

APPENDIX H
TRAFFIC DATA

PM Peak Hour -- Existing Conditions
General Plan Update EIR
City of Healdsburg

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

Intersection #1 Healdsburg Ave/Parkland Farms Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.201
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 9.8
Optimal Cycle: 18 Level Of Service: A

Street Name: Healdsburg Ave Parkland Farms Blvd
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 Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 0 1

Volume Module: >> Count Date: 22 May 2006 << 4:45 - 5:45 pm
Base Vol: 0 188 160 10 310 0 0 0 0 105 0 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
Initial Bse: 0 188 160 10 310 0 0 0 0 105 0 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
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 0 209 178 11 344 0 0 0 0 117 0 6
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 209 178 11 344 0 0 0 0 117 0 6
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: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 209 178 11 344 0 0 0 0 117 0 6

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.88 0.88 0.95 0.95 1.00 1.00 1.00 1.00 0.95 1.00 0.85
Lanes: 0.00 1.08 0.92 1.00 2.00 0.00 0.00 0.00 0.00 1.00 0.00 1.00
Final Sat.: 0 1816 1545 1805 3610 0 0 0 0 1805 0 1615

Capacity Analysis Module:
Vol/Sat: 0.00 0.12 0.12 0.01 0.10 0.00 0.00 0.00 0.00 0.06 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.57 0.57 0.03 0.60 0.00 0.00 0.00 0.00 0.32 0.00 0.32
Volume/Cap: 0.00 0.20 0.20 0.20 0.16 0.00 0.00 0.00 0.00 0.20 0.00 0.01
Delay/Veh: 0.0 8.3 8.3 39.6 7.0 0.0 0.0 0.0 0.0 19.8 0.0 18.5
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: 0.0 8.3 8.3 39.6 7.0 0.0 0.0 0.0 0.0 19.8 0.0 18.5
LOS by Move: A A A D A A A A A B A B
HCM2kAvgQ: 0 2 2 0 2 0 0 0 0 2 0 0

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

PM Peak Hour -- Existing Conditions
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Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Healdsburg Ave/Grove St

Cycle (sec): 80 Critical Vol./Cap.(X): 0.262
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 12.8
Optimal Cycle: 24 Level Of Service: B

Street Name: Healdsburg Ave Grove 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 Split Phase Split Phase
Rights: Include Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 1 1 0 0 1 0 0 0 1

Volume Module: >> Count Date: 23 May 2006 << 4:00 - 5:00 pm
Base Vol: 63 271 3 0 314 107 104 0 50 0 0 0 1
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: 63 271 3 0 314 107 104 0 50 0 0 0 1
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: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 65 280 3 0 325 111 108 0 52 0 0 0 1
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 65 280 3 0 325 111 108 0 52 0 0 0 1
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
FinalVolume: 65 280 3 0 325 111 108 0 52 0 0 0 1

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.89 0.89 1.00 0.86 0.86 0.93 1.00 0.83 1.00 1.00 0.87
Lanes: 1.00 1.98 0.02 1.00 1.49 0.51 1.00 0.00 1.00 0.00 0.00 1.00
Final Sat.: 1702 3360 37 1900 2443 832 1773 0 1583 0 0 1644

Capacity Analysis Module:
Vol/Sat: 0.04 0.08 0.08 0.00 0.13 0.13 0.06 0.00 0.03 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.15 0.65 0.65 0.00 0.51 0.51 0.23 0.00 0.38 0.00 0.00 0.00
Volume/Cap: 0.26 0.13 0.13 0.00 0.26 0.26 0.26 0.00 0.09 0.00 0.00 0.26
Delay/Veh: 30.9 5.3 5.3 0.0 11.3 11.3 25.5 0.0 16.1 0.0 0.0 72.3
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: 30.9 5.3 5.3 0.0 11.3 11.3 25.5 0.0 16.1 0.0 0.0 72.3
LOS by Move: C A A A B B C A B A A E
HCM2kAvgQ: 2 1 1 0 3 3 2 0 1 0 0 0

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

PM Peak Hour -- Existing Conditions
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Healdsburg Avenue/Sunnyvale Drive

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: B[12.8]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes. Rows for Healdsburg Ave and Sunnyvale Dr.

Table with columns for Volume Module, Count, Date, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns for Critical Gap Module, Critical Gap, FollowUpTim.

Table with columns for Capacity Module, Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

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

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #4 US 101 SB Ramps/Dry Creek Rd

Average Delay (sec/veh): 56.5 Worst Case Level Of Service: F[505.8]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes. Rows for US 101 SB Ramps and Dry Creek Rd.

Table with columns for Volume Module, Count, Date, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns for Critical Gap Module, Critical Gap, FollowUpTim.

Table with columns for Capacity Module, Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

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

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #5 US 101 NB Ramps/Dry Creek Road

Average Delay (sec/veh): 5.8 Worst Case Level Of Service: C [18.8]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include US 101 NB Ramps and Dry Creek Rd with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Critical Gap Module, Critical Gap, and FollowUpTim.

Table with columns for Capacity Module, Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

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

Intersection #6 Grove Street/Dry Creek Road

Cycle (sec): 80 Critical Vol./Cap.(X): 0.624
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 20.8
Optimal Cycle: 42 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Grove St and Dry Creek Rd with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Saturation Flow Module, Sat/Lane, Adjustment, Lanes, and Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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

Intersection #7 Healdsburg Ave/Dry Creek Rd-March Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.1
Optimal Cycle: 48 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes for Healdsburg Ave and Dry Creek Rd-March Ave.

Table with columns for Volume Module, Count, Date, and various traffic metrics for 8 Aug 2007.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns for Capacity Analysis Module metrics including Vol/Sat, Crit Moves, Delay/Veh, etc.

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

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #8 University Street/March Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.227
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.2
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes for University St and March Ave.

Table with columns for Volume Module, Count, Date, and various traffic metrics for 6 Mar 2000.

Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat. for Saturation Flow Module.

Table with columns for Capacity Analysis Module metrics including Vol/Sat, Crit Moves, Delay/Veh, etc.

