip inbound plus 1 trip outbound for each bus and delivery). The Urban Systems Marketing Study assumed that 9 buses

per day would bring visitors to the site, and information provided by the shipping and receiving department of a similar northern California Indian gaming casino revealed that they experience an average of 9 deliveries a day. A conservative estimate of 5 buses and deliveries a day (25% of the daily total) was assumed for peak hour conditions.

Based on the marketing study, it was projected that a 282,600 sq. ft. casino would generate 29.60 trips per 1,000 square feet (ksf) of casino during an average weekday, and 3.47 trips/ksf during the PM peak hour of an average weekday. During the peak month, these rates increase to 39.43 trips/ksf and 4.95 trips/ksf, respectively. On an average Saturday, it is projected that a 282,600 sq. ft. casino would generate 49.25 trips/ksf and 5.45 trips/ksf during the average Saturday peak hour. During the peak month, these rates increase to 59.07 trips/ksf and 6.90 trips/ksf, respectively.

These same trip generation rates were applied to the newly proposed, and slightly smaller, casino. The casino as currently proposed is 238,500 sq. ft., which is approximately 16% smaller than the 282,600 sq. ft. casino previously proposed. Since the same trip generation rates were used, the number of trips which would be associated with the smaller casino were also assumed to be approximately 16% less than those reported in the marketing study. The trip generation for the currently proposed 238,500 sq. ft. casino are summarized in Table 12b.

Table 12b
Trip Generation based on Marketing Study
 (for currently proposed 238,500 sq. ft. Casino)

| Trip Type | Weekday | | Saturday | |
|------------------------------|--------------|--------------|---------------|---------------|
| | Average | Peak Month | Average | Peak Month |
| Daily Vehicle Trips | | | | |
| DAILY | 29.60 | 39.43 | 49.25 | 59.07 |
| TRIP GENERATION RATE | trips/ksf | trips/ksf | trips/ksf | trips/ksf |
| TOTAL TRIPS | 7,060 | 9,403 | 11,746 | 14,083 |
| PM Peak Hour Trips | | | | |
| PM PEAK HOUR | 3.47 | 4.95 | 5.45 | 6.90 |
| TRIP GENERATION RATE | trips/ksf | trips/ksf | trips/ksf | trips/ksf |
| TOTAL TRIPS (Maximum) | 827 | 1,181 | 1,300 | 1,646 |

Notes:
 ksf = 1,000 square feet
 Source: Urban Systems Marketing Study

Existing Casino Surveys

The second approach used for establishing trip generation rates for the casino was to investigate trip generation characteristics at other casinos, including both information within traffic studies for other casinos, and the results of surveys conducted at two northern California Indian gaming casinos specifically for this project.

David Evans and Associates, Inc. conducted surveys of two Indian gaming casinos in the vicinity of the proposed project during both the PM peak period of a weekday, and the assumed peak hour period for a Saturday (late afternoon/early evening). One of the two casinos was also surveyed during a weekday AM peak period. At the request of the casinos surveyed, their identities are not divulged in this study. Traffic counts were collected at one northern California casino (Survey location A in Table 13) during the months of December and April. Utilizing monthly variation factors from the March 1999 ITE Journal article "Gaming Casino Traffic"; the December weekday PM peak hour counts were factored by 1.2, and the April Saturday peak hour counts were factored by 1.1 to establish peak month rates. Traffic counts were collected at a second northern California casino (Survey location B in Table 13) during the month March for all three peak periods. Counts at this casino were factored by 1.1 to establish peak month rates.

Trip generation rates for three other northern California casinos were also used as reported within the traffic study performed for the proposed Auburn Rancheria Gaming Facility in Placer County. This traffic study, which was issued by Fehr and Peers on June 1, 1999, surveyed a total of four northern California Indian gaming casinos, one of which was also surveyed by David Evans and Associates, Inc. These surveys only analyzed trip generation during the PM peak hour of a weekday. Trip generation rates reported within this traffic study were also for peak month conditions following the factoring of raw counts utilizing the "Gaming Casino Traffic" article monthly variation factors.

Table 13 provides a summary of the trip generation rates and inbound/outbound directional splits found for the two casinos surveyed by David Evans and Associates, Inc., and the three additional casinos surveyed by Fehr and Peers. Table 13 also provides a summary of the trip rates established from the marketing study for comparison. Due to the confidential nature of the surveyed casinos, their identities are designated simply as survey locations A through E.

Table 13
Casino Trip Generation Rates

| Survey Location | Estimated Size (sq. ft.) | Trip Generation Rates (vehicle trips per 1,000 square feet of Casino) | | | | | | | | | |
|--------------------------------------|--------------------------|---|---------------------|--------------|--------------|-----------|---------------------|-----|-----|-----|-----|
| | | Weekday | | Saturday | | Peak Hour | | | | | |
| | | AM Peak Hour | PM Peak Hour | AM Peak Hour | PM Peak Hour | In / out | Total | | | | |
| Market Study⁽¹⁾ | | | | | | | | | | | |
| Average | 282,600 ⁽¹⁾ | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Peak | 282,600 ⁽¹⁾ | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Casino Surveys | | | | | | | | | | | |
| A ⁽²⁾ | 78,000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| B ⁽³⁾ | 50,000 | 70% / 30% | 3.02 | 45% / 55% | 2.67 | 36% / 64% | 5.86 | | | | |
| C ⁽⁴⁾ | 32,400 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| D ⁽⁴⁾ | 20,000 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| E ⁽⁴⁾ | 17,300 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Average in/out Split | | 70% / 30% | 3.02 | 53% / 47% | 5.95 | 48% / 54% | | | | | |
| Weighted Average Rate | | | | | | | | | | | |
| Final Trip Rate (trips/ft of Casino) | | 70% / 30% | 2.95 ⁽⁵⁾ | 53% / 47% | 4.95 | 48% / 54% | 6.90 ⁽⁶⁾ | | | | |

Notes:

- (1) = Casino size from market study based on previously proposed casino square footage of 282,600 sq. ft.
- (2) = Weekday PM peak hour count conducted at Site A in December, factored by 1.2 to peak month.
- (3) = Peak hour count conducted at site A in April, factored by 1.1 to peak month.
- (4) = Information from Auburn Rancheria Gaming Facility traffic study, Fehr & Peers, June 1, 1999. PM Peak hour count conducted at site C, D, & E in October, factored by 1.2 to peak month.
- (5) = AM peak hour trip rate assumed to be 60% of PM peak hour rate based on comparison of AM and PM rates at site B (60% of 3.06 = 3.02)(60% of 4.95 = 2.95).
- (6) = Saturday peak hour trip rate based on Market Study.

The final trip rate for each peak hour scenario was established separately using available information and methodologies. Inbound/Outbound directional splits were established for each peak hour by averaging the directional splits at surveyed casinos for each respective peak hour.

Use of the weighted average to establish trip rates is justified based on the following precedents:
 (1) A similar methodology using a "weighted average" was used by Fehr and Peers within their traffic study for the Auburn Rancheria. A PM peak hour rate was established within that report by using a "weighted average" of PM peak hour rates at four northern California casinos.

(2) The member of the technical advisory committee which helped to put together the report prepared for the Institute of Transportation Engineers titled "Casino Trip Generation"

verified that this methodology was valid for determining reasonable trip generation for the project.

(3) Page 7 of the Institute of Transportation Engineer's "Trip Generation Handbook" published October, 1998 states:

The data presented in Trip Generation allow for several trips of analyses of trip generation data for each combination of land use type, independent variable, and time period.

Weighted Average Trip Generation Rate: This rate is defined as the number of weighted trip ends per unit of the independent variable. The rate simply assumes a linear relationship between trip ends and the independent variable, having a slope equal to the rate and with the straight line passing through the origin (i.e., with a value of zero for the independent variable, the number of trips generated is zero). The averages (weighted by the units of the independent variable).

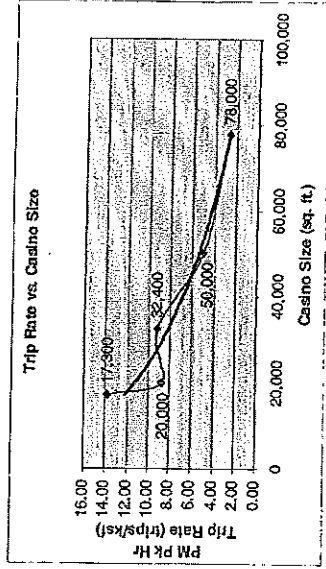
Weekday PM Peak Hour Trip Generation Rates

The weekday PM peak hour rate was established prior to rates for weekday AM peak hour and Saturday peak hour conditions due to the large amount of information available, and to create a baseline from which peak hour rates for the remaining scenarios could be compared and established.

A review of the weekday PM peak hour trip rates at the five northern California casinos shows that the rates range from 2.67 trips/ksf at site A (which has the largest square footage of the five locations) to 13.83 trips/ksf at site E (which has the smallest square footage of the five locations). The graph within Graph 1 below illustrates how smaller casinos experience high trip rates, whereas larger casinos experience smaller trip rates, and that trip rates begin to level off as the casino becomes increasingly large. This decrease, which is best exemplified by the fitted curve, reveals that trip rates decrease dramatically as the square footage of the smaller casinos increase, and continue to decrease (although at a steadily decreasing rate) as the casino size increases to large casinos such as the proposed project.

As Table 13 shows, the weighted average of the PM peak hour trip rates established for the five surveyed casinos was calculated as 5.95 trips/ksf. A weighted average was used rather than a straight average (which would have resulted in 7.92 trips/ksf) to give more weight to the larger casinos.

Graph 1
Casino Trip Generation Rates vs. Casino Size Graph



Using the above graph, an argument could be made that the trip generation for the proposed project would only be approximately 2-4 trips/ksf. As the graph shows, the fitted curve line begins to level off in the 2-4 trips/ksf range for casinos approaching 100,000 sq. ft. Since the proposed casino would be 282,600 sq. ft. in size, and thus well to the right of the point in the line where the rate levels off, it is not unreasonable to expect that only 3-4 trips/ksf would be generated by the project during the PM peak hour during a peak month.

Trip rates derived from the market study projected 3.47 trips/ksf for an average PM peak hour, and 4.95 for a peak month PM peak hour. These rates lie between the lower potential trip generation rates of 3-4 trips/ksf from the fitted curve, and the higher weighted average of 5.95 trips/ksf.

For this study, the PM peak hour rate of 4.95 trips/ksf from the market study was used for the weekday PM peak hour trip generation rate for peak month conditions. Based on the large size of the proposed casino, the same relative trip rate per 1,000 square feet is assumed to generally be the same for casinos over 200,000 sq. ft. It is believed that 4.95 trips/ksf is a reasonable rate for the proposed project, since it lies half way between the higher weighted average of 5.95, and the lower potential rates of 3-4 trips/ksf which the fitted curve in the above graph indicates could reasonably represent the rate for a large casino such as the proposed project.

Weekday AM Peak Hour Trip Generation Rates

Neither the marketing study, or any other trip generation information reviewed, provided information regarding AM peak hour trip generation for casinos.

Very few trips are generated by a casino during AM peak periods when compared to the PM peak hour and weekends, therefore a survey of a single existing casino during the AM peak hour was considered sufficient for purposes of this study. The AM peak hour trip generation rate for the proposed casino was established based on the assumption that casinos would likely experience similar proportional amounts of traffic during the AM peak hour as would be generated during the PM peak hour. For example, since traffic to and from casino B during the AM peak hour was found to be 60% of the trips the casino experienced during the PM peak hour, it is expected that other casinos (including the proposed project) would similarly experience the same proportional differences. Therefore, 60% of the trip rate assumed for weekday PM peak hour conditions is assumed for the weekday AM peak hour rate, resulting in a weekday AM peak hour trip generation rate of 2.95 trips/ksf for peak month conditions.

Saturday Peak Hour Trip Generation Rates

The weekends, and particularly Saturday, are typically the busiest time periods for a casino. Two northern California casinos were surveyed during the late afternoon/early evening hours of a Saturday to establish Saturday peak hour trip generation rates.

As Table 13 shows, the weighted average of the two Saturday peak hour trip rates established for the two surveyed casinos was calculated as 6.73 trips/ksf.

This rate of 6.73 trips/ksf lies between the average and maximum trip rates derived from the market study, lying well above the projected 5.45 trips/ksf during an average Saturday peak hour, and just below the 6.90 trips/ksf for the Saturday peak hour during the peak month.

For this study, the more conservative rate of 6.90 trips/ksf derived from the marketing study for Saturday peak hour/peak month conditions was used. Although there would likely only be a dozen or so days per year which would experience Saturday peak hour/peak month conditions, this rate was used to provide a worst case scenario for the project. In addition, it is important to note that peak hour spikes are not as pronounced on a Saturday as they are through the week. Instead high traffic volumes are experienced for long periods of time on a Saturday. Although there would only be one hour on any given Saturday which would constitute the "peak hour" for that day, observations show that the peak hour is only the absolute highest of a number of peak hours during which traffic volumes to and from the casino are high. Therefore, care must be taken with regards to the number of hours during which Saturday peak hour conditions are expected to occur. In reality, Saturday peak hour conditions can be assumed to generally exist for perhaps 6 or more hours. Typically, it is reasonable and justifiable to mitigate project impacts for the 25th-30th worst hour of a year. This is because there will always be special events during which excessively high traffic volumes can occur which can not be fully mitigated to acceptable levels of service. Additionally, it is prohibitively costly to mitigate for the absolute worst hour or day of the year. Care must be taken to differentiate between the 25th-30th worst hour vs. the 25th-30th worst day. Since volumes very near those generated during the peak hour may occur for up to 6 or so hours of a Saturday during the peak month, the worst 25-30 peak hours might actually occur during a total of only a half dozen or so days.

Based on these considerations, a trip rate of 6.90 trips/ksf is assumed for Saturday peak hour conditions during the peak month.

Hotel Trip Generation Rates

The proposed casino project includes a 250 room hotel. The existence of the hotel will not necessarily result in a significant increase in trip generation from that which the casino would generate if a hotel did not exist. In fact, a review of trip generation at the 50,000 square foot northern California casino designated as Site B, which includes a hotel, did not show a relative increase in trip generation than was calculated at the other four surveyed casinos (none of which included hotels). In fact, a review of the graph on the preceding page shows that the rate is less than the rates which would lie along the theoretical trip generation rate fitted curve.

This characteristic is due to the fact that the existence of the hotel will result in a significant level of internal trips. The marketing study confirmed that nearly all of the hotel guests are expected to also visit the casino, hence they are accounted for within the trip generation characteristics of the casino itself. Adding trip generation for them based on the hotel would result in a double counting of trips. Therefore, trips associated with casino visitors who also are staying in the hotel should be deducted from any hotel trip generation calculations. Additionally, trip generation for casinos without hotels would include a number of trips to account for visitors arriving from or departing for their hotels, thus trip generation for the proposed casino could theoretically be reduced to account for this reduction in trips. This reduction in trips could in theory result in up to a 100% internal capture for the hotel.

These assumptions are validated by surveys of Mississippi Coast casinos included within the traffic study titled *Mississippi Gulf Coast Transportation Management Plan for Waterfront Development*. Of the eight casinos surveyed within this report, half had casinos and half did not. Table 14 summarizes the trip generation rates for the eight casinos, as well as the weighted average for all of the casinos, those casinos with hotels, and those without hotels.

As the below table shows, the weighted Saturday peak hour average rate for hotels with casinos is actually lower than the rates for hotels without casinos (as well as the rate for all casinos either with or without hotels).

Although it is not unreasonable to conclude that the existence of the hotel would not add to the trip generation which would be expected if the casino stood alone, to be conservative, this study assumes that the hotel would generate 25% of the trips which would be generated by the hotel if it stood alone. Trip generation rates, and directional splits for inbound/outbound traffic for the hotel, were obtained from the ITE Trip Generation Manual, 6th Edition (Land Use Code 310 = Hotel).

Table 14
Mississippi Coast Casino Trip Generation Rates

| Casino | Casino Gaming Area Size (ksf) | Saturday Peak Hour Rate ⁽¹⁾ (trips/ksf) |
|--------------------------------|-------------------------------|--|
| <i>w/ Hotels</i> | | |
| Grand (Gulfport) | 65,000 | 10.11 |
| Grand | 60,000 | 10.75 |
| Casino One | 19,550 | 12.56 |
| Isle of Capri | 35,000 | 13.34 |
| <i>w/out Hotels</i> | | |
| Copa Casino | 30,000 | 10.77 |
| Gold Coast | 20,000 | 12.55 |
| Biloxi Belle | 18,000 | 14.17 |
| Casino Magic | 57,000 | 12.16 |
| Weighted Average (all) | | 11.61 |
| Weighted Average (w/ HOTEL) | | 11.22 |
| Weighted Average (w/out HOTEL) | | 12.18 |

Notes:
(1) = Rate is trips/1,000 square feet of casino gaming floor area only, and not square footage of entire casino as rates within remainder of study reference.
Source: Mississippi Gulf Coast Transportation Management Plan for Waterfront Development, Gulf Regional Planning Commission, Gulfport, MS, June, 1993.