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

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

Intersection #9 Healdsburg Avenue/Powell Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.505
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 18.5
Optimal Cycle: 41 Level Of Service: B

Street Name: Healdsburg Ave Powell Ave
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 Split Phase Split Phase
Rights: Include Include Include Include
Lanes: 1 0 1 0 1 1 0 0 1 0 0 0 1 0 0 1 0 0 1 0

Volume Module: >> Count Date: 14 May 2002 << 4:45 - 5:45 pm
Base Vol: 0 423 50 123 417 0 0 0 0 77 0 133
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 423 50 123 417 0 0 0 0 77 0 133
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: 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84 0.84
PHF Volume: 0 504 60 146 496 0 0 0 0 92 0 158
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 504 60 146 496 0 0 0 0 92 0 158
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: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 504 60 146 496 0 0 0 0 92 0 158

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 0.85 0.95 1.00 1.00 1.00 1.00 1.00 0.95 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 1.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00
Final Sat.: 1900 1900 1615 1805 1900 0 0 1900 0 1805 0 1615

Capacity Analysis Module:
Vol/Sat: 0.00 0.27 0.04 0.08 0.26 0.00 0.00 0.00 0.00 0.05 0.00 0.10
Crit Moves: ****
Green/Cycle: 0.00 0.53 0.53 0.16 0.69 0.00 0.00 0.00 0.00 0.19 0.00 0.19
Volume/Cap: 0.00 0.50 0.07 0.50 0.38 0.00 0.00 0.00 0.00 0.26 0.00 0.50
Delay/Veh: 0.0 15.8 11.7 39.8 6.9 0.0 0.0 0.0 0.0 34.6 0.0 37.3
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 15.8 11.7 39.8 6.9 0.0 0.0 0.0 0.0 34.6 0.0 37.3
LOS by Move: A B B D A A A A A C A D
HCM2kAvgQ: 0 10 1 5 6 0 0 0 0 3 0 5

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

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

Intersection #10 Fitch Street/Powell Avenue

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: B[12.1]

Street Name: Fitch St Powell Ave
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 1 0 0 1 0 0 0 0

Volume Module: >> Count Date: 30 Nov 1999 << 4:30-5:30 p.m.
Base Vol: 40 0 104 0 0 0 0 0 172 36 51 118 0
Growth Adj: 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08
Initial Bse: 43 0 112 0 0 0 0 0 186 39 55 127 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: 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85
PHF Volume: 51 0 132 0 0 0 0 0 218 46 65 150 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 51 0 132 0 0 0 0 0 218 46 65 150 0

Critical Gap Module:
Critical Gp: 6.4 6.5 6.2 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 4.1 xxxxx xxxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 2.2 xxxxx xxxxxx

Capacity Module:
Conflict Vol: 520 520 241 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 264 xxxxx xxxxxx
Potent Cap.: 520 463 803 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 1312 xxxxx xxxxxx
Move Cap.: 499 439 803 xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 1312 xxxxx xxxxxx
Volume/Cap: 0.10 0.00 0.16 xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.05 xxxxx xxxxxx

Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.2 xxxxx xxxxxx
Control Del: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 7.9 xxxxx xxxxxx
LOS by Move: *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 687 xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue: xxxxxx 1.1 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx 0.2 xxxxx xxxxxx
Shrd ConDel: xxxxxx 12.1 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx 7.9 xxxxx xxxxxx
Shared LOS: * B *
ApproachDel: 12.1 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: B *

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

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Level of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 University Street/Powell Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.391
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.9
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name (University St, Powell Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Lanes.

Table with columns for Volume Module: Count, Date (9 May 2002), and various traffic volume metrics like Base Vol, Growth Adj, etc.

Table for Saturation Flow Module: Adjustment, Lanes, and Final Sat. values.

Table for Capacity Analysis Module: Vol/Sat, Crit Moves, Delay/Veh, etc.

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

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Level of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #12 Grove Street/Grant Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.226
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.7
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name (Grove St, Grant St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Lanes.

Table with columns for Volume Module: Count, Date (8 May 2003), and various traffic volume metrics like Base Vol, Growth Adj, etc.

Table for Saturation Flow Module: Adjustment, Lanes, and Final Sat. values.

Table for Capacity Analysis Module: Vol/Sat, Crit Moves, Delay/Veh, etc.

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

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

Intersection #13 Healdsburg Avenue/Grant Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.445
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 16.4
Optimal Cycle: 31 Level Of Service: B

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for Healdsburg Ave and Grant St.

Table with columns: Volume Module, Count, Date, Time. Rows for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #14 Fitch Street/Grant Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.131
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 7.7
Optimal Cycle: 0 Level Of Service: A

Table with columns: Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for Fitch St and Grant St.

Table with columns: Volume Module, Count, Date, Time. Rows for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns: Capacity Analysis Module, Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

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

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 University Street/Grant Street

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: A[9.9]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include University St and Grant Street with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Critical Gap Module, Critical Gap, and FollowUpTim.

Table with columns for Capacity Module, Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

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2000 HCM Operations Method (Base Volume Alternative)

Intersection #16 Healdsburg Avenue/Piper Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.471
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: 32 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Healdsburg Ave and Piper St with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Saturation Flow Module, Sat/Lane, Adjustment, Lanes, and Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

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Intersection #17 Healdsburg Avenue/North Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.422
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 12.8
Optimal Cycle: 30 Level Of Service: B

Table with columns for Street Name (Healdsburg Ave, North St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (7 Aug 2007), and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Delay/Veh, and LOS by Move.

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

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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Vine Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.985
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 39.7
Optimal Cycle: 0 Level Of Service: E

Table with columns for Street Name (Vine St, Matheson St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (9 Aug 2007), and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Delay/Veh, and LOS by Move.