Casino Project Trip Generation

Using the rates and inbound/outbound directional splits as shown in Table 13 and described above for a casino, the number of vehicular trips to and from the proposed casino project were calculated for all three peak hour scenarios. Trips associated with the hotel portion of the casino project were also calculated. Table 15a provides a summary of trips which are projected to be generated from the casino project as originally proposed.

Trip generation for the casino for the 24 hour weekday and Saturday periods reflects the trip generation from the marketing study during the peak month for the project.

As the below table shows, it is projected that the proposed hotel/casino would generate a total of 9,918 trips during a typical weekday of the peak month, 739 of which would occur during the AM peak hour, and 1,219 of which would occur during the PM peak hour. On a Saturday during the peak month of the project, it is projected that the proposed project would generate 14,600 trips, 1,691 of which would occur during the peak hour. Trip generation for the proposed casino-

hotel are not specific to any year, and thus are assumed to be applicable for both existing and cumulative conditions.

Table 15a
Casino-Hotel Project Trip Generation

| Time Period | Size | Rate | in / out Split | | Trip Generation | | |
|--|-----------|-------|----------------|-----|-----------------|-------|--------|
| | | | In | Out | In | Out | total |
| <i>Casino Trip Generation</i> | | | | | | | |
| Weekday | 238.5 Ksf | 39.43 | --- | --- | --- | --- | 9,404 |
| Saturday | 238.5 Ksf | 59.07 | --- | --- | --- | --- | 14,088 |
| Weekday AM Pk Hr | 238.5 Ksf | 2.95 | 70% / 30% | 493 | 211 | 704 | |
| Weekday PM Pk Hr | 238.5 Ksf | 4.95 | 53% / 47% | 626 | 555 | 1,181 | |
| Saturday Peak Hour | 238.5 Ksf | 6.90 | 46% / 54% | 757 | 889 | 1,646 | |
| <i>Hotel Trip Generation⁽¹⁾</i> | | | | | | | |
| Weekday | 250 Rooms | 2.06 | --- | --- | --- | --- | 514 |
| Saturday | 250 Rooms | 2.05 | --- | --- | --- | --- | 512 |
| Weekday AM Pk Hr | 250 Rooms | 0.14 | 61% / 39% | 21 | 14 | 35 | |
| Weekday PM Pk Hr | 250 Rooms | 0.15 | 53% / 47% | 20 | 18 | 38 | |
| Saturday Peak Hour | 250 Rooms | 0.18 | 56% / 44% | 25 | 20 | 45 | |
| TOTAL TRIP GENERATION | | | | | | | |
| Weekday | | | | | | | 9,918 |
| Saturday | | | | | | | 14,600 |
| Weekday AM Peak Hour | | | | | 514 | 225 | 739 |
| Weekday PM Peak Hour | | | | | 646 | 573 | 1,219 |
| Saturday Peak Hour | | | | | 782 | 909 | 1,691 |

Notes:
ksf = 1,000 square feet

(1) = Trip rates based on ITE Trip Generation - Hotel (Land Use 310).

Rate reduced by 75% to account for internal capture to/from casino.

Casino Project Trip Generation Validation

Subsequent to the initial establishment of trip generation for this study, additional research was conducted to validate trip generation assumptions. Some parties have publicly stated that the proposed hotel and casino would generate over 17,000 trips per day instead of the 9,918 weekday trips assumed within this analysis.

The trip generation established in the previous section was established using separate trip generation rates for casinos and hotels, not a combined Shingle Springs casino-hotel facility. Table 15b establishes trip generation rates based on the TOTAL number of trips that were established for the entire casino-hotel facility. Rates for a combined facility are necessary to help validate trip generation assumptions used within this analysis against research described below.

**Table 15b
Casino-Hotel Project Trip Generation**

| | Trips Generated by Shingle Springs Hotel (25% of ITE Trip Gen) | | | | Trips Generated by Shingle Springs Casino-Hotel | | | |
|----------------|--|-----------|---------------|---------------|---|-----------|-------------|--|
| | Size (GFA sq) | Trip Rate | Trips (rooms) | Size (GFA sq) | Adj Rate | Trip Rate | TOTAL TRIPS | |
| Weekday Daily | 238.5 | 39.43 | 9,404 | 238.5 | 41.58 | 9,918 | | |
| Wday AM Pk Hr | 238.5 | 2.95 | 704 | 238.5 | 3.10 | 739 | | |
| Wday PM Pk Hr | 238.5 | 4.95 | 1,181 | 238.5 | 5.11 | 1,219 | | |
| Saturday Daily | 238.5 | 59.07 | 14,088 | 238.5 | 61.22 | 14,600 | | |
| Saturday Pk Hr | 238.5 | 6.90 | 1,646 | 238.5 | 7.09 | 1,691 | | |

Notes: Trip Rates for casino and casino-hotel based on square footage of "Casino Gaming Floor Area" (GFA).

The following research and analysis helps to verify that the trip generation assumptions used within this report are reasonable and conservative, and helps illuminate how erroneous conclusions might be mistakenly drawn by others from similar research.

San Diego Casino Study

San Diego County Department of Public Works prepared a study of casino trip generation titled "Report on the Potential Impacts of Tribal Gaming on Northern and Eastern San Diego County." The traffic study portion of this report, which was included as an appendix, was titled "Preliminary Traffic Assessment of Indian Gaming Projects in the San Diego Region" dated October 17, 2000. Due to confusion regarding the specific criteria used in preparing this study, David Evans & Associates contacted the licensed traffic engineer serving as the project manager for this study. The project manager stated that the November 1, 2000 report which has been referenced within comments was only a preliminary report, and that the assumptions used regarding trip rates have since been revised. Additionally, it is important to note that the preliminary San Diego report did not specifically differentiate between the square footage of the ENTIRE casino facility vs. the square footage of ONLY the gaming floor area. This distinction is crucial when comparing trip generation rates. The project manager stated that since the submittal of the preliminary report, they have established that the 130 trips/1,000 sq. ft. of casino they used previously was with respect to the square footage of ONLY the gaming floor area, and not the square footage of the ENTIRE casino. Trip generation rates associated with the ENTIRE square footage of the casino would logically be significantly smaller than rates associated with the square footage of ONLY the gaming floor area due to the inclusion of square footage associated with ancillary uses such as restaurants, banking facilities, day care, offices, rest rooms, lobby areas, retail, etc. San Diego County is in the process of revising their earlier report with a more detailed report using more refined numbers, which will specify that the trip generation rates used are relative to the square footage of ONLY the gaming floor area. The project manager stated that they will be revising their trip generation rate down to 100 trips/1,000 square feet of gaming floor area.

The ENTIRE Shingle Springs casino, including all ancillary uses (but excluding the hotel) is proposed to be 238,500 sq. ft., whereas the gaming floor area is proposed to include only 82,800

sq. ft. The following shows how the total trip generation was initially calculated within the Shingle Springs traffic study using trip rates corresponding to the 238,500 sq. ft. of the ENTIRE Casino square footage:

$$\begin{aligned} \text{Trip Rate used within} &= \frac{\text{Shingle Springs Trip Generation}}{\text{using ENTIRE Casino square footage as originally used within traffic study}} \\ &= \frac{39,43 \text{ trips per } 1,000 \text{ sq. ft.}}{\text{of ENTIRE Casino}} \\ \text{Size of ENTIRE Shingle Springs Casino} &= 238.5 \text{ ksf (thousand sq. ft.)} \\ \text{Shingle Springs Trip Generation (used in Traffic Study)} &= 9,404 \text{ trips} \end{aligned}$$

If instead, the 82,800 sq. ft. of ONLY the gaming floor area of Shingle Springs was used, the trip rate (assuming the total trip generation were held constant) would be 113.57, as shown within the following calculation:

$$\begin{aligned} \text{Shingle Springs Trip Generation} &= 9,404 \text{ trips} \\ \text{using sq. ft. of ONLY Casino Gaming area as used within San Diego traffic study} &= 82.8 \text{ ksf} \\ \text{Shingle Springs Trip Generation} &= 113.57 \text{ trips per } 1,000 \text{ sq. ft.} \\ \text{(used in Traffic Study)} &= \text{ONLY Casino} \\ \text{Revised San Diego Traffic Study} &= \text{Gaming Floor Area} \end{aligned}$$

As can be seen, the trip generation rate which would correspond to the trip generation used for the project would be almost 14% higher than the trip rate which is being used within the revised San Diego report. If the rates which will be used within the Revised San Diego study were to be used for the Shingle Springs Traffic Study, the total number of trips which the casino would generate would be as follows:

$$\begin{aligned} \text{Shingle Springs Trip Generation} &= 113.57 \text{ trips per } 1,000 \text{ sq. ft.} \\ \text{(using trip rate used within Revised San Diego Traffic Study)} &= \text{ONLY Casino} \\ \text{Trip Rate used within} &= 100 \text{ trips per } 1,000 \text{ sq. ft.} \\ \text{Revised San Diego Traffic Study} &= \text{Gaming Floor Area} \\ \text{Size of Shingle Springs} &= 82.8 \text{ ksf (thousand sq. ft.)} \\ \text{Casino Gaming Floor Area} &= 82.8 \text{ ksf} \\ \text{Alternative Shingle Springs Trip Generation} &= 8,280 \text{ trips} \end{aligned}$$

The use of this rate would result in a reduction of 1,184 daily trips (a 12.6% reduction).

The project manager also stated that the revised San Diego study will also assume an internal capture for a mixed hotel/casino, although a slightly more conservative rate of 3.0 trips/room for an average weekday will be added to casino hotel trip generation. Based on the Institute of Transportation Engineers', "Trip Generation, 6th Edition," a hotel generates 8.23 trips per room on an average weekday. The Shingle Springs report assumed that 25% of the trips which the hotel would generate if standing alone would be added onto the trips generated by the hotel, which resulted in an average daily rate of 2.06 trips per room (8.23 x 0.25 = 2.06). The revised

San Diego Study rate of 3.0 trips/room assumes that 36.5% of the trips which the hotel would generate if standing alone would be added onto the trips generated by the casino (3,078.23 = 36.5%). If the Shingle Springs report used a similar assumption of 3 trips/room, it would result in an addition of only 236 trips during an average day, 16 additional trips during the AM peak hour, and 17 additional trips during the PM peak hour. With respect to assumptions used with the revised San Diego traffic study, these differences would easily have been absorbed within the extra 1,184 daily trips which would have derived were the 100 trips/ksf of gaming floor space per the revised San Diego study. Ignoring that, however, these additional trips would have resulted in only negligible changes in the calculated levels of services within the report, and would have created no additional impacts or changes in any of the conclusions of the traffic study.

Mystic Lake Casino

David Evans and Associates located trip generation calculation research for Mystic Lake Casino-Hotel, a large stand-alone Indian gaming casino facility in southwestern Minnesota. This research was included within the "St. Croix Meadows Racing Park Proposed Casino Traffic Impact Study: Hudson, Wisconsin" (also called the Hudson Casino) prepared by BRW within the past 2 years. The Mystic Lake Casino-Hotel is also a very large complex, and very similar in nature to the proposed Shingle Springs casino, as shown by the comparison in Table 16a.

Table 16a
Shingle Springs vs. Mystic Lake Size Comparison

| Variable | Mystic Lake | Shingle Springs |
|--------------------------------------|-------------|-----------------|
| Size of Casino (All - without Hotel) | 447.6 ksf | 238.5 |
| Size of Casino Gaming Floor Area | 101.5 ksf | \$2.8 |
| Number of Hotel Rooms | 416 rooms | 250 rooms |
| Number of Gaming Positions | 3,916 | 3,000 |

Source: "St. Croix Meadows Racing Park Proposed Casino Traffic Impact Study, Hudson, Wisconsin," BRW.

Trip rates for the Mystic Lake Casino-Hotel were established based on surveys of existing weekday PM peak hour, and Saturday peak hour trips which are currently visiting the facility. Because this facility is large, it is assumed that trip rates experienced at the facility would provide a reasonable check of peak hour trip rates used for the Shingle Springs analysis. A comparison of weekday PM peak hour and Saturday peak hour rates is provided in Table 16b.

Table 16b
Shingle Springs vs. Mystic Lake Trip Generation Rate Comparison

| Casino-Hotel | Size of Entire Casino (without Hotel) (ksf) | Trip Generation Rate (ksf) | |
|-----------------|---|----------------------------|----------------|
| | | Weekday PM Pk Hr | Saturday Pk Hr |
| Mystic Lake | 447.6 | 4.08 | 4.51 |
| Shingle Springs | 238.5 | 5.11 | 7.09 |
| % Difference | | +25% | +57% |

Source: Mystic Lake data from "St. Croix Meadows Racing Park Proposed Casino Traffic Impact Study, Hudson Wisconsin," BRW.

As can be seen, the trip rates assumed for the Shingle Springs Casino are 25% higher for weekday PM peak hour conditions, and 57% higher than Saturday peak hour conditions than actually occur at the Mystic Lake Casino-Hotel. Thus, from this perspective, the peak hour trip rates used for the Shingle Springs facility are considered to be conservative.

Trip rates for the Shingle Springs facility were established using 25% of ITE trip rates for stand-alone hotels. Since these result in trip generation 25%-57% less than trip rates established for the Mystic Lake Casino-Hotel, this validates that the assumption in which only 25% of hotel trips as established in the ITE Trip Generation Manual were used to establish Shingle Springs trip generation are reasonable and conservative.

ITE Article

An article published within the May, 1992 Institute of Transportation Engineers Journal titled "Trip Generation Rates for Las Vegas Area Hotel-Casinos" was referenced to see how trip generation rates for the proposed Shingle Springs Casino corresponded to the findings within the article. Trip characteristics for "all hotel-casinos" analyzed as part of the study, rather than "strip hotel-casinos," were used for comparisons since they included rural casinos in outlying areas, and off-strip casinos with 200-300 rooms, as well as strip casinos. Inclusion of these other casino types would provide results closer to those which would be expected for the Shingle Springs facility than would results due to strictly strip casinos. As discussed elsewhere, the use of trip generation rates for Las Vegas area casinos, particularly those lying along the strip, are not considered to be directly applicable to the trip rates for the Shingle Springs Casino, but are provided here to provide an additional check on the peak hour trip rates used. Within this study, trip generation rates for entire hotel-casino complexes were established using three separate variables (1) number of hotel rooms, (2) employees, (3) thousand square feet of casino gaming floor area. Using the fitted curve equations provided, and quantities as assumed for the Shingle Springs facility, the Shingle Springs facility would generate the trips shown in Table 17.

Table 17
Shingle Springs vs. Las Vegas Casino-Hotels Peak Hour Trip Rate Comparison

| | 250 Rooms | 1,500 Employees | \$2.8 ksf Casino Gaming Floor Area | Average Trips |
|--|-----------|-----------------|------------------------------------|---------------|
| AM Peak Hour | | | | |
| Shingle Springs Trips (Per Traffic Study) | 739 | 739 | 739 | 739 |
| Trips per ITE Article Fitted Curve Equation | 328 | 503 | 851 | 561 |
| % Difference in Volumes (Traffic Study vs. Article) | -411 | -236 | +112 | -178 |
| % Difference (Article Rates vs. Traffic Study Rates) | -125% | -47% | +13% | -32% |
| Coefficient of Determination (R ²) | 0.568 | 0.927 | 0.748 | - |
| PM Peak Hour | | | | |
| Shingle Springs Trips (Per Traffic Study) | 1,219 | 1,219 | 1,219 | 1,219 |
| Trips per ITE Article Fitted Curve Equation | 501 | 827 | 1,386 | 905 |
| Difference in Volumes (Traffic Study vs. Article) | -718 | -392 | +167 | -314 |
| % Difference (Article Rates vs. Traffic Study Rates) | -145% | -47% | +12% | -35% |
| Coefficient of Determination (R ²) | 0.445 | 0.799 | 0.631 | - |

Source: "Trip Generation Rates for Las Vegas Area Hotel-Casinos" May, 1992 Institute of Transportation Engineers Journal.

total. This is especially true when it is remembered that the trip generation utilized within this study is considered to be extremely conservative, well more than the site will likely experience, and was established without regard to individual trip types. Trip generation breakdowns described elsewhere in this report were established by delineating the total number of trips into all of the various potential trip types, and were performed prior to the decision to include water delivery trucks. Nonetheless, the addition of water trucks would likely be negligible for the following reasons: (1) they would comprise only 1/5% of the 9,918 daily trips; (2) deliveries would be spread out over the entire 24 hour period each day, and to avoid peak hour congestion, it is likely that very few, if any, deliveries would be made during the AM or PM peak periods due to congestion.