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

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

Intersection #19 Healdsburg Avenue/Matheson Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.484
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.7
Optimal Cycle: 33 Level Of Service: B

Table with columns for Street Name (Healdsburg Ave, Matheson St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (30 Apr 2002), and time range (5:00 - 6:00 pm). Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Delay/Veh, Volume/Cap, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

PM Peak Hour -- Existing Conditions
General Plan Update EIR
City of Healdsburg

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #20 Fitch Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.313
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.9
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name (Fitch St, Matheson St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (8 Mar 2000), and time range (4:30-5:30 p.m.). Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Table for Saturation Flow Module with columns for Adjustment, Lanes, and Final Sat. values.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Delay/Veh, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

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

PM Peak Hour -- Existing Conditions
General Plan Update EIR
City of Healdsburg

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #21 University Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.342
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.8
Optimal Cycle: 0 Level of Service: A

Street Name: University St Matheson St
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 Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module: >> Count Date: 8 Aug 2007 << 4:30 - 5:30 p.m.
Base Vol: 22 136 7 48 83 19 23 173 20 10 96 33
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: 22 136 7 48 83 19 23 173 20 10 96 33
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 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 24 149 8 53 91 21 25 190 22 11 105 36
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 24 149 8 53 91 21 25 190 22 11 105 36
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
FinalVolume: 24 149 8 53 91 21 25 190 22 11 105 36

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.13 0.83 0.04 0.32 0.55 0.13 0.11 0.80 0.09 0.07 0.69 0.24
Final Sat.: 89 547 28 211 365 84 74 554 64 49 468 161

Capacity Analysis Module:
Vol/Sat: 0.27 0.27 0.27 0.25 0.25 0.25 0.34 0.34 0.34 0.22 0.22 0.22
Crit Moves: ****
Delay/Veh: 9.8 9.8 9.8 9.6 9.6 9.6 10.3 10.3 10.3 9.3 9.3 9.3
Delay 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
AdjDel/Veh: 9.8 9.8 9.8 9.6 9.6 9.6 10.3 10.3 10.3 9.3 9.3 9.3
LOS by Move: A A A A A A B B B A A A
ApproachDel: 9.8 9.6 10.3 9.3
Delay Adj: 1.00 1.00 1.00
ApprAdjDel: 9.8 9.6 10.3 9.3
LOS by Appr: A B A
AllWayAvgQ: 0.3 0.3 0.3 0.3 0.3 0.3 0.5 0.5 0.5 0.2 0.2 0.2

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

PM Peak Hour -- Existing Conditions
General Plan Update EIR
City of Healdsburg

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

Intersection #22 U.S. 101 NB Ramp/Westside Road

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[8.2]

Street Name: U.S. 101 NB Ramp Westside Rd
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 0 0 1 0 0 0 0 0 1 0 1

Volume Module: >> Count Date: 29 Apr 2002 << 4:15 - 5:15 pm
Base Vol: 0 0 0 0 0 0 42 295 0 0 205 160
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 0 0 42 295 0 0 205 160
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: 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89 0.89
PHF Volume: 0 0 0 0 0 0 47 333 0 0 231 181
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 47 333 0 0 231 181

Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 2.2 xxxxx xxxxxx xxxxxx xxxxx xxxxxx

Capacity Module:
Conflict Vol: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 412 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Potent Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 1158 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Move Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 1158 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Volume/Cap: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.04 xxxxx xxxxx xxxxx xxxxx xxxxxx

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

PM Peak Hour -- Existing Conditions
General Plan Update EIR
City of Healdsburg

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #23 U.S. 101 SB Ramp/Westside Road

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: B[12.9]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), Lanes (0-1).

Table with 12 columns: Volume Module, Count, Date (29 Apr 2002), Time (4:15 - 5:15 pm), and various traffic volume metrics like Base Vol, Growth Adj, etc.

Table for Critical Gap Module showing Critical Gp and FollowUpTim values for different approaches.

Table for Capacity Module showing Cnflct Vol, Potent Cap, Move Cap, and Volume/Cap for different approaches.

Table for Level Of Service Module showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap, Shared Queue, Shrd ConDel, and Shared LOS for different approaches.

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

HCM Signalized Intersection Capacity Analysis

24: Mill St & Healdsburg Ave/ Vine St

Healdsburg 2025 General Plan Update-ADEIR



Movement	EBL	EBT	EBR	WBL	WBT	NBL2	NBL	NBT	NBR	SBL	SBT	SER
Lane Configurations		↕	↗		↕		↘	↕	↗	↘	↕↔	↗↘
Volume (vph)	80	85	168	78	69	169	174	288	82	7	329	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00	1.00	1.00	0.95	0.88
Fr't		1.00	0.85		1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00		0.97		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1819	1583		1815		1770	1863	1583	1770	3539	2787
Flt Permitted		0.98	1.00		0.97		0.54	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1819	1583		1815		1002	1863	1583	1770	3539	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	92	183	85	75	184	189	313	89	8	358	258
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	42	0	0	0
Lane Group Flow (vph)	0	179	70	0	160	0	373	313	47	8	358	258
Turn Type	Split		pm+ov	Split		Prot	Prot		Perm	Prot		custom
Protected Phases	4	4	5	8	8	5	5 3	2 3		1	6	3
Permitted Phases			4						2 3			
Actuated Green, G (s)		16.0	42.0		16.0		42.0	58.0	58.0	4.0	16.0	16.0
Effective Green, g (s)		16.0	42.0		16.0		42.0	58.0	58.0	4.0	16.0	16.0
Actuated g/C Ratio		0.15	0.38		0.15		0.38	0.53	0.53	0.04	0.15	0.15
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Grp Cap (vph)		265	604		264		564	982	835	64	515	405
v/s Ratio Prot		c0.10	0.03		c0.09		c0.16	0.17		0.00	c0.10	0.09
v/s Ratio Perm			0.02				c0.10		0.03			
v/c Ratio		0.68	0.12		0.61		0.66	0.32	0.06	0.12	0.70	0.64
Uniform Delay, d1		44.5	22.0		44.0		26.6	14.8	12.7	51.3	44.7	44.3
Progression Factor		1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		13.0	0.4		9.9		6.0	0.9	0.1	4.0	7.6	7.5
Delay (s)		57.5	22.4		54.0		32.6	15.6	12.8	55.3	52.2	51.7
Level of Service		E	C		D		C	B	B	E	D	D
Approach Delay (s)		39.8			54.0			23.5			52.3	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

PM Peak Hour -- Existing Conditions
General Plan Update EIR
City of Healdsburg

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

Intersection #25 Healdsburg Avenue/Exchange Avenue

Cycle (sec): 80 Critical Vol./Cap.(X): 0.689
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 14.7
Optimal Cycle: 48 Level Of Service: B

Table with columns for Street Name (Healdsburg Ave, Exchange Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Protected, Split Phase), Rights (Include), and Lanes.