However, impacts identified within this study were tested to determine if the addition of water delivery trucks could potentially cause additional impacts beyond those identified. At most, it is assumed that 10% of deliveries would occur during the AM, PM and/or Saturday peak hour, since peak hour traffic volumes typically represent approximately 10% of daily volumes along any traffic facility. It was found that the addition of 5 trips during any peak hour (10% of 50 trips), or 50 daily trips, would not create any additional impacts beyond those identified within this study, including intersections, ramps, US-50 freeway mainline, and local roads.

CASINO PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Different approaches were taken to distribute peak hour and daily trips. The initial phase of this study investigated peak hour trip distribution and considered only trips in the immediate vicinity of the project. To facilitate the more detailed phase of this study which considered impacts to local streets throughout El Dorado County, a more detailed trip distribution scenario was established. However, the local street analysis requiring a more detailed trip distribution scenario considered trip distribution on a daily basis rather than a peak hour basis.

Peak Hour Trip Distribution and Assignment

Peak Hour Trip Distribution

Peak hour trip distribution of casino project generated traffic is based on information in the Urban Systems Marketing Study, and the geographical location of population centers from which the casino is expected to draw both customers and employees. Based on this criteria, a significant percentage of the casino's traffic is expected to originate from the Sacramento/San Francisco Bay area.

Based on this criteria, peak hour trips to and from the proposed casino project (for analysis of impacts within the immediate vicinity of the project) were distributed as follows:

- 80% to/from the west (Sacramento/San Francisco Bay area)
- 20% to/from the east (Placerville/South Lake Tahoe area)

Casino project trips as assigned to the two proposed freeway interchange intersections for weekday AM and PM peak hours, and the Saturday peak hour, are depicted in Figure 2.

As the table shows, use of the fitted curve equations for Shingle Springs quantities for two of the three variables result in peak hour volumes between 47% and 143% less than those which are assumed for the Shingle Springs study. The remaining variable (casino gaming floor area) results in slightly higher peak hour rates (12-13% higher). When average together, it can be seen that fitted curve equations within the article result in an average number of trips which are 32-35% lower than those which were actually used. Thus, from this perspective, the peak hour trip rates used for the Shingle Springs facility are considered to be conservative.

Because hotels are included within these studies, these results also validates that the assumption in which only 25% of hotel trips as established in the ITE Trip Generation Manual were used to establish Shingle Springs trip generation are reasonable and conservative.

ITE Casino Trip Generation Report

A write up regarding trip generation rates for the Shingle Springs study was submitted to a member of the technical advisory committee which helped to put together a report prepared for the Institute of Transportation Engineers titled "Casino Trip Generation." This report is currently undergoing final review and is expected to be published in the near future. This individual reviewed the trip generation assumptions used within the Shingle Springs study, which included trip rates for total square footages (238,500 sq. ft.), gaming floor area square footage (\$2,800 sq. ft.), trips per gaming position (3,000), and trips per employee (1,500). He verified that the rates and methodology were fully consistent with this report, and that in his opinion, the rates used, and trips generation volumes calculated, were very conservative for a facility this size.

He also verified that an assumption of approximately 2 trip/room (25% of the trip generation vs. a stand alone hotel) is reasonable.

Casino Project Trip Generation Validation Summary

As the research and analysis above indicates, the trip generation assumptions used within this report are reasonable and conservative.

Additionally, the discussion above shows that great care must be taken when comparing assumptions used within this analysis against those drawn from other sources. As shown, it is important that data be used correctly. For example, it is important that trip generation based on rates established for the square footage of the gaming floor area be carefully distinguished from those established for the square footage of an entire casino. Similarly, it is important that allowances be made for the mixed nature of the project, and recognized that a combined casino-hotel will draw significantly less traffic than the combined traffic associated with a similar sized stand alone casino and stand alone hotel.

Water Supply Trucks

It is anticipated that an average of 25 trucks may deliver water to the casino-hotel per day, which when accounting for the inbound and outbound leg of each delivery, would result in a total of 50 trips per day on average. Although not specifically identified within the trip generation breakdown described elsewhere in this report, they could conceivably be included within the

Peak Hour Passer-By Diversion

Not all of the traffic to and from the proposed casino project would be newly generated trips. A significant percentage of the through traffic on Highway 50 consists of vehicles travelling to and from Lake Tahoe, and a large percentage of these trips have a known propensity to gamble. Also, Shingle Springs will be an attractive stop for vehicles travelling a significant distance to and from locations such as the Bay Area, Stockton, etc. Thus, many of the people visiting the casino will be people who would have already been on the freeway en route to other existing casinos or recreational activities, particularly east of the project site including in large part the Tahoe area. Therefore, the trip generation calculated for the proposed casino must be adjusted before assigning the trips to the freeway. In other words, although 100% of the trips generated by the casino/hotel would be assigned as new trips to the ramps, interchanges, and roadways of the new interchange, only a percentage of these trips should be assigned to US-50 as new trips since a significant percentage are assumed to already exist on the freeway. Without the new interchange and casino, these trips would have continued past the new interchange along US-50.

With the new interchange and casino, it is assumed some of these trips will be intercepted or diverted to the new casino.

For this traffic analysis, it was conservatively assumed that 40% of peak hour trips generated by the proposed casino project would be trips which are already assumed to exist within existing (and future projected baseline) US-50 traffic volumes during peak hours. Following the completion of the casino and interchanges, this 40% is assumed to stop at the site rather than continuing past the site, which they would do in the absence of the development. This assumed passer-by capture rate was established in coordination with Caltrans traffic engineering personnel.

The assumed passer-by capture rate of 40% is based on and/or validated by the following:

- (1). Mississippi Coast Casinos - License plate data included within the "Mississippi Gulf Coast Transportation Management Plan for Waterfront Development" traffic study suggests a 40% capture from the local area.
- (2a). Urban Systems Marketing Study - The Urban Systems Marketing Study provided research regarding capture rates of I-15 traffic to facilities in Primm, Nevada. Primm, Nevada is located just inside the California/Nevada border, approximately 25 miles southwest of Las Vegas. Thus Primm is also located along a heavily used corridor in which a large percentage of trips have a known propensity to gamble. Studies show that 20% to 24% of "non-commuter, non-truck" traffic passing traffic chooses to exit I-15 and visit a facility located in Primm. In addition to multiple casino facilities, Primm offers hotels, dining and fuel, thus the capture rate is not due exclusively to gaming.
- (2b). Using this information as a basis, the Urban Systems Marketing Study concluded that 8% of "through" vehicular traffic passing along US-50 would be captured. Again, through traffic excluded both commuter traffic and truck traffic. Based on research conducted by Urban Systems, it is assumed that 65% of traffic along US-50 in the vicinity of the project is commuter

oriented. Additionally, Caltrans truck volume data shows that 6% of the volumes along US-50 in the vicinity of the project are trucks. Based on 2000 Caltrans counts, the average annual daily traffic volumes along US-50 between Shingle Springs is 43,000 vehicles. Thus, as the following calculation shows, there are 12,470 through vehicular (non-truck) trips on an average weekday.

| | |
|--|---------------|
| <u>2000 AADT on US-50 between Shingle Springs & Greenstone</u> | <u>43,000</u> |
| Commuter Traffic = 65% | 27,950 |
| Through Traffic = 35% | 15,050 |
| Truck Traffic = 6% | 2,580 |
| <u>Through Vehicular (Non-Truck) Traffic</u> | <u>12,470</u> |
| Traffic which Casino will Intercept = 8% | 1,000 |
| <u>Trips due to Traffic Intercept (2 trip cards/vehicle)</u> | <u>2,000</u> |
| <u>Total Shingle Springs Trip Generation (Average Weekday)</u> | <u>9,918</u> |
| <u>% of Average Daily Trip Generation</u> | <u>20.2%</u> |

If it is assumed that the project captures 8% of this traffic, then 20.2% of the trips generated by the project on an average weekday are due to the "capture" of passing through traffic.

The diversions outlined within the Urban Systems Marketing Study do not necessarily include other types of potential trip diversions, including the diversions of commuters, business travelers, truckers, vacationers, etc. traveling between SF Bay/Sacramento and the Placerville/South Lake Tahoe area who might decide to stop for an hour or two of leisure before continuing on. The exact number of visitors falling into these categories is unknown, but are obvious components. As outlined in detail within the next section, these other potential trip diversions potentially include the following trip types:

- Interception of gamers who would have been traveling to South Lake Tahoe casinos, but instead will visit Shingle Springs. Note that most of these gamers would have been arriving from the west (i.e. Bay Area, Sacramento, and Stockton), however some of the gamers would have been diverted from portions of El Dorado County, including locations east of the project site.
- Diversion of gamers from the west (i.e. Bay Area, Sacramento, and Stockton) who would have gone to South Lake Tahoe casinos in the absence of Shingle Springs, is visiting Shingle Springs as a primary destination instead, but will still continue to Tahoe as a secondary destination
- Diversion and interception of a portion of the following unique trip types, which it is assumed would have already been on US-50 with or without the casino-hotel:
 - gamers who are primarily tourists visiting family and friends in the area
 - gamers who are primarily in the area on business or attending conventions
 - employees who would have been on US-50 to/from other jobs in the area
 - guests staying in casino's hotel who would have been participating in area recreation (and possibly staying in other area hotels)
 - other miscellaneous hotel related trips
 - buses
 - vehicles making deliveries

(2b). Urban Systems Marketing Study - An early draft of the Environmental Assessment for this study included the following assumptions regarding the potential interception and diversion of traffic to the casino. These assumptions were calculated based on information from the Urban Systems Marketing Study:

- A 20.9% interception of South Lake Tahoe trips (trips which would potentially travel to the proposed casino instead of going to South Lake Tahoe recreational activities)
- A 21.8% interception of Stateline casino trips (trips which would potentially travel to the proposed casino instead of going to Stateline casinos)
- A 15.0% diversion of South Lake Tahoe trips (trips which would still continue to/from Lake Tahoe after stopping temporarily at the new casino)

It is important to note that these percentages are not percentages of US-50 traffic volumes, but rather the percentages of trips generated by the proposed casino/hotel. Together, these potential diversions and intercepts add up to a 57.7% total potential reduction of casino project trip generation which would travel along US-50. Additionally, due to the actual interception of traffic which would have gone to Tahoe without the new casino, baseline volumes along US-50 east of the site could theoretically be reduced by a volume equal to 15% of the total project trip generation. However, neither existing or future baseline volumes are reduced within this analysis to account for this potential characteristic.

(3). Auburn Rancheria Environmental Assessment - The "Environmental Assessment for the United Auburn Indian Community of the Auburn Rancheria" (Environmental Science Associates, June, 2000) assumed that a minimum of 30% of the trips generated by the casino would be "pass-by" trips. Since this facility is located a few miles off from I-80, it is reasonable that the passer-by capture for a facility located immediately next to a major freeway such as Shingle Springs would attract a higher passer-by percentage, thus 40% seems reasonable in comparison.

(4). Sensitivity Analysis - A sensitivity analysis was performed to establish the passer-by capture threshold where additional potential impacts than those identified within this traffic study might be created. This sensitivity analysis shows that as long as the passer-by capture rate is no less than 20%, that no additional peak hour impacts than those identified within this traffic study would be created.

The establishment of a capture rate for any project is not an exact science, and is very difficult to establish with certainty. This is especially true for a complex project such as Shingle Springs where a broad spectrum of trip types relating to gamers, hotel guests, employees, recreation related traffic, etc. will exist in unknown quantities. Although a reasonable estimate of the total trip generation can be established based on comparisons with other facilities, the exact nature of various trip types is more troublesome. Additionally, the breakdown between new trips, trips which would have existed without the project, diverted passer-by trips, intercepted passer-by trips, etc. are also troublesome to breakdown. There are other factors which will influence passer-by capture.

It is important to note that trip generation characteristics will likely be affected during time periods when US-50 is experiencing peak congestion. Although US-50 in the vicinity of the project does not currently operate in a significantly congested manner, freeway congestion will continue to become increasingly problematic in the future until the freeway is widened to 6-lanes. During times when the freeway is highly congested, persons desiring to travel to or from the casino would potentially be discouraged from travelling during peak hour conditions when US-50 volumes are approaching or exceeding capacity. This would be especially true for traffic to and from the Sacramento/SF Bay area, which would encounter significant traffic problems along long stretches of the route. For these reasons, it is probable that during peak hours when US-50 is congested that less traffic would travel to/from the Sacramento/SF Bay area. Additionally, the facility would have an added attractiveness when the highway is congested, at which time the casino would provide an even higher degree of attraction as a means of waiting out congestion.

Similarly, since the facility is located in the vicinity of the Sierra snowline, and at a point where the highway is frequently shut down, or where chain control begins, the facility would have an added attractiveness during times when continued travel up into the mountains is questionable.

Trip generation as described above is based on peak hour characteristics at similar facilities, which also experienced congestion along access roadways. Thus, the trip generation characteristics described above are considered to be a fair representation of the trips for the proposed casino project, even when US-50 is congested. However, to account for the reduced number of longer trips during these congested peak hour periods, trips generated by the casino would be expected to be more locally oriented, or the result of trip diversions. Although it is recognized that the diversions might in reality be lower during uncongested peak hours (and newly generated trips might constitute a higher percentage of all generated trips), this aspect would be more than offset by the lower traffic volumes along an uncongested freeway. Thus, the same 40% reduction is assumed for all three peak hour scenarios.

Daily Trip Distribution and Assignment

To establish daily trip distribution to local roads, it was necessary to disaggregate the total number of project trips into various trip types to differentiate between newly generated trips and those which are assumed to already be on US-50 as passer-by trips. To do this, the total daily project traffic volumes for an average weekday during the peak month were used:

9,404 casino trips + 514 hotel trips = 9,918 TOTAL trips

A variety of materials were used to separate these trips into trip types, particularly the November, 1999 Marketing Study performed by Urban Systems. Urban System's personnel were also contacted to establish additional information such as casino employee characteristics, typical vehicle occupancy rates, etc. which were helpful in converting information within the Marketing Study to vehicular trips. Substantial additional research and analysis was also performed to refine the assumptions, and distribute the traffic.

Trips generated by Single Springs were broken down into categories and assigned to highways and local roadways within El Dorado County as shown in Table 18.

Table 18
Shingle Springs Average Daily Trip Generation

| Trip Type | Avg Wkdy Trips |
|---|----------------------|
| Employees (Assume Hotel = 10%) | 1,375 |
| Gamers - Local Residents (El Dorado Co. & vicinity) | 965 |
| Gamers - Regional Residents (SF, Sacramento, etc.) | 4,565 |
| (West along US-50) | 199 |
| (North along SR-49) | 135 |
| (South along SR-49) | |
| Gamers - Tourists | |
| Visiting Friends & Family | 48 |
| Business | 169 |
| Conventioneers | 14 |
| Vacationers | 37 |
| Recreation by Hotel Guests | 304 |
| Other Hotel (Non-Employee/Recreation) | 72 |
| Buses | 20 |
| Deliveries | 20 |
| Traffic Diversion of "Passing Through" Traffic | 1,995 |
| Total | 9,918 |

The specific types of trips which are assumed to be generated by the proposed casino/hotel, and methodologies used to distribute the trips, are described below:

Employee Trips to both the casino and hotel were established assuming a total of 1,500 casino employees (including full time administrative staff) and an additional 200 hotel employees. It was assumed that on an average weekday that 550 casino employees, 200 administrative employees, and 90 hotel employees would travel to and from the site. It was assumed that each employee vehicle would include 1.2 people, and that each vehicle would make a total of 2.2 trips per day. Employee trips were distributed using the County's travel forecast model, which distributed traffic volumes to US-50 interchanges as shown in Table 19.

Local & Regional Gamer Trips are defined as trips where a gamer's trip originated generally from their residence. These trips were established through use of market forecasts as described within the Marketing Study performed by Urban Systems. This study carefully analyzed the potential gaming market and the likely locations where gamers would be drawn from. Factors such as distance from the proposed casino, the propensity for gaming by residents in certain locations, and the influence of competing casinos such as Jackson Rancheria and the proposed Auburn Rancheria were considered. The exact locations of gamers was delineated as much as was necessary to determine the exact roadways in which gamers would arrive at the project site. For example, all of the gamers from the San Francisco, Sacramento, and Stockton areas would arrive via US-50, whereas gamers in the Rocklin, Auburn area have a choice between SR-49 and US-50 (via Auburn-Folsom Rd, Sunrise Blvd, Hazel Ave, etc.). Local gamer trips were

separated from regional gamer trips and distributed onto the local roadway network using the County's travel forecast model, in the same manner in which employees were distributed. It is assumed that gamers and employees living in the immediate vicinity of the project will be distributed in a similar manner since each is a function of the location of local residential development.

Table 19
Local Trip Distribution (Employees & Local Gamers)

| US-50 Interchange/Intersection | Cumulative % | % to/from South | % to/from Interchange | % to/from North |
|---|--------------|-----------------|-----------------------|-----------------|
| 9.1% (Continuing West) | | | | |
| 1. El Dorado Hills Blvd / Laroche Rd | 18.9% | <- 2.0% | 9.8% | 7.8% → |
| 2. Bass Lake Rd | | <- 0.6% | 1.4% | 0.8% → |
| 3. Cambridge Rd | 20.3% | <- 0.1% | 3.0% | 2.9% → |
| 4. Cameron Pk Dr | 23.3% | <- 2.0% | 12.0% | 10.0% → |
| 5. Pondessa Rd / S. Shingle Rd | 35.3% | <- 5.5% | 14.3% | 8.8% → |
| 6. E. Shingle Springs Dr | 49.6% | <- 3.5% | 7.0% | |
| 53.1% (off from west) | | | | |
| 6.5. NEW SHINGLE SPRINGS RANCHERIA INTERCHANGE | | | | |
| 46.9% (off from east) | | | | |
| 7. Greenstone Rd | 34.1% | <- 7.9% | 12.8% | 4.9% → |
| 8. El Dorado Rd | 33.2% | <- 0.6% | 0.9% | 0.3% → |
| 9. Missouri Flat Rd | | <- 9.3% | 13.2% | 3.9% → |
| 10. Placerville Dr / Forni Rd | 20.0% | <- 1.3% | 6.0% | 4.7% → |
| 11. Main St | 14.0% | <- 0.2% | 1.0% | 0.8% → |
| 12. SR 49 | 13.0% | <- 2.1% | 3.4% | 1.3% → |
| 13. Bedford Ave | 9.6% | <- 0.8% | 2.2% | 1.4% → |
| 14. Mesquite Rd | 7.4% | <- 0.9% | 2.0% | 1.1% → |
| 15. Samuel School Rd | 5.4% | <- 0.8% | 1.3% | 0.5% → |
| 16. Point View Dr | 4.1% | <- 0.6% | 0.8% | 0.2% → |
| 17. Carson Rd | 3.3% | <- 0.4% | 0.7% | 0.3% → |
| 18. Carson Rd (@ Bartsely) | 2.6% | | 0.7% | 0.7% → |
| 19. Carson Rd (@ Pony Express Tr) | 1.9% | | 0.4% | 0.4% → |
| | 1.5% | | | |

| | | | | |
|---|-----------------------|------|------|---|
| 20. Port Express Tr. | 1.0% | 0.5% | 0.5% | → |
| 21. Sky Park Rd. | ← 0.3% | 0.6% | 0.3% | → |
| Source: 1999 El Dorado County travel forecast model | 0.4% (Combining East) | | | |

Tourist Gamer Trips are defined as gamers who are visiting the northern California area. These can be separated into people visiting family and friends in Northern California, people visiting the area on business or attending conventions, and people who are vacationing in the area. For purposes of this study, it is assumed that most of the business people and conventioners will be arriving at the site from locations west of El Dorado County (i.e. Sacramento). It is also assumed that 80% of the tourist gamers visiting family and friends would also be arriving from the west, with the remaining 20% assumed to be visiting family and friends within El Dorado County (and thus also distributed to local roadways using the County's travel forecast model). Finally, people who are vacationing in the area were assumed to arrive from local points of recreation (described below). Most of the trips associated with Tourist Gamers were assumed to be arriving at the site from locations west of El Dorado County, although a portion of the trips were assigned to local roadways within El Dorado County.

Recreation Trips by Hotel Guests are based on the assumption that some of those people who are staying at the hotel (whether they are gamers or not) will visit one or more of the many recreational spots in the area. Assuming that each hotel guest party (i.e. 1 occupied room) stays an average of 1.75 days, and assuming that each party makes 1.25 recreation oriented trips per stay, an average of 304 trips per day (inbound plus outbound) would be generated by the project. Extensive research was performed regarding the various recreational choices in the area, and the number of visitors to each. Using this information, as well as input from the El Dorado County Chamber of Commerce, recreational trips by guests were distributed to roadways to and from the destinations shown in Table 20.

Table 20
Hotel Recreation Trip Distribution

| Recreation Choice | Percentage |
|--|------------|
| Downtown Placerville (Antiques, Museums, Restaurants, Shopping, etc.) | 25% |
| Apple Hill (+ North County Wineries) | 13% |
| Coloma area North County Wineries | 1% |
| South County Wineries | 8% |
| Marshall Gold State Park | 12% |
| Gold Bug Park | 3% |
| White Water Rafting (Coloma Put In) | 3% |
| White Water Rafting (Chili Bar Put In) | 2% |
| Golf (El Dorado Hills Golf Course) | 2% |
| Golf (Apple Mtn. Golf Course) | 3% |
| Other Misc. Attractions (in western & central El Dorado Co.) | 5% |

| | |
|---|-------------|
| South Lake Tahoe & other attractions in East County (west along US-50) | 8% |
| Sacramento & Folsom (west along US-50) | 10% |
| Auburn (and other pts north along SR-49) | 3% |
| Yosemite (& other pts south along SR-49) | 2% |
| TOTAL | 100% |

Other Hotel Trips are trips associated with that portion of trips related specifically to the hotel, which are over and above project trips calculated specifically in connection with the casino. Other hotel trips are the remainder of hotel trips after deductions for hotel employee trips (assumed as 10% of the projected 1,500 employees), and recreation trips as described above. As discussed elsewhere, 75% of trips associated with the hotel are assumed to be trips which would have been generated by the casino with or without the hotel. Most of these trips were assumed to be arriving at the site from locations west of El Dorado County.

Bus Trips are assumed to number, on average, 20 per day based on information included within the Marketing Study performed by Urban Systems. It is assumed that these trips would be arriving at the site from locations west of El Dorado County.

Delivery Trips are assumed to number, on average, 20 per day based on information provided by the shipping and receiving department of a similar northern California casino. It is assumed that these trips would be arriving at the site from Placerville.

Traffic Intercept Trips are the most difficult component of the traffic to establish. Although the previous traffic study assumed a passer-by capture rate of 40% along US-50, a more refined calculation was established which took into account the assumed passer-by capture for each individual trip type generated by the project. The following details this breakdown.

As described within the introduction to this section, the Urban Systems Marketing Study concluded that 8% of "through" vehicular traffic passing along US-50 would be captured (excluding both commuter traffic and truck traffic), which converts to 20.2% of trips generated by the project on an average weekday being due to the "capture" of passing through traffic. These trips do not fall into any other category, and thus are assumed to be simply "passer-by capture of through vehicular volumes" trips.

It is important to note, however, that other trips generated by the project will also exist on US-50, and thus should not be added to trip generation volumes on US-50. Table 21 breaks down the various types of trips which are assumed would already exist along US-50, and which would be either diverted or intercepted by Shingie Springs. These trip type percentages are based in large part on information provided by Urban Systems both within the Marketing Study and verbally. However, additional assumptions are based on assumptions considered to be reasonable for the project.

Table 21
Passer-By Capture % by Trip Type

| | |
|--|--------------|
| Passer-By Capture (Through Vehicular) includes gamers with South Lake Tahoe as primary destination | 20.1% |
| "Intercepted Trips" associated with Bay Area, Sacramento, and Stockton gamers who would have been traveling to South Lake Tahoe casinos, but instead will visit Shingle Springs. (12% of trips as defined) | 5.5% |
| "Diverted Trips" associated with Bay Area, Sacramento, and Stockton gamers who would have gone to South Lake Tahoe casinos in the absence of Shingle Springs, is visiting Shingle Springs as a primary destination instead, but will still continue to Tahoe as a secondary destination (4% of trips as defined) | 1.8% |
| "Intercepted Trips" associated with El Dorado County area gamers who would have gone to South Lake Tahoe casinos in the absence of Shingle Springs, but instead will visit Shingle Springs. (63% of trips as defined) (Note: Capture rate varies along US-50 within El Dorado County) | 6.1% |
| "Diverted Trips" associated with Employees who are assumed would have been on US-50 to/from other jobs in the area (25% of trips as defined) | 3.5% |
| "Diverted & Intercepted Trips" associated with Gamers who are Tourists visiting family and friends (20%), in area on Business (10%), in area attending Conventions (10%), in area Vacantioning (25%) | 0.4% |
| Misc. "Diverted & Intercepted Trips" associated with Hotel Guests participating in area Recreation (25%), other misc. Hotel related trips (50%), Buses (50%), and Deliveries (100%) | 1.4% |
| TOTAL PASSER-BY CAPTURE | 38.8% |

As the table shows, it is assumed that almost 39% of the trips which the project would generate on an average weekday would already be present on US-50. This is slightly less than the 40% passer-by capture assumed for peak hour conditions. It is expected that the passer-by capture during peak hours is higher than daily conditions due to increased traffic volumes and congestion during the peak hours, at which time the casino would provide an even higher degree of attraction as a means of waiting out congestion.

It is important to note that the total number of project trips was established through careful research of trip generation characteristics at other casino facilities, some of which includes hotels. Trip generation rates were established by conducting counts of traffic entering and exiting driveways at other casinos, which would thus include every type of trip possible including each of the various types of project trips described above such as the employee trips, recreation oriented trips, buses, deliveries, capture of passerby volumes, and obviously gamer trips. It is important to note that in reality the exact number of trips which would correspond to any specific trip type can never be known with certainty, and in fact many trips would be spread out over the various trip types. It would be nearly impossible for a study of this magnitude, with the

complexity and variety of trips generated, to be broken down perfectly into each exact trip type. However, the assumptions, trip allocations between trip types, and distribution and assignments to highways and local roadways represents the analyst's best faith effort to reasonably identify all trip types, and simulate traffic conditions with the project. Although close scrutiny may result in reasonable questions regarding the nature of each trip type, overlap between trip types, etc., it is believed the analysis reasonably represents the manner in which trips would be generated and distributed "as a whole." The breakdown into trip types simply represents the best analytical approach to reasonably distribute trips.

PEAK HOUR PROJECT VOLUMES

Existing Plus Project - Peak Hour Volumes

Peak hour turning movements at the new ramp intersections which would be expected without the proposed casino/hotel are depicted in Figure 3 for Existing Conditions.

Peak hour turning movements at the new ramp intersections following the completion and opening of the proposed casino/hotel are depicted in Figure 4 for Existing Conditions.

Table 22 provides a breakdown of the volumes along the freeway ramps and freeway mainline. This breakdown includes existing (no project) volumes, passer-by volumes, rerouted baseline Rancharia volumes, and newly generated casino traffic volumes.

Table 22
Freeway & Freeway Ramp Volumes by Type Existing Plus Project Conditions

| US-50 WB On-Ramp | AM | | PM | | SAT | |
|---------------------|------------|------------|------------|-------|-------|-------|
| | PK Hr | PK Hr | PK Hr | PK Hr | PK Hr | PK Hr |
| Rancharia Only | 5 | 3 | 3 | 3 | | |
| PLUS PROJECT | 108 | 275 | 436 | | | |
| Casino Passer-By | 58 | 92 | 171 | | | |
| Total Volume | 171 | 370 | 610 | | | |


| US-50 WB Mainline (West of New Interchange) | AM | | PM | | SAT | |
|---|--------------|--------------|--------------|-------|-------|-------|
| | PK Hr | PK Hr | PK Hr | PK Hr | PK Hr | PK Hr |
| No Project Freeway Vol | 2,206 | 1,589 | 1,691 | | | |
| - Non-Casino Off-Ramp Vol* | 135 | 113 | 154 | | | |
| Adj No Project Fwy Vol | 2,071 | 1,476 | 1,537 | | | |
| + On-Ramp Volume | 171 | 370 | 610 | | | |
| Plus Project Freeway Vol | 2,242 | 1,846 | 2,147 | | | |

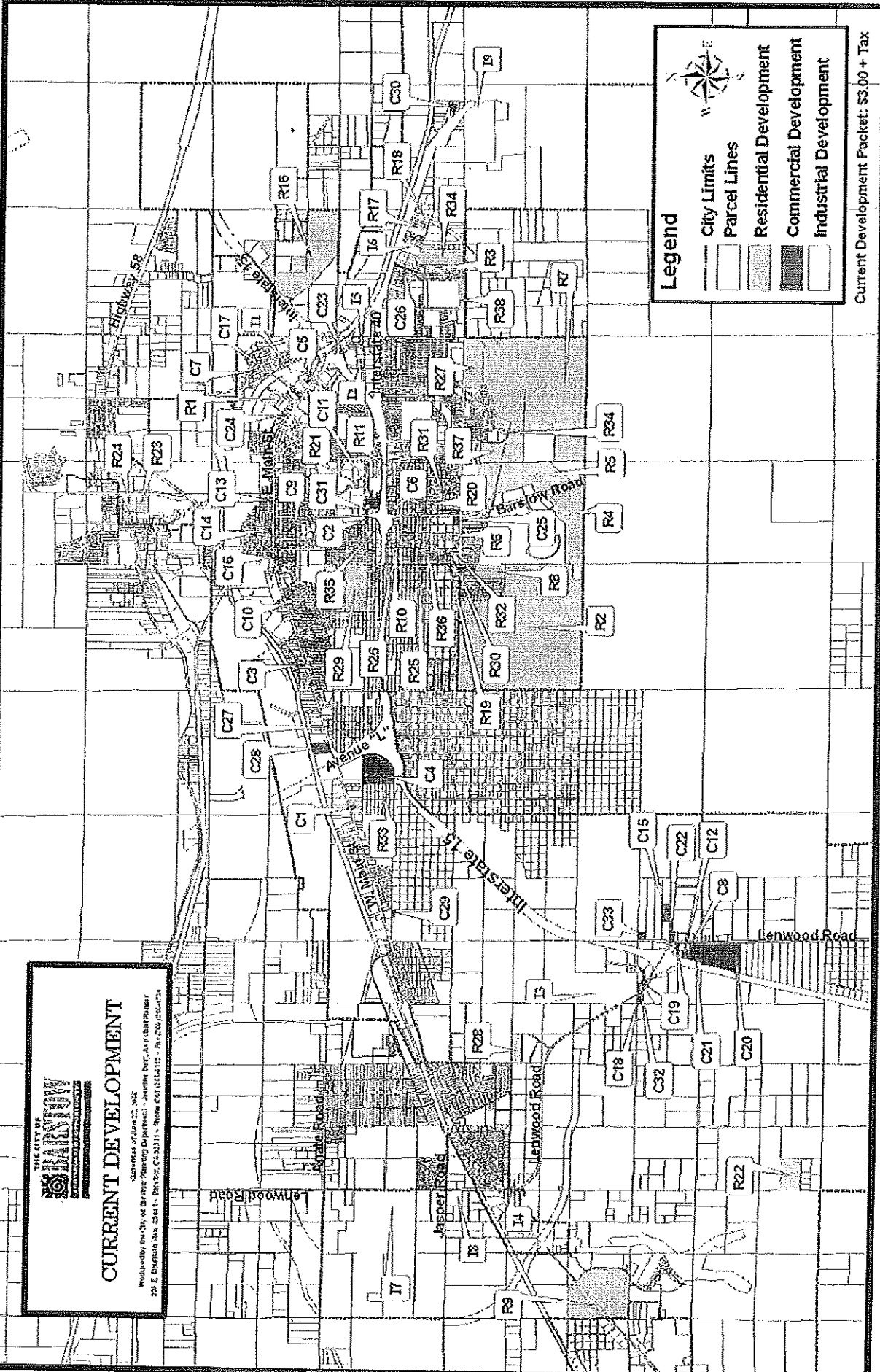
| US-50 WB Mainline (East of New Interchange) | AM | | PM | | SAT | |
|---|--------------|--------------|--------------|-------|-------|-------|
| | PK Hr | PK Hr | PK Hr | PK Hr | PK Hr | PK Hr |
| No Project Freeway Vol | 2,206 | 1,589 | 1,691 | | | |
| + New Casino Vol | 62 | 78 | 94 | | | |
| Plus Project Freeway Vol | 2,268 | 1,667 | 1,785 | | | |


* "Non-Casino Off-Ramp Volume" subtracted from "No Project Freeway Volume" to account for cumulative volumes (Rancharia volumes and "passer-by" volumes) diverted to upstream off-ramp.