Table with columns for Volume Module: >> Count Date: 29 Apr 2002 << 4:30 - 5:30 pm, Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Table with columns for Saturation Flow Module: Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

PM Peak Hour -- Existing Conditions
General Plan Update EIR
City of Healdsburg

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #26 Front Street/Healdsburg Avenue

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: C[17.5]

Table with columns for Street Name (Front St, Healdsburg Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Table with columns for Volume Module: >> Count Date: 13 Jan 2000 << 4:00-6:00 p.m., Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table with columns for Critical Gap Module: Critical Gp, FollowUpTim.

Table with columns for Capacity Module: Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Table with columns for Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

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

PM Peak Hour -- Existing Conditions
General Plan Update EIR
City of Healdsburg

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

Intersection #27 Old Redwood Hwy/US 101 SB Ramps

Average Delay (sec/veh): 5.0 Worst Case Level Of Service: B[12.4]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include US 101 SB Ramps and Old Redwood Hwy.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, etc.

Table for Critical Gap Module with columns for Critical Gap, FollowUpTim, and various values.

Table for Capacity Module with columns for Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

PM Peak Hour -- Existing Conditions
General Plan Update EIR
City of Healdsburg

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

Intersection #28 Healdsburg Ave/US 101 NB Ramps

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: B[11.2]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include US 101 NB Ramps and Healdsburg Ave.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, etc.

Table for Critical Gap Module with columns for Critical Gap, FollowUpTim, and various values.

Table for Capacity Module with columns for Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

PM Peak Hour - General Plan Buildout Conditions
General Plan Update EIR
City of Healdsburg

Trip Generation Report

Forecast for pm

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
2	Saggio Hills	74.00	SFR	0.65	0.36	48	27	75	1.5
	Zone 2 Subtotal					48	27	75	1.5
5	Affordable H	500.00	SFR	0.65	0.36	325	180	505	10.3
	Zone 5 Subtotal					325	180	505	10.3
7	16977 Healds	394.13	General Indust	0.12	0.86	47	339	386	7.9
	Zone 7 Subtotal					47	339	386	7.9
9	Parkland Far	43.00	Single Family	0.65	0.36	28	15	43	0.9
	Zone 9 Subtotal					28	15	43	0.9
10	Chiquita	66.00	Multi-Family	0.38	0.20	25	13	38	0.8
	Zone 10 Subtotal					25	13	38	0.8
11	N. Rosewood	34.00	Single Family	0.65	0.36	22	12	34	0.7
	Zone 11 Subtotal					22	12	34	0.7
12	N. Grove Com	285.21	General Light	0.12	0.86	34	245	279	5.7
	Zone 12 Subtotal					34	245	279	5.7
13	Healdsburg A	79.66	Retail	1.19	1.52	95	121	216	4.4
	Zone 13 Subtotal					95	121	216	4.4
14	Callahan	58.00	Single Family	0.65	0.36	38	21	59	1.2
	Zone 14 Subtotal					38	21	59	1.2
15	Dry Creek Co	15.00	Commercial	1.19	1.52	18	23	41	0.8
15	Dry Creek Co	150.00	Hotel	0.21	0.28	32	42	74	1.5
	Zone 15 Subtotal					50	65	115	2.4
16	County growt	1.00	General	50.00	50.00	50	50	100	2.0
	Zone 16 Subtotal					50	50	100	2.0
17	Grove SP Com	157.80	Commercial	1.19	1.52	188	240	428	8.8
17	Grove SP Com	6.25	Industrial	0.12	0.86	1	5	6	0.1
	Zone 17 Subtotal					189	245	434	8.9
18	Grove SP Res	145.00	Single Family	0.65	0.36	94	52	146	3.0
	Zone 18 Subtotal					94	52	146	3.0
19	Piedmont Ter	45.00	Single Family	0.65	0.36	29	16	45	0.9
19	Piedmont Ter	69.00	Apartment	0.38	0.20	26	14	40	0.8
	Zone 19 Subtotal					55	30	85	1.7
20	1081 Healdsb	19.99	Retail	1.19	1.52	24	30	54	1.1
	Zone 20 Subtotal					24	30	54	1.1

PM Peak Hour - General Plan Buildout Conditions
General Plan Update EIR
City of Healdsburg

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
21	Grant St Vil	39.00	SFR	0.65	0.36	25	14	39	0.8
	Zone 21 Subtotal					25	14	39	0.8
22	Healdsburg C	11.00	Multi-Family	0.38	0.20	4	2	6	0.1
22	Healdsburg C	15.00	SFR	0.65	0.36	10	5	15	0.3
	Zone 22 Subtotal					14	7	21	0.4
23	20-25-95 W G	60.00	Multi-Family	0.38	0.20	23	12	35	0.7
23	20-25-95 W G	5.00	Single Family	0.65	0.36	3	2	5	0.1
	Zone 23 Subtotal					26	14	40	0.8
24	Central Heal	89.00	Commercial	1.19	1.52	106	135	241	4.9
24	Central Heal	20.00	Office	0.25	1.24	5	25	30	0.6
	Zone 24 Subtotal					111	160	271	5.6
25	Creekside	17.00	Apartments	0.38	0.20	6	3	9	0.2
25	Creekside	14.00	Single Family	0.65	0.36	9	5	14	0.3
	Zone 25 Subtotal					15	8	23	0.5
26	Plaza Hotel/	36.00	Hotel	0.21	0.28	8	10	18	0.4
26	Plaza Hotel/	66.35	Commercial/Ret	1.19	1.52	79	101	180	3.7
	Zone 26 Subtotal					87	111	198	4.1
27	Coghlan-Hidd	9.00	SFR	0.65	0.36	6	3	9	0.2
	Zone 27 Subtotal					6	3	9	0.2
28	146 Healdsbu	23.00	Hotel	0.21	0.28	5	6	11	0.2
	Zone 28 Subtotal					5	6	11	0.2
29		18.00	Multi-Family	0.38	0.20	7	4	11	0.2
29		3.00	SFR	0.65	0.36	2	1	3	0.1
	Zone 29 Subtotal					9	5	14	0.3
30	County Growt	1.00	General	35.00	200.00	35	200	235	4.8
	Zone 30 Subtotal					35	200	235	4.8
31		295.86	Industrial	0.12	0.86	36	254	290	5.9
31		386.03	Retail	1.19	1.52	459	587	1046	21.4
	Zone 31 Subtotal					495	841	1336	27.4
32	32 Healdsbur	32.67	Industrial	0.12	0.86	4	28	32	0.7
32	32 Healdsbur	30.36	Retail/MF	1.19	1.52	36	46	82	1.7
	Zone 32 Subtotal					40	74	114	2.3
33		55.00	Multi-Family	0.00	0.00	0	0	0	0.0
TOTAL						1992	2888	4880	100.0