** "No Project Freeway Volume" includes existing Rancharia Traffic.

APPENDIX G
CUMULATIVE PROJECTS DATA AND GROUP LOCATION MAP


CITY OF CARY
 OFFICE OF PLANNING AND DEVELOPMENT
CURRENT DEVELOPMENT
 Services of June 22, 2007
 Prepared by the City of Cary Planning Department - Jennifer Day, Assistant Planner
 200 E. Durham Street - Cary, NC 27511 - Phone: 659-1124/1115 - Fax: 659-254-0214



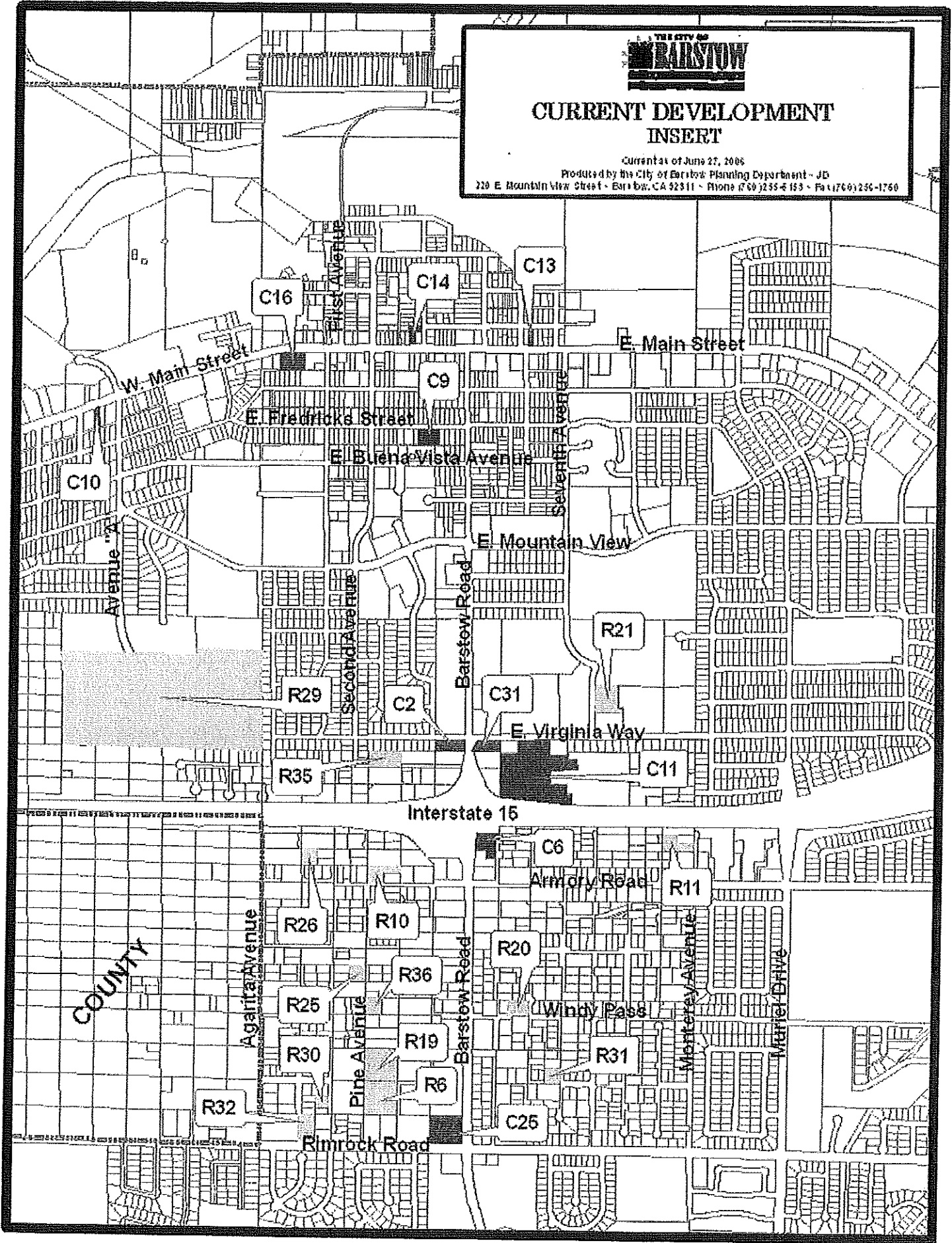
Legend

 City Limits
 Parcel Lines
 Residential Development
 Commercial Development
 Industrial Development

Current Development Packet: \$3.00 + Tax



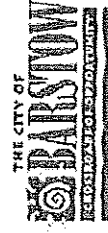
CURRENT DEVELOPMENT INSERT

Current as of June 27, 2005
Produced by the City of Barstow Planning Department - JD
220 E. Mountain View Street - Barstow, CA 92311 - Phone (760) 255-4153 - Fax (760) 256-1760



Residential Development and Subdivisions

| Index # | Applicant | Project Description | Location | Status |
|---------|--|--|---|--|
| R1 | Riverview Apartments | Development Permit #05-05: to construct an 80 unit affordable housing apartment complex | 200 N. Yucca Avenue | Approved: July 2005 Under Construction December 2001 |
| R2 ✓ | Rimrock Ranch Specific Plan Canaday & Company | Development of 1450 to 1700 residential lots | Located south of and abutting Rimrock Road, west of and abutting the logical extension of Agarita Avenue, and North of and abutting the City Limits. APN: 0428-021-04 | Approved January 2006 |
| | Canaday & Company | Tentative Tract 17344-1 thru 3: to create 221 lots for residential development | | Pending: Filed: January 2006 |
| | Canaday & Company and Rimrock Ranch Investments, LLC | Tentative Tract 17344-4: to create 128 lots for residential development | | Approved: April 2006 |
| R3 ✓ | Joe Gec | Tentative Parcel Map #06-07: to create four parcels and a remainder from one parcel. | | |
| | | Tentative Tract Map #1158 for 44 single-family residential lots | Located approximately 390 feet south of Armory Road, 780 feet north of Rimrock Road, 110 feet east of Arbor Way and along the logical northerly extension of Granada Hills Avenue. APN: 0424-217-29 | Approved July 2005 |
| R4 ✓ | A&A Surveying & Mapping | Tentative Tract Map #17800 for 279 single and multi-family residential lots | Located west of and abutting Barstow Road, north of and abutting the City Limits, east of and abutting the logical extension of Agarita Avenue, and south of the Barstow Community College. APN: 0181-711-50, 54 & 55 | Approved November 2005; Final Map for Phase 1 is in plan check: February 2006 |
| R5 | Harrison Development | Planned Unit Development (PUD #05-01 & ZC #05-01) for 498 units | Located east of and abutting Barstow Road and west of and abutting the Sports Park. APN: 0181-711-26 & 27 | Pending Filed: December 2005 |
| R6 ✓ | Linda Gin and John Savitch | Tentative Tract Map #17605 for 10 lots | Located along the south side of Cypress Street between Fine Avenue and Buckthorn Drive. APN: 0183-121-03 | Approved September 2005 |
| R7 ✓ | Dan Piles | Planned Unit Development (PUD #05-02 & ZC#05-06) for 2772 residential lots | Located south of Rimrock Road, east of Barstow Road, and adjacent to the Sports Park. APN: 0181-7111-80 & 89 | Pending Filed: November 2005 |
| R8 ✓ | Mike English/ CF Properties | Tentative Tract Maps #12489-5 to 8 for 71 lots, otherwise known as "The Highlands" | Located west of the logical extension of Agarita Avenue, east of Garnet Avenue and approximately 600 feet south of Rimrock Road and Parcels 15, 16, and 17 of tract 12489-4 (southerly terminus of Armethyst Avenue). APN: 0428-021-12, 0428-321-54, 55, & 56 | Approved May 2003 (Final Maps for 5&6 Approved June 2004--under construction) |
| R9 ✓ | Robert Merritt | Tentative Parcel Map #05-06: to develop a condominium and rental apartment subdivision of a planned senior's community | Located at the southwest and northwest corners of West Main Street and Country | Approved April 2005 |



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Residential Development and Subdivisions

| | | | | |
|-----|--|--|---|---|
| R10 | Robert Merritt, Global Homescare Systems Ann Birchfield | Tentative Tract Map #17832: to subdivide 36.62 acres for a multiple-family residential development Tentative Parcel Map #05-11: Create 3 lots from one parcel for development | Club Drive. APN: 0421-082-01, 03, 24. Located north of and abutting Armory Road, east of and abutting Pine Avenue and west of and abutting Sumac Court. APN: 0183-081-08 | Pending: Filed January 2006 Approved November 2005 |
| R11 | Tracy Malan, M&L Development | Tentative Parcel Map #05-10: Create 3 lots from one parcel for development | Located north of Armory Road, between Sandilewood Court and Monterey Avenue. APN: 0183-241-09 | Approved October 2005 |
| R34 | ✓ Dan Pites | Tentative Tract Map #10873 for 83 lots | Located south of Zion Drive, east of the logical extension of Monterey Avenue and west of the logical extension of Opal Avenue and north of the logical extension of Veterans Parkway. APN: 0181-711-80 | Approved July 2005 |
| | R12 ✓ Dan Pites | Tentative Tract Map #10874 for 97 lots | | Approved July 2005 |
| | R13 ✓ Dan Pites | Tentative Tract Map #11253 for 40 lots | | Approved July 2005 |
| | R14 ✓ Dan Pites | Tentative Tract Map #12086 for 115 lots | | Approved July 2005 |
| | R15 ✓ Dan Pites | Tentative Parcel Map #06-05: to create four parcels from one, east of Guadalupe and Mayor Katy Drive (430 ± acres). | | Approved: April 2006 Final Map Pending: April 2006 |
| R16 | Pacific Holt Development | General Plan Amendment #05-02 and Zone Change #05-04 for 302 lots | APN: 0424-081-10, 29, 43, 79 and 90 | Approved: March 2006 |
| R17 | Stephen Hackett | Tentative Parcel Map #06-01: to create 4 lots plus remainder from one parcel | 2410 Armory Road | Approved January 2006 |
| R18 | Stephen Hackett | Tentative Parcel Map #06-02: to create 3 lots from one parcel | 2336 E. Main Street | Approved January 2006 |
| R19 | Tim McCandless | Tentative Tract Map #17917 to create 10 lots from one parcel for development | Located north of and abutting Cypress Street, east of and abutting Pine Avenue and west of and abutting Buckthorn Drive. APN: 0183-111-010 | Approved February 2006 |
| R20 | Carlos Villa | Tentative Parcel Map #05-09: to create 2 lots from one parcel | 581 Windy Pass | Approved August 2005 |
| R21 | Barstow Associates LLC | Tentative Parcel Map #05-01: to create 4 and a remainder parcels from 1 | Located on the east side of Lookout Drive, approximately 200 feet north of Virginia Way. APN: 0183-221-22. | Approved February 2005 |
| R22 | VVCE, Inc | Tentative Parcel Map #05-02: to create 4 lots from one parcel | Located north of Daniels Road, between the logical extensions of Melody and Cynthia Avenue. APN: 0421-101-27. | Approved October 2005 |
| R23 | Thomas Matteson | Conditional Use Permit #05-28: to allow single-family residential w/in the MU zoning district. | 1500 Silver Saddle Dr | Approved September 2005 |
| R24 | Paul and Jill Jordan | Conditional Use Permit #05-01: to allow single-family residential w/in the MU zoning district | 1600 Silver Saddle Dr | Approved January 2005; Under Construction |



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Residential Development and Subdivisions

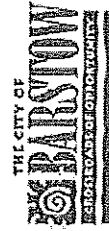
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|-----|--|--|--|--------------------------------|
| R25 | Arthur Sawyers | Tentative Parcel Map #05-06: to create two parcels from one | 1120 Pine Avenue | Approved April 2005 |
| R26 | Robert Mahoney | Tentative Parcel Map #05-07: to create two parcels from one | | Approved August 2005 |
| R27 | ✓ Rimrock Associates | Tentative Tract Map #17713 to create 154 lots from 9 parcels for development | Located south of and abutting Rimrock Road, west of and abutting the City Limits APN: 0181-711-72, 73, 74, 75, 81, 82, 83, 84, & 85 | Approved June 2006 |
| R28 | ✓ Lynn Potter and Dianna Powell | Tentative Tract Map #17864: to create 24 lots from one parcel for development | Located north of and abutting Tortoise Road, west of and abutting Industrial Way APN: 0421-122-51 | Pending; Filed January 2006 |
| R29 | ✓ Corman-Leigh Communities, Inc. | Tentative Tract Map #17868: to create 178 lots from three parcels for development | Located approximately 85 feet west of Mount Vernon Avenue; south of Thomson Elementary School; approximately 640 feet east of Henderson Elementary School; and approximately 165 feet north of Interstate 15. APN: 0428-122-17 | Pending; Filed January 2006 |
| R30 | Donald Garmin | Tentative Parcel Map #06-03: to create two lots from one parcel for development | Located west of and abutting Prairie Drive, approximately 100 feet south of Cypress Street, and approximately 340 feet north of Rimrock Road. APN: 0183-121-27 | Approved February 2006 |
| R31 | Darrell Gramenz & Josephine Baca | Tentative Parcel Map #06-04: to create 3 lots from one parcel for development | Located north of and abutting Startlight Street, west of and abutting Oasis Drive, approximately 380 feet south of Windy Pass, and approximately 190 feet east of Astral Drive. APN: 0183-191-08 & 09 | Approved February 2006 |
| R32 | Helen C. Riley | Tentative Parcel Map #06-06: to create three parcels from one | 1361 Savanna Street | Approved: April 2006 |
| R33 | Stephen H. Hackett and MEZ Brothers, Inc. | Tentative Parcel Map #06-08: to create four parcels from one. | Located at the northeast corner of Santa Rosa Avenue and Santa Cruz Street. APN: 0182-231-22 | Pending: March 2006 |
| R34 | ✓ Marc Gabriel and Desert Skys, LLC and Sun Ridge CA, LLC | Tentative Tract Map #18189, Zone Change #06-08 and General Plan Amendment #06-06: to subdivide 30.63 acres into 133 lots for single-family residential development | Located north of and abutting Rimrock Road, south of and abutting Army Road and east of and abutting Granada Hill Avenue. APN: 0424-241-12 & 13 | Pending: Filed May 2006 |
| R35 | John Day | Tentative Parcel Map #06-09: to create four lots from one parcel | 209 E. Grace Street | Approved: June 2006 |
| R36 | Jose Baca | Tentative Parcel Map #06-10: to create two lots from one parcel | 401 Windy Pass | Approved: June 2006 |
| R37 | Century Crowell Communities (applicant) for Dan Piles (owner). | Conditional Use Permit #06-25 and DP #06-09: for the establishment of a sales trailer, two model homes, two on-site signs, temporary power and 35 flags. | Located at the southwest corner of Broadway and Muriel Drive, north of the drainage channel. APN: 0181-711-80 | Approved: June 2006 |



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Residential Development and Subdivisions

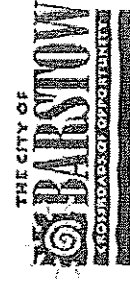
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| R38 | Riegel Properties | Conditional Use Permit #06-29 and Variance #06-03: to add 45 spaces to an existing mobile home park. | Pending: Filed June 2006 |
| | | Located south of 701 Montara Road, east of and abutting Montara Road, west of and abutting Arbor Way and north of and abutting Rimrock Road. APN: 0424-241-33 | |



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Commercial Development

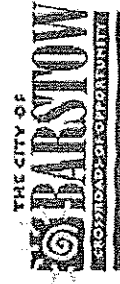
| Index # | Applicant | Project Description | Location | Status |
|---------|---------------------------------------|--|---|--|
| C1 | Thomas McKinnon | Conditional Use Permit #05-02: addition to motorcycle sales office | 2380 West Main Street | Approved: January 2005 |
| C2 | Mojave River Valley Museum | Conditional Use Permit #05-03: outdoor stage for concerts/lectures | 270 East Virginia Way | Approved: June 2005 |
| | Chris Curtis for Parsons and Cingular | Conditional Use Permit #06-02: for the co-location of antennas on an existing monopole and the establishment of an elevated equipment shelter. | | Approved: May 2006 |
| C3 | Juan Macias | Conditional Use Permit #05-04: to sell used cars | 1401 West Main Street | Approved: January 2005 |
| C4 | The Home Depot, USA, LLC | Conditional Use Permits #05-05 & 20: for outdoor display of merchandise and sign program | 1100 "L" Avenue | Under Construction |
| C5 | Marcus J. Chuy | Conditional Use Permit #05-08: to establish an auto lease/rental shop at | 130 Eastgate Road | Approved: March 2005 |
| C6 | Anil Mohan | Conditional Use Permit #05-09: to construct a drive-thru restaurant (Subway and Jumpin Juice and Java) | Located between Barstow Road and Desert Avenue, south of and abutting Interstate 15. APN: 0183-161-24, 25, & 26 | Approved: March 2005 |
| C7 | Marlynn Mitchell | Conditional Use Permit #05-11: to establish retail sales in the MU zoning district | 1351 Riverside Drive | Approved: March 2005 |
| C8 | Eric Dransfield | Conditional Use Permit #05-13: to re-establishment of gas station/convenience store | 2824 Lenwood Road | Approved: July 2005 |
| C9 | Vista Guidance Centers | Conditional Use Permit #05-21: to establish a substance abuse center | 236-308 E. Fredricks Street | Use Established: September 2005 |
| C10 | High Desert Appliance | Conditional Use Permit #05-23: to re-establish appliance repair, sales and outdoor storage | 750 W. Main Street | Approved: September 2005 |
| C11 | In Soon Seo | Conditional Use Permit #05-25: to establish tattoo and piercing shop at | 510 E. Virginia Way | Approved: September 2005 |
| | Peggy Varner | Conditional Use Permit #06-08: to establish a miniature golf course | | Approved: September 2005 |
| C12 | John Ahn | Conditional Use Permit #06-15: to establish an arcade within the Swap Meet | 2834 Lenwood Road | Approved: March 2006 |
| | John DeFranza, Architect | Conditional Use Permit #05-26: to establish a Starbucks restaurant with drive-thru | | Approved: April 2006 |
| C13 | Peter Castaneda | Conditional Use Permit #05-29: to establish a tattoo and body piercing studio | 605 E. Main Street | Approved: September 2005; Under Construction Approved: September 2005 |



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Commercial Development

| | | | | |
|-----|-----------------------------------|---|--|---|
| C14 | Union Bank | Conditional Use Permit #05-30: to install a drive-up remote teller unit for bank | 239 E. Main Street | Approved: October 2005 |
| C15 | Blue Beacon | Conditional Use Permit #05-31 & Development Permit #05-11: to establish a triple bay truck wash with office and equipment room | 2540 Highpoint Parkway | Approved: October 2005 |
| | Blue Beacon | Conditional Use Permit #06-07: to redesign approved site plan | | Approved: February 2006 |
| C16 | New Life Fellowship | Conditional Use Permit #05-32: to revise and enlarge existing parking facilities | 134 W. Main Street | Approved: November 2005 |
| C17 | Sav-a-Lot | Conditional Use Permit #05-33: to establish a grocery store in the shopping center | 1307 E. Main Street, Suite B | Opened March 2006 |
| C18 | Today Truck Wash | Conditional Use Permit #05-36: to establish truck tire sales at an existing truck wash | 2970 Lenwood Road | Approved: December 2005 |
| C19 | Harvey House Restaurant | Development Permit #05-07: to enclose an existing patio and overhang for a Bob's Big Boy | 2860 Lenwood Road | Approved: August 2005 |
| C20 | Desert Mojave View | Development Permit #05-09: to construct a four-story, 90 room Hampton Inn hotel | 2750 Lenwood Road | Approved: October 2005 |
| C21 | Ino Cruz & Larry Webster | Conditional Use Permit #06-01 & Development Permit #06-02: to establish an auto service station & convenience store with two drive-thru restaurants | Located at the northwest corner of Lenwood Road and Tanger Way. APN: 0421-311-70, 72, & 73. | Approved: January 2006 |
| C22 | Tom Matteson | Development Permit #06-01: to expand the restrooms and workroom of an existing Del Taco restaurant | 2871 Lenwood Road | Approved: January 2006 |
| C23 | Wahed Abdulla | Conditional Use Permit #06-04: to re-establish a fueling station bay as an automobile repair garage at | 1600 E. Main | Approved: February 2006 |
| C24 | Amin Mettias | Conditional Use Permit #06-05: to allow establishment of a facility for automobile smog check, repair and tune-up | 1251 E. Main Street | Approved: January 2006 |
| C25 | Rite Aid | Conditional Use Permit #06-09 & Development Permit #06-04: to allow establishment of a Rite Aid with drive-thru | Located at the northwest corner of Rimrock and Barstow Roads | Under Construction |
| C26 | Joel Murrford | Conditional Use Permit #05-22: to establish auto sales, repair, towing, and impound | | 2150 E. Main Street |
| C27 | Jozef Petrgalovic | Conditional Use Permit #05-24: to re-establish an automotive and transmission repair service | 2040 W. Main Street | Approved: September 2005 |
| C28 | Cezar V. Obnial & Leonard Purdy | Conditional Use Permit #04-24: to construct office/apartment, car wash, and self-storage facility, otherwise known as Purdy's Car Wash | 2185 W. Main Street | Approved: October 2004; Currently: Grading |
| C29 | Omnipoint USA, agent for T-Mobile | Conditional Use Permit #06-14 and Development Permit #06-08: to establish an unmanned wireless telecommunications facility | 2620 W. Main Street | Approved: May 2006 |



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Commercial Development

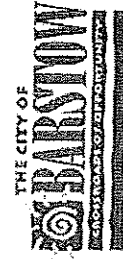
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| C30 | Omniport USA, agent for T-Mobile | Conditional Use Permit #06-19: to establish an unmanned wireless telecommunications facility (60' monopole and sign) | 2980 E. Main Street | Pending: March 2006 |
| C31 | Quiet Bros. Sign Company | Conditional Use Permit #06-20: to allow for a garden wall with signage as a City of Barstow welcome sign | Located at the southeast corner of Virginia Way and Barstow Road (Centennial Park) | Approved: May 2006 |
| C32 ✓ | Dan Plies | Conditional Use Permit #06-13 and Development Permit #06-05: to re-establish truck stop and gas station | 2596 Commerce Parkway (former Arco Station) | Approved: June 2006 |
| C33 ✓ | Scott Kaythekar and Rai Marwah (applicants) for Elite Experience, Inc. (owner) | Development Permit #06-11: to construct an 89 unit, three story hotel | 2571 and 2581 Fischer Boulevard | Pending: Filed June 2006 |



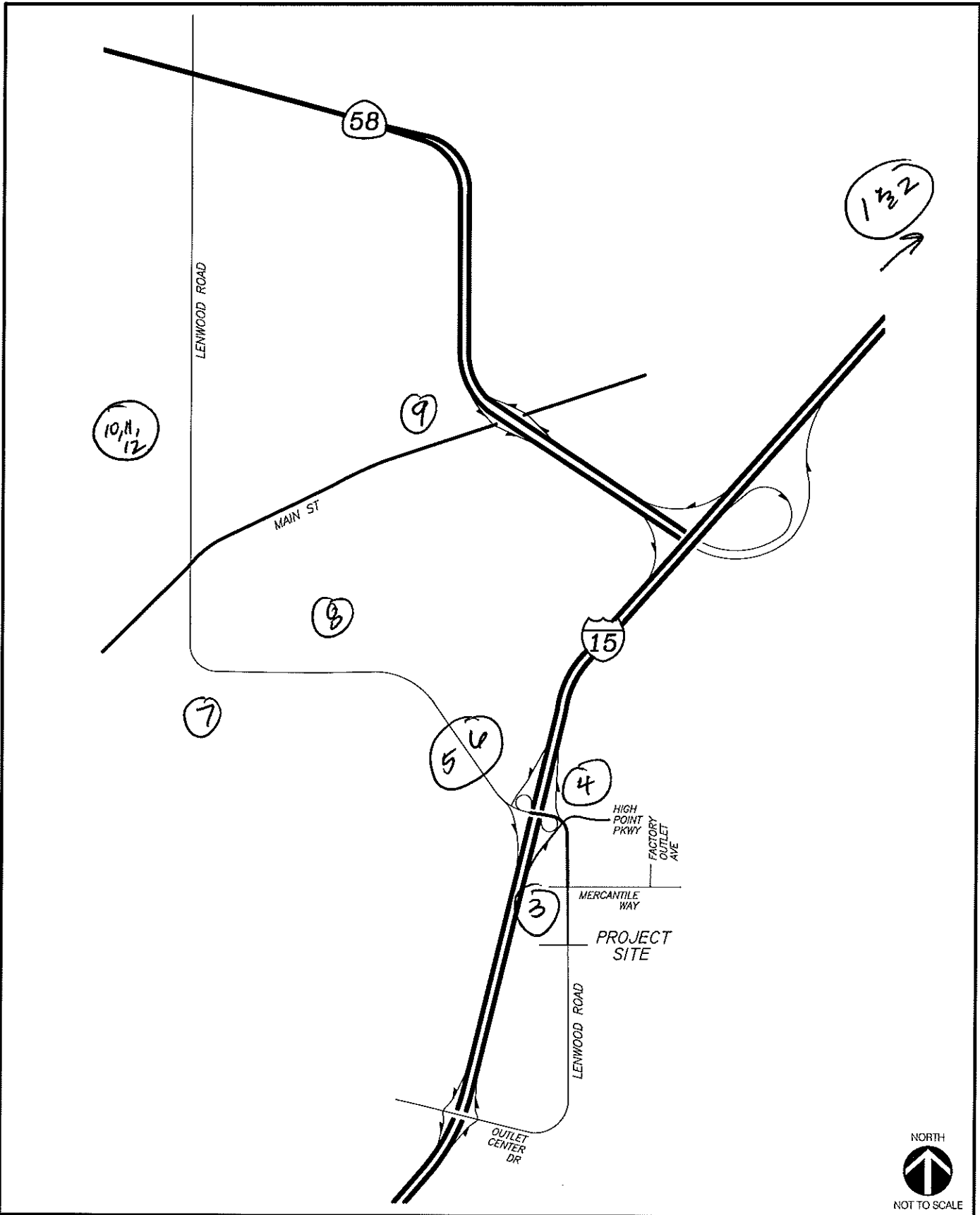
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Industrial Development

| Index # | Applicant | Project Description | Location: | Status |
|---------|--|---|--|--|
| I1 | United Plastics | Conditional Use Permit #04-02 and #05-15: to allow the manufacture of Styrofoam boxes for takeout foods and the placement of above ground storage containers and cooling towers | 250 Eastgate Road | Approved: January 2004 & July 2005 |
| I2 | Harold Brown | Conditional Use Permit #05-16: to allow for a construction storage yard | 1609 State Street | Approved: July 2005 |
| I3 | Michael Gilliam | Development Permit #05-04: to expand the existing facilities to include cold storage | 2951 Lenwood Road (old Yellow Freight building) | Approved: July 2005 |
| I4 | Eugene Naccarato/ Hank Barto | Development Permit #05-06: to establish mini-storage | 1311 Lenwood Road | Approved: August 2005 |
| I5 | Jonathon Click | Conditional Use Permit: #05-35: for the continuation of an automotive body and restoration shop | 190 Cal Avenue | Approved: November 2005 |
| I6 | Silver Valley Propane | Conditional Use Permit #06-03: to construct a new building for the maintenance and fabrication of LPG equipment | 2260 E. Main Street | Approved: January 2006 |
| I7 | Walmart Stores East, LP c/o Lynn McAlexander Agent: GSNT c/o Robert Ritter, Esq. | Zone Change #06-04: to adopt West Barstow Specific Plan #4 (superseding West Barstow Specific Plans #1 & #2), for the future establishment of a Walmart Distribution Center | Located west of and abutting Lenwood Road, approximately one half mile north of Jasper Road and approximately one-quarter mile south of Agate Road APN: 0497-131-13, 27, 38, 40, 42, 44, & 45 | Pending: January 2006 |
| I8 | Mark A. Nourse | Conditional Use Permit #06-17: for the construction of new shop/storage and shop/office buildings for an existing towing service | 3880 Lenwood Road | Approved: April 2006 |
| I9 | Service Rock Products | Tentative Parcel Map #06-11: to create two lots from one parcel for the establishment of a billboard | Located south of and abutting Interstate 40 and west of the Marine Corps Base. APN: 0424-141-13 | Pending: May 2006 |



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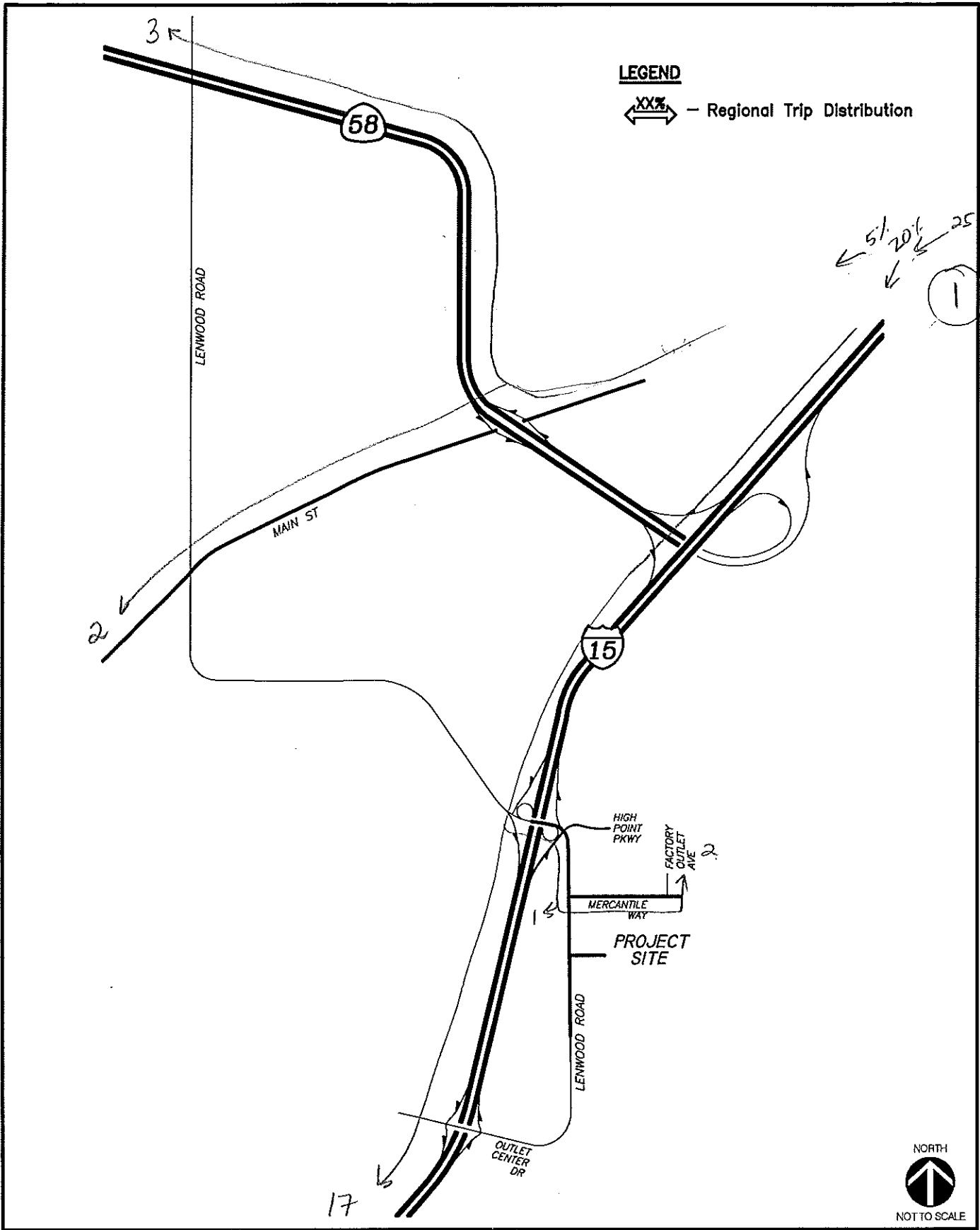