PM Peak Hour - General Plan Buildout Conditions
General Plan Update EIR
City of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Healdsburg Ave/Parkland Farms Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.357
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 8.8
Optimal Cycle: 21 Level Of Service: A

Street Name: Healdsburg Ave Parkland Farms Blvd
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 Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 0 0

Volume Module: >> Count Date: 22 May 2006 << 4:45 - 5:45 pm
Base Vol: 0 188 160 10 310 0 0 0 0 105 0 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
Initial Bse: 0 188 160 10 310 0 0 0 0 105 0 5
Added Vol: 0 106 239 25 329 0 0 0 0 125 0 4
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 294 399 35 639 0 0 0 0 230 0 9
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 294 399 35 639 0 0 0 0 230 0 9
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 294 399 35 639 0 0 0 0 230 0 9
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: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 294 399 35 639 0 0 0 0 230 0 9

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 0.87 0.87 0.95 0.95 1.00 1.00 1.00 1.00 0.95 1.00 0.95
Lanes: 0.00 1.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.93 0.00 0.07
Final Sat.: 0 1650 1650 1805 3610 0 0 0 0 3473 0 131

Capacity Analysis Module:
Vol/Sat: 0.00 0.18 0.24 0.02 0.18 0.00 0.00 0.00 0.00 0.07 0.00 0.07
Crit Moves: **** ****
Green/Cycle: 0.00 0.68 0.68 0.05 0.73 0.00 0.00 0.00 0.00 0.19 0.00 0.19
Volume/Cap: 0.00 0.26 0.36 0.36 0.24 0.00 0.00 0.00 0.00 0.34 0.00 0.36
Delay/Veh: 0.0 5.1 5.6 38.7 3.5 0.0 0.0 0.0 0.0 28.2 0.0 28.3
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: 0.0 5.1 5.6 38.7 3.5 0.0 0.0 0.0 0.0 28.2 0.0 28.3
LOS by Move: A A A D A A A A C A C
HCM2kAvgQ: 0 3 5 1 3 0 0 0 0 3 0 3

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

PM Peak Hour - General Plan Buildout Conditions
General Plan Update EIR
City of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Healdsburg Ave/Grove St

Cycle (sec): 80 Critical Vol./Cap.(X): 0.475
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 14.5
Optimal Cycle: 32 Level Of Service: B

Street Name: Healdsburg Ave Grove 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 Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 0 0 1

Volume Module: >> Count Date: 23 May 2006 << 4:00 - 5:00 pm
Base Vol: 63 271 3 0 314 107 104 0 50 0 0 1
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 63 271 3 0 314 107 104 0 50 0 0 1
Added Vol: 1 62 0 0 201 253 284 0 1 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 64 333 3 0 515 360 388 0 51 0 0 1
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 64 333 3 0 515 360 388 0 51 0 0 1
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 64 333 3 0 515 360 388 0 51 0 0 1
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: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 64 333 3 0 515 360 388 0 51 0 0 1

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.89 0.89 1.00 0.84 0.84 0.93 1.00 0.83 1.00 1.00 0.87
Lanes: 1.00 1.98 0.02 1.00 1.18 0.82 2.00 0.00 1.00 0.00 0.00 1.00
Final Sat.: 1702 3370 30 1900 1879 1314 3545 0 1583 0 0 1644

Capacity Analysis Module:
Vol/Sat: 0.04 0.10 0.10 0.00 0.27 0.27 0.11 0.00 0.03 0.00 0.00 0.00
Crit Moves: **** ****
Green/Cycle: 0.08 0.66 0.66 0.00 0.58 0.58 0.23 0.00 0.23 0.00 0.00 0.00
Volume/Cap: 0.48 0.15 0.15 0.00 0.48 0.48 0.48 0.00 0.14 0.00 0.00 0.48
Delay/Veh: 37.9 5.3 5.3 0.0 10.1 10.1 27.0 0.0 24.7 0.0 0.0 154.6
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: 37.9 5.3 5.3 0.0 10.1 10.1 27.0 0.0 24.7 0.0 0.0 154.6
LOS by Move: D A A A B B C A C A A F
HCM2kAvgQ: 2 2 2 0 7 7 5 0 1 0 0 0

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

PM Peak Hour - General Plan Buildout Conditions
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Healdsburg Avenue/Sunnyvale Drive

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: C [15.9]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Healdsburg Ave and Sunnyvale Dr with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Critical Gap Module, Critical Gp, and FollowUpTim.

Table with columns for Capacity Module, Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

PM Peak Hour - General Plan Buildout Conditions
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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 US 101 SB Ramps/Dry Creek Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.842
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 27.4
Optimal Cycle: 65 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include US 101 SB Ramps and Dry Creek Rd with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Saturation Flow Module, Sat/Lane, Adjustment, Lanes, and Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

PM Peak Hour - General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 US 101 NB Ramps/Dry Creek Road

Cycle (sec): 80 Critical Vol./Cap.(X): 0.999
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 40.6
Optimal Cycle: 170 Level Of Service: D

Street Name: US 101 NB Ramps Dry Creek Rd
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 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 1 0 0 0 0 0 1 0 1

Volume Module: >> Count Date: 23 May 2006 << 4:15 - 5:15 pm
Base Vol: 72 0 421 0 0 0 14 306 0 0 588 222
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 72 0 421 0 0 0 14 306 0 0 588 222
Added Vol: 20 0 385 0 0 0 5 87 0 0 423 83
Overlap WB: 0 0 -225 0 0 0 0 0 0 0 0 0
Initial Fut: 92 0 581 0 0 0 19 393 0 0 1011 305
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 92 0 581 0 0 0 19 393 0 0 1011 305
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 92 0 581 0 0 0 19 393 0 0 1011 305
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: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 92 0 581 0 0 0 19 393 0 0 1011 305

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.96 1.00 0.86 1.00 1.00 1.00 0.95 1.00 1.00 1.00 1.00 0.85
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 1.00
Final Sat.: 1827 0 1631 0 0 0 1805 1900 0 0 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.05 0.00 0.36 0.00 0.00 0.00 0.01 0.21 0.00 0.00 0.53 0.19
Crit Moves: ****
Green/Cycle: 0.36 0.00 0.36 0.00 0.00 0.00 0.01 0.54 0.00 0.00 0.53 0.53
Volume/Cap: 0.14 0.00 1.00 0.00 0.00 0.00 1.00 0.38 0.00 0.00 1.00 0.35
Delay/Veh: 17.5 0.0 62.7 0.0 0.0 0.0 245.3 10.8 0.0 0.0 46.6 11.0
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 0.0 62.7 0.0 0.0 0.0 245.3 10.8 0.0 0.0 46.6 11.0
LOS by Move: B A E A A A F B A A D B
HCM2kAvgQ: 2 0 21 0 0 0 2 6 0 0 34 4

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

PM Peak Hour - General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Grove Street/Dry Creek Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.881
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 37.0
Optimal Cycle: 94 Level Of Service: D

Street Name: Grove St Dry Creek Rd
Approach: North Bound South Bound East Bound 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 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 0 1 0

Volume Module: >> Count Date: 6 Jun 2005 << 4:30 - 5:30 pm
Base Vol: 126 72 103 34 84 115 117 483 88 83 486 45
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: 126 72 103 34 84 115 117 483 88 83 486 45
Added Vol: 130 62 50 71 102 282 254 89 129 44 94 16
On-ramp Div: -9 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 247 134 153 105 186 397 371 572 217 127 580 61
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 247 134 153 105 186 397 371 572 217 127 580 61
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 247 134 153 105 186 397 371 572 217 127 580 61
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
FinalVolume: 247 134 153 105 186 397 371 572 217 127 580 61

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.51 0.51 0.83 0.59 0.59 0.83 0.90 0.86 0.86 0.90 0.88 0.88
Lanes: 0.65 0.35 1.00 0.36 0.64 1.00 1.00 1.45 0.55 1.00 1.81 0.19
Final Sat.: 629 341 1568 406 719 1568 1702 2367 898 1702 3037 319

Capacity Analysis Module:
Vol/Sat: 0.39 0.39 0.10 0.26 0.26 0.25 0.22 0.24 0.24 0.07 0.19 0.19
Crit Moves: ****
Green/Cycle: 0.45 0.45 0.45 0.45 0.45 0.45 0.25 0.35 0.35 0.11 0.22 0.22
Volume/Cap: 0.88 0.88 0.22 0.58 0.58 0.57 0.88 0.68 0.68 0.68 0.88 0.88
Delay/Veh: 43.8 43.8 17.2 22.4 22.4 21.7 55.1 29.1 29.1 52.7 50.0 50.0
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: 43.8 43.8 17.2 22.4 22.4 21.7 55.1 29.1 29.1 52.7 50.0 50.0
LOS by Move: D D B C C C E C D D D
HCM2kAvgQ: 14 14 3 7 7 9 14 12 12 5 13 13

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 #7 Healdsburg Ave/Dry Creek Rd-March Ave

Cycle (sec): 90 Critical Vol./Cap.(X): 0.717
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 31.3
Optimal Cycle: 50 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes for Healdsburg Ave and Dry Creek Rd-March Ave.

Volume Module table with columns: >> Count Date: 8 Aug 2007 << 4:15 - 5:15 pm. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ. Rows include Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

PM Peak Hour - General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #8 University Street/March Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.276
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.9
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes for University St and March Ave.

Volume Module table with columns: >> Count Date: 6 Mar 2000 << 4:30-5:30 p.m. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ. Rows include Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

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 #9 Healdsburg Avenue/Powell Avenue

Cycle (sec): 80 Critical Vol./Cap.(X): 0.570
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 16.3
Optimal Cycle: 44 Level Of Service: B

Street Name: Healdsburg Ave Powell Ave
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 Split Phase Split Phase
Rights: Include Include Include Include
Lanes: 1 0 1 0 1 1 0 0 1 0 0 0 1 0 0 1 0 0 1 0 0

Volume Module: >> Count Date: 14 May 2002 << 4:45 - 5:45 pm
Base Vol: 0 423 50 123 417 0 0 0 0 77 0 133
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: 0 423 50 123 417 0 0 0 0 77 0 133
Added Vol: 0 108 12 72 166 0 0 0 0 8 0 23
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 531 62 195 583 0 0 0 0 85 0 156
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 531 62 195 583 0 0 0 0 85 0 156
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 531 62 195 583 0 0 0 0 85 0 156
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
FinalVolume: 0 531 62 195 583 0 0 0 0 85 0 156

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 0.85 0.95 1.00 1.00 1.00 1.00 1.00 0.95 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 1.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00
Final Sat.: 1900 1900 1615 1805 1900 0 0 1900 0 1805 0 1615

Capacity Analysis Module:
Vol/Sat: 0.00 0.28 0.04 0.11 0.31 0.00 0.00 0.00 0.00 0.05 0.00 0.10
Crit Moves: ****
Green/Cycle: 0.00 0.49 0.49 0.19 0.68 0.00 0.00 0.00 0.00 0.17 0.00 0.17
Volume/Cap: 0.00 0.57 0.08 0.57 0.45 0.00 0.00 0.00 0.00 0.28 0.00 0.57
Delay/Veh: 0.0 15.2 10.8 31.7 6.1 0.0 0.0 0.0 0.0 29.4 0.0 33.4
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: 0.0 15.2 10.8 31.7 6.1 0.0 0.0 0.0 0.0 29.4 0.0 33.4
LOS by Move: A B B C A A A A C A C
HCM2kAvgQ: 0 10 1 5 7 0 0 0 0 2 0 4