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GROUP LOCATION MAP

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 BARSTOW CASINOS PROJECT

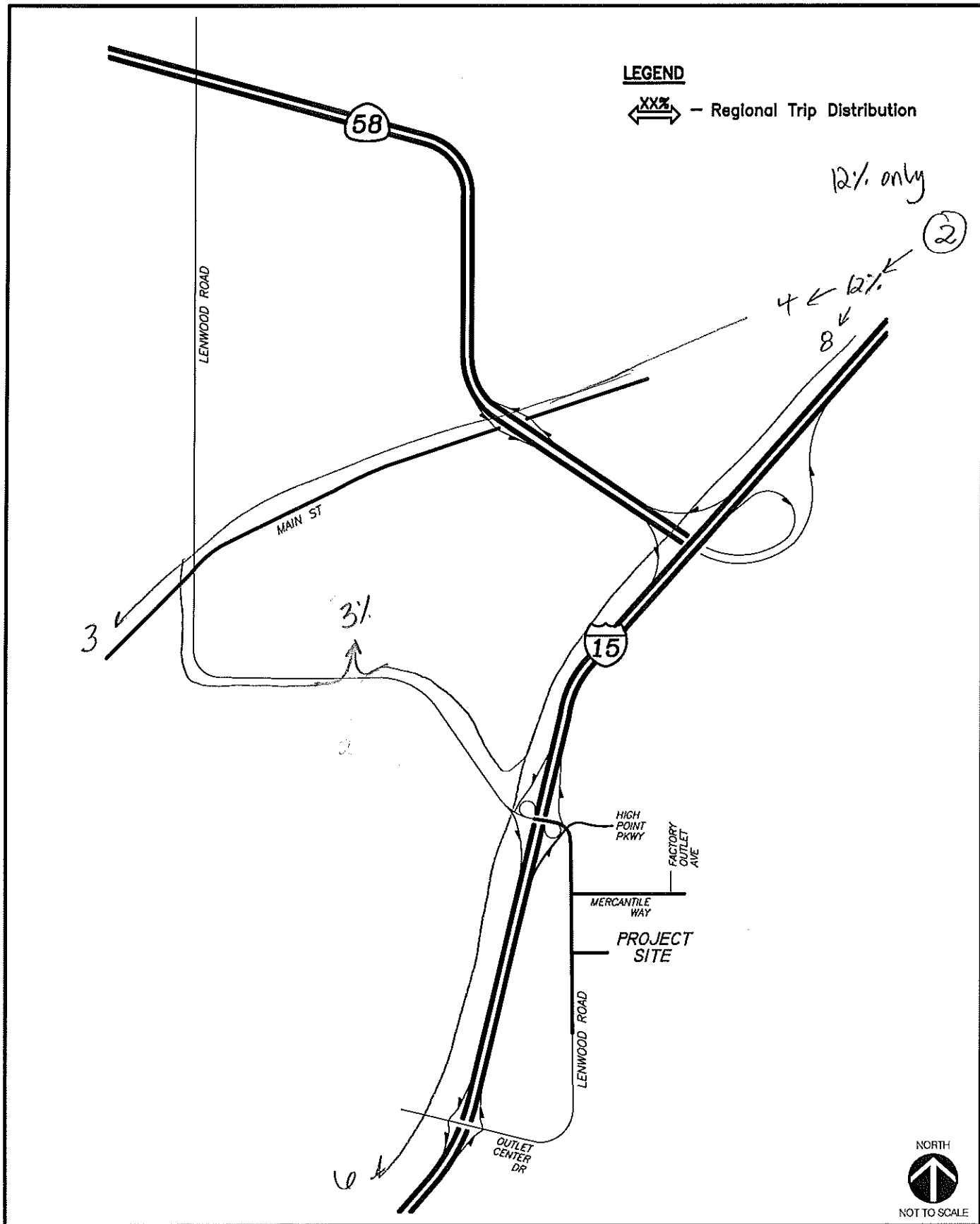


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TAZ 1

Residential

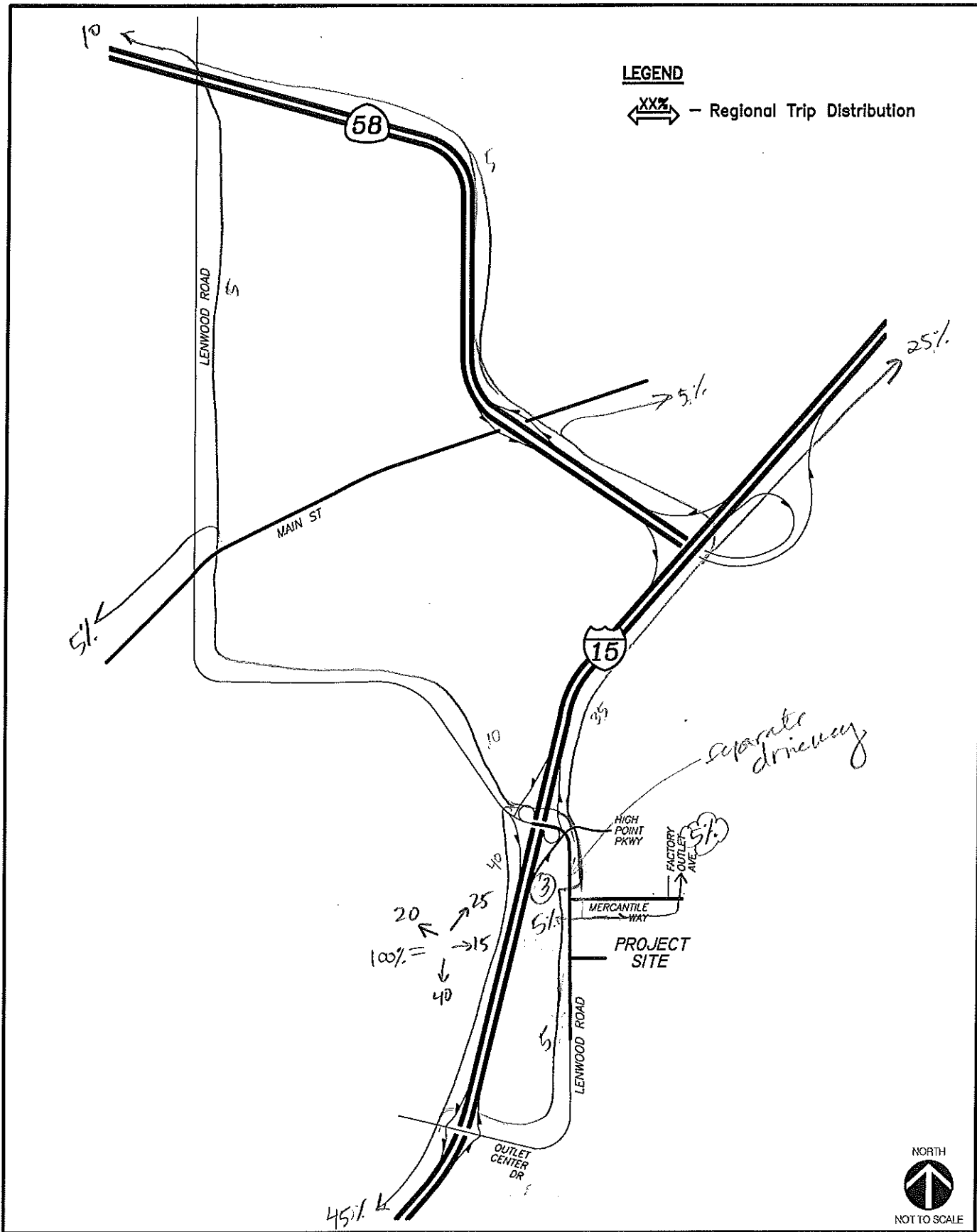


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TAR 2

commercial
 hospital / office / restaurant

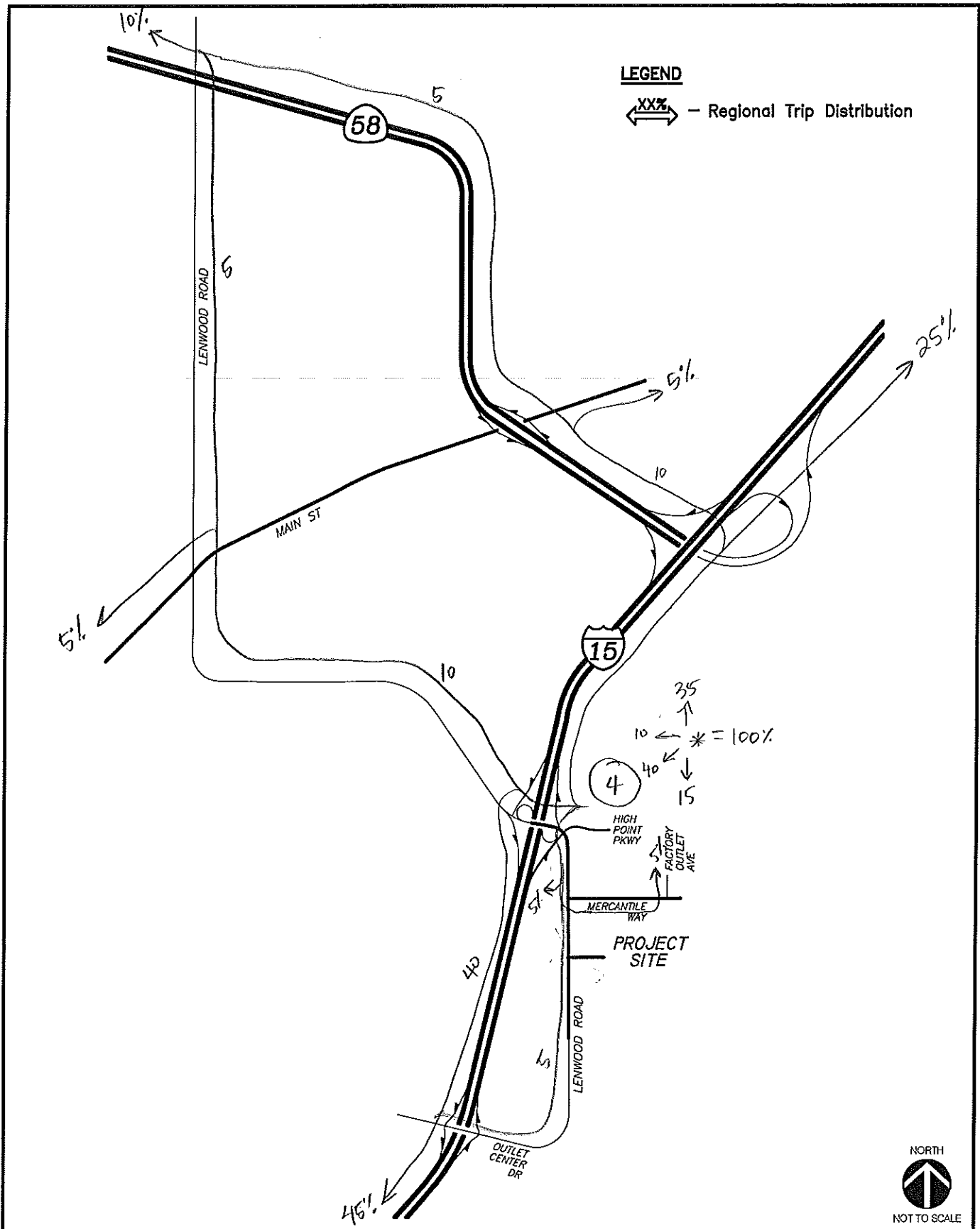


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TAZ 3

Country Inn & Suites

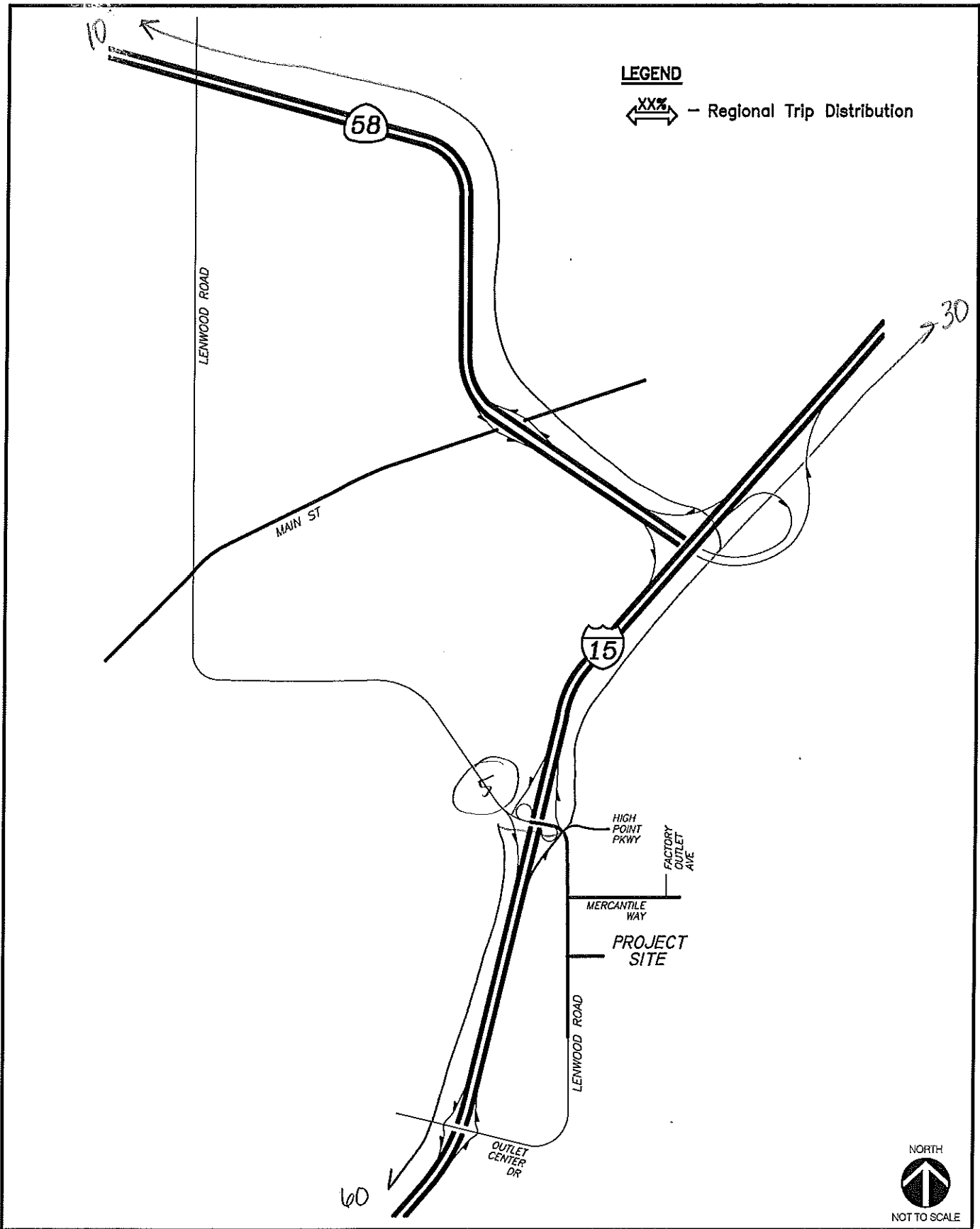


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TAZ #4

La Quinta Hotel



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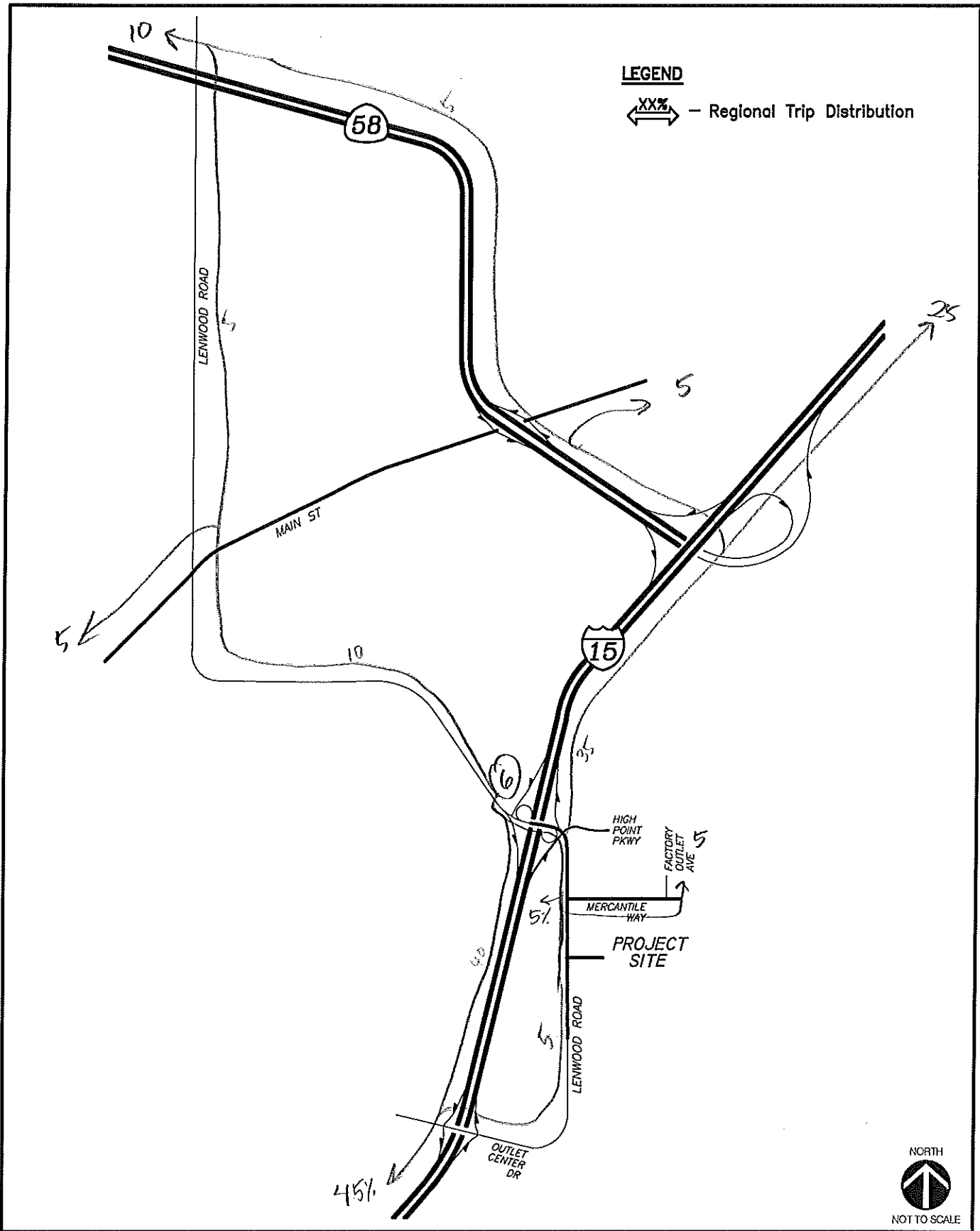
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TAZ 5