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 Fitch Street/Powell Avenue

Average Delay (sec/veh): 3.6 Worst Case Level Of Service: B[12.4]

Street Name: Fitch St Powell Ave
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 1 0 0 1 0 0 0 0

Volume Module: >> Count Date: 30 Nov 1999 << 4:30-5:30 p.m.
Base Vol: 40 0 104 0 0 0 0 172 36 51 118 0
Growth Adj: 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08
Initial Bse: 43 0 112 0 0 0 0 186 39 55 127 0
Added Vol: 1 0 6 0 0 0 0 84 1 5 30 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 44 0 118 0 0 0 0 270 40 60 157 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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 44 0 118 0 0 0 0 270 40 60 157 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 44 0 118 0 0 0 0 270 40 60 157 0

Critical Gap Module:
Critical Gp: 6.4 6.5 6.2 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 4.1 xxxxx xxxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 2.2 xxxxx xxxxxx

Capacity Module:
Conflict Vol: 567 567 290 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 310 xxxxx xxxxxx
Potential Cap.: 488 436 754 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 1262 xxxxx xxxxxx
Move Cap.: 470 414 754 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 1262 xxxxx xxxxxx
Volume/Cap: 0.09 0.00 0.16 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.05 xxxxx xxxxxx

Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.1 xxxxx xxxxxx
Control Del: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 8.0 xxxxx xxxxxx
LOS by Move: *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 648 xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue: xxxxxx 1.0 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.1 xxxxx xxxxxx
Shrd ConDel: xxxxxx 12.4 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 8.0 xxxxx xxxxxx
Shared LOS: * B *
ApproachDel: 12.4 xxxxxxxx xxxxxxxx xxxxxxxx
ApproachLOS: B * * * * *

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

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Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 University Street/Powell Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.504
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.2
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (University St, Powell Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Lanes.

Table with columns for Volume Module, Count, Date (9 May 2002), and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

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Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #12 Grove Street/Grant Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.523
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.7
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Grove St, Grant St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Lanes.

Table with columns for Volume Module, Count, Date (8 May 2003), and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

PM Peak Hour - General Plan Buildout Conditions
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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 Healdsburg Avenue/Grant Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.579
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 15.7
Optimal Cycle: 38 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes for Healdsburg Ave and Grant St.

Table with columns for Volume Module, Count, Date, and various traffic metrics for 7 May 2003.

Table with columns for Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Delay/Veh, etc.

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

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Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #14 Fitch Street/Grant Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.127
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 7.8
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes for Fitch St and Grant St.

Table with columns for Volume Module, Count, Date, and various traffic metrics for 7 Aug 2007.

Table with columns for Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Delay/Veh, etc.

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

PM Peak Hour - General Plan Buildout Conditions
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 University Street/Grant Street

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: B [10.1]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include University St and Grant Street with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Critical Gap Module with columns for Critical Gap, FollowUpTim, and various gap metrics.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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 #16 Healdsburg Avenue/Piper Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.522
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 16.1
Optimal Cycle: 35 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Healdsburg Ave and Piper St with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

PM Peak Hour - General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Healdsburg Avenue/North Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.479
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 12.3
Optimal Cycle: 26 Level Of Service: B

Table with columns for Street Name (Healdsburg Ave, North St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Include), Rights, Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (7 Aug 2007), and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.

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

PM Peak Hour - General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Vine Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.617
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 19.3
Optimal Cycle: 40 Level Of Service: B

Table with columns for Street Name (Vine St, Matheson St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Include), Rights, Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (9 Aug 2007), and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.

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

PM Peak Hour - General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Healdsburg Avenue/Matheson Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.591
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 20.3
Optimal Cycle: 39 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes for Healdsburg Ave and Matheson St.

Volume Module table with columns: >> Count Date: 30 Apr 2002 << 5:00 - 6:00 pm. Rows include Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include 1900 1900 1900, etc.

Capacity Analysis Module table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, HCM2kAvgQ.

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

PM Peak Hour - General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #20 Fitch Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.326
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.0
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes for Fitch St and Matheson St.

Volume Module table with columns: >> Count Date: 8 Mar 2000 << 4:30-5:30 p.m. Rows include Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat. Rows include 1.00 1.00 1.00, etc.

Capacity Analysis Module table with columns: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

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

PM Peak Hour - General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 University Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.413
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.0
Optimal Cycle: 0 Level Of Service: B

Street Name: University St Matheson St
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 Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module: >> Count Date: 8 Aug 2007 << 4:30 - 5:30 p.m.
Base Vol: 22 136 7 48 83 19 23 173 20 10 96 33
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: 22 136 7 48 83 19 23 173 20 10 96 33
Added Vol: 0 64 14 8 36 0 0 50 0 8 16 7
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 22 200 21 56 119 19 23 223 20 18 112 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: 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: 22 200 21 56 119 19 23 223 20 18 112 40
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 22 200 21 56 119 19 23 223 20 18 112 40
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
FinalVolume: 22 200 21 56 119 19 23 223 20 18 112 40

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.09 0.82 0.09 0.29 0.61 0.10 0.09 0.84 0.07 0.11 0.66 0.23
Final Sat.: 58 525 55 179 380 61 56 539 48 66 410 146

Capacity Analysis Module:
Vol/Sat: 0.38 0.38 0.38 0.31 0.31 0.31 0.41 0.41 0.41 0.27 0.27 0.27
Crit Moves: ****
Delay/Veh: 11.2 11.2 11.2 10.6 10.6 10.6 11.6 11.6 11.6 10.1 10.1 10.1
Delay 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
AdjDel/Veh: 11.2 11.2 11.2 10.6 10.6 10.6 11.6 11.6 11.6 10.1 10.1 10.1
LOS by Move: B B B B B B B B B B B B
ApproachDel: 11.2 10.6 11.6 10.1
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 11.2 10.6 11.6 10.1
LOS by Appr: B B B B
AllWayAvgQ: 0.5 0.5 0.5 0.4 0.4 0.4 0.6 0.6 0.6 0.3 0.3 0.3