I1, I5, I9

Concrete, Truck Stop, Truck Terminal

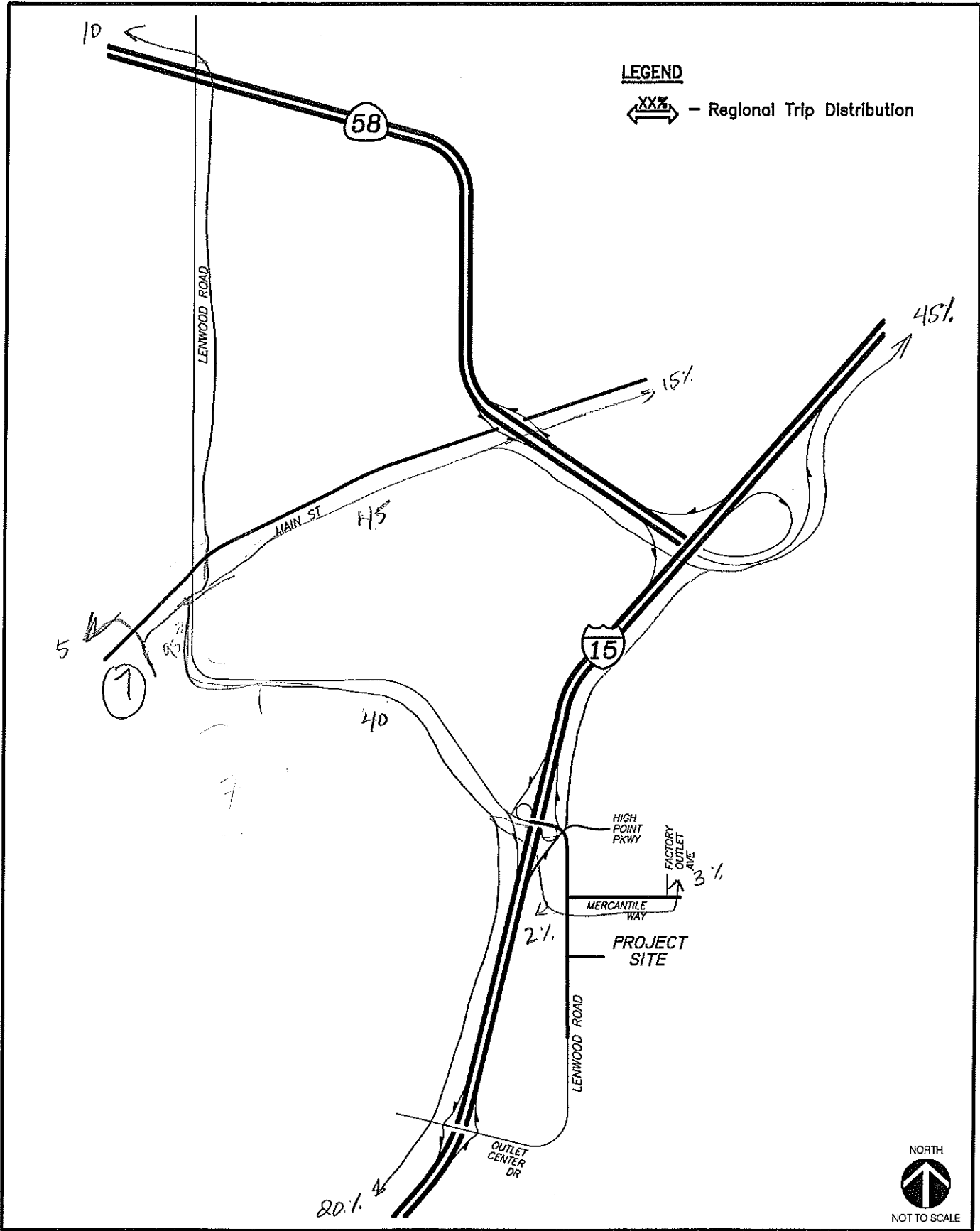
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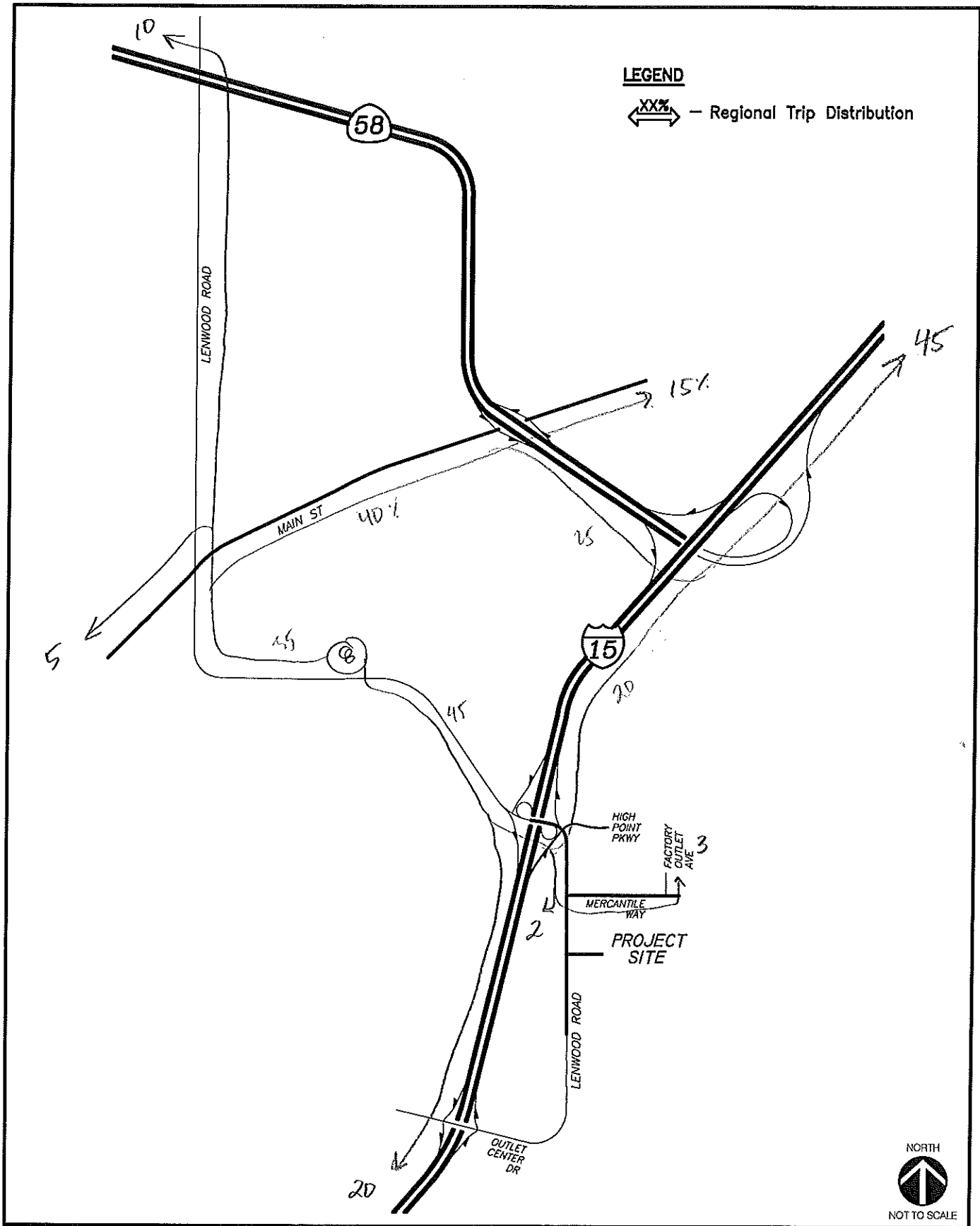
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TAZ 7 Rb, R16, R17, R18
 Residential

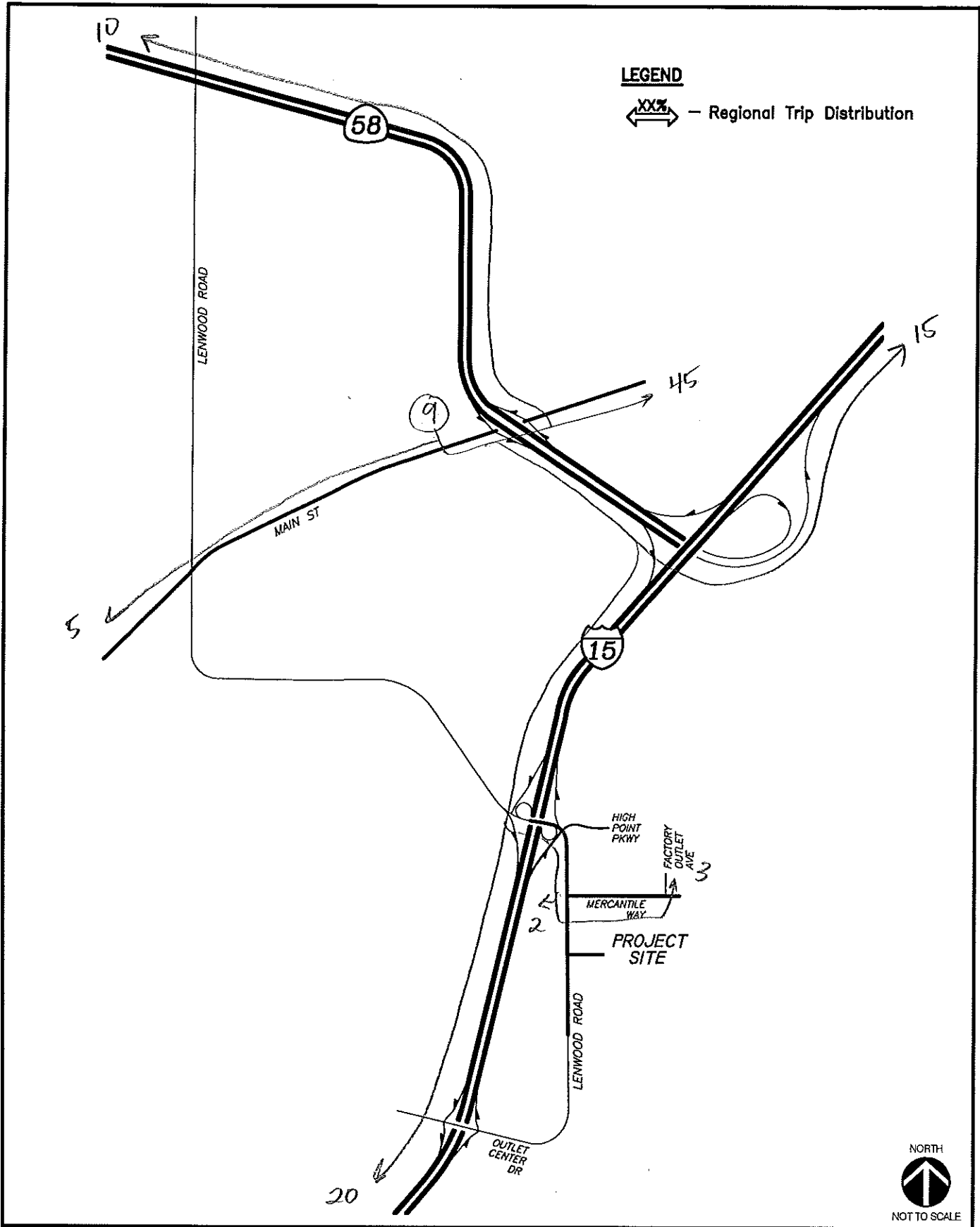


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TAZ B

R10
 R21 Residential

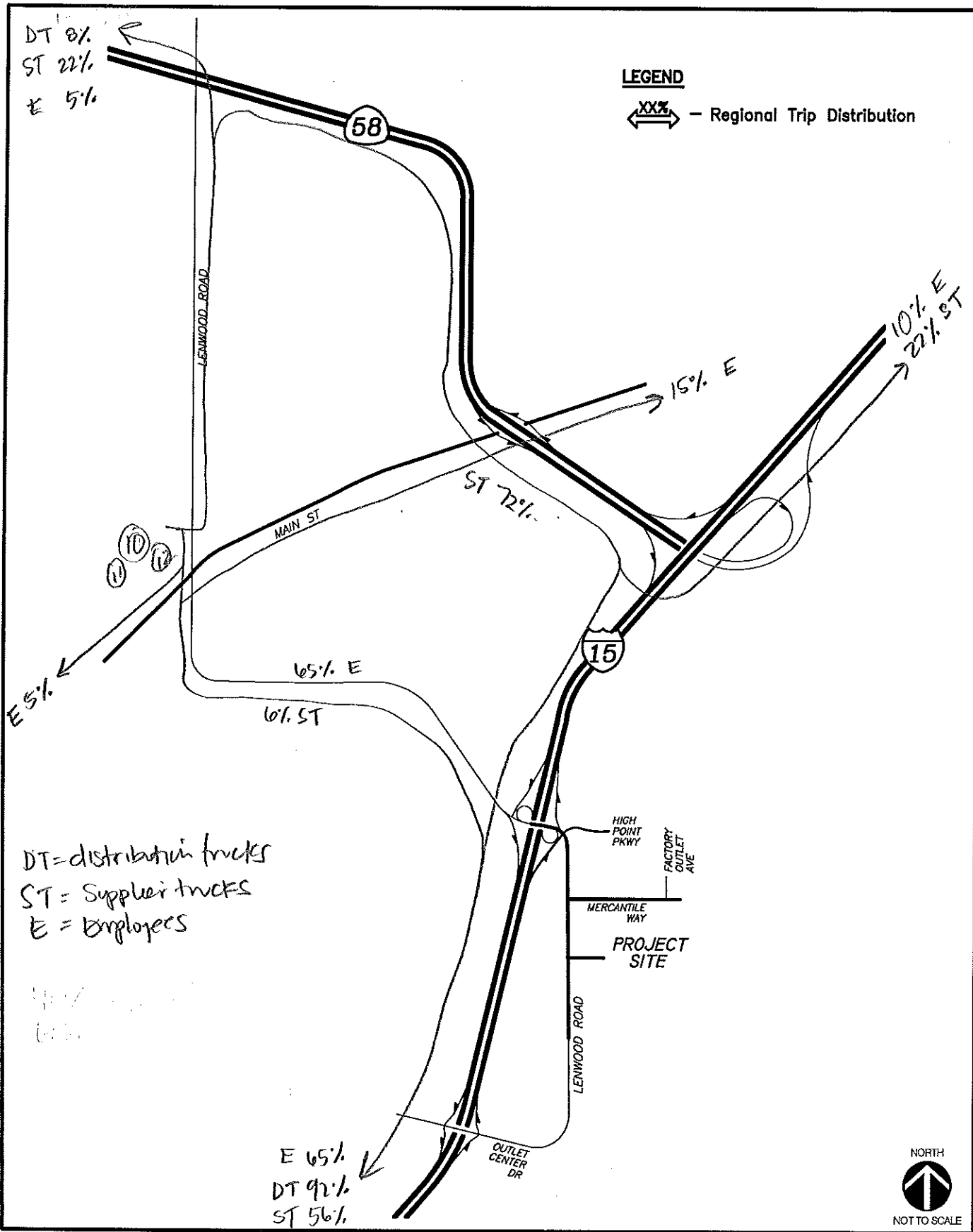


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TAZ 9

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TAZ 10

I6, I7, I8

11/3/12 Walmart Dist. Ctr
 Low Facility
 Industrial Master Plan

BARSTOW CASINOS PROJECT