PM Peak Hour - General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #22 U.S. 101 NB Ramp/Westside Road

Average Delay (sec/veh): 10.6 Worst Case Level Of Service: D[33.5]

Street Name: U.S. 101 NB Ramp Westside Rd
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 1 0 0 0 0 0 1 0 1

Volume Module: >> Count Date: 29 Apr 2002 << 4:15 - 5:15 pm
Base Vol: 0 0 0 0 0 0 42 295 0 0 205 160
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 0 0 42 295 0 0 205 160
Added Vol: 14 0 90 0 0 0 54 55 0 0 117 16
Ramps Diver: 75 0 250 0 0 0 0 -90 0 0 158 0
Initial Fut: 89 0 340 0 0 0 96 260 0 0 480 176
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 89 0 340 0 0 0 96 260 0 0 480 176
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 89 0 340 0 0 0 96 260 0 0 480 176

Critical Gap Module:
Critical Gp: 6.4 6.5 6.2 xxxxxx xxxxx xxxxxx 4.1 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxxx xxxxx xxxxxx 2.2 xxxxx xxxxxx xxxxxx xxxxx xxxxxx

Capacity Module:
Conflict Vol: 1020 1108 260 xxxxx xxxxx xxxxxx 656 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Potential Cap.: 264 212 784 xxxxx xxxxx xxxxxx 941 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Move Cap.: 243 189 784 xxxxx xxxxx xxxxxx 941 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Volume/Cap: 0.37 0.00 0.43 xxxxx xxxxx xxxxxx 0.10 xxxxx xxxxx xxxxx xxxxx xxxxxx

Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.3 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Control Del: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 9.3 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 536 xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue: xxxxxx 7.7 xxxxxx xxxxxx xxxxx xxxxxx 0.3 xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx
Shrd ConDel: xxxxxx 33.5 xxxxxx xxxxxx xxxxx xxxxxx 9.3 xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx
Shared LOS: * D * * * * A * * * * *
ApproachDel: 33.5 xxxxxxx xxxxxxx xxxxxxx
ApproachLOS: D * * * *

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

PM Peak Hour - General Plan Buildout Conditions
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 U.S. 101 SB Ramp/Westside Road

Average Delay (sec/veh): 9.3 Worst Case Level Of Service: E[49.0]

Table with columns: Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), Lanes (0-1).

Table with columns: Volume Module, Count, Date (29 Apr 2002), Time (4:15 - 5:15 pm), Base Vol, Growth Adj, Initial Bse, Added Vol, Ramps Diver, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume.

Table for Critical Gap Module: Critical Gp, FollowUpTim.

Table for Capacity Module: Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Table for Level Of Service Module: 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

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

HCM Signalized Intersection Capacity Analysis
24: Mill St & Healdsburg Avenue/ Vine St

Healdsburg 2025 General Plan Update-ADEIR



Movement	EBL	EBT	EBR	WBL	WBT	NBL2	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔	↔	↔	↔	↔	↔	↔	↔
Volume (vph)	475	85	94	55	113	116	164	222	93	15	225	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	0.95	
Frt	1.00	0.92			1.00	1.00	1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00			0.98	0.95	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1716			1833	1770	1770	1780		1770	3308	
Flt Permitted	0.95	1.00			0.98	0.95	0.95	1.00		0.25	1.00	
Satd. Flow (perm)	1770	1716			1833	1770	1770	1780		472	3308	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	475	85	94	55	113	116	164	222	93	15	225	173
RTOR Reduction (vph)	0	34	0	0	0	0	0	13	0	0	0	0
Lane Group Flow (vph)	475	145	0	0	168	116	164	302	0	15	398	0
Turn Type	Split			Split		Prot	Prot			Perm		
Protected Phases	4	4		8	8	5	5.3	2.3			6	
Permitted Phases												6
Actuated Green, G (s)	33.3	33.3			14.3	9.0	31.3	52.4		17.1	17.1	
Effective Green, g (s)	33.3	33.3			14.3	9.0	31.3	52.4		17.1	17.1	
Actuated g/C Ratio	0.29	0.29			0.12	0.08	0.27	0.45		0.15	0.15	
Clearance Time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	508	493			226	137	478	804		70	488	
v/s Ratio Prot	c0.27	0.08			c0.09	c0.07	0.09	0.17			c0.12	
v/s Ratio Perm										0.03		
v/c Ratio	0.94	0.30			0.74	0.85	0.34	0.38		0.21	0.82	
Uniform Delay, d1	40.3	32.2			49.1	52.8	34.1	21.0		43.5	47.9	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	24.6	0.3			12.4	35.6	0.4	0.3		6.9	14.0	
Delay (s)	64.9	32.5			61.5	88.4	34.5	21.3		50.4	61.9	
Level of Service	E	C			E	F	C	C		D	E	
Approach Delay (s)		56.0			61.5			38.0			61.5	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM Average Control Delay	54.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
24: Mill St & Healdsburg Avenue/ Vine St

Healdsburg 2025 General Plan Update-ADEIR



Movement	SER
Lane Configurations	↔
Volume (vph)	489
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	0.88
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	2787
Flt Permitted	1.00
Satd. Flow (perm)	2787
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	489
RTOR Reduction (vph)	0
Lane Group Flow (vph)	489
Turn Type	custom
Protected Phases	3
Permitted Phases	
Actuated Green, G (s)	22.3
Effective Green, g (s)	22.3
Actuated g/C Ratio	0.19
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	536
v/s Ratio Prot	c0.18
v/s Ratio Perm	
v/c Ratio	0.91
Uniform Delay, d1	45.9
Progression Factor	1.00
Incremental Delay, d2	19.9
Delay (s)	65.8
Level of Service	E
Approach Delay (s)	
Approach LOS	

Intersection Summary	
HCM Average Control Delay	54.8
HCM Volume to Capacity ratio	0.87
Actuated Cycle Length (s)	116.0
Intersection Capacity Utilization	87.3%
Analysis Period (min)	15
c Critical Lane Group	



Movement Summary

Healdsburg Avenue/Mill Street-Vine Street

PM Peak Hour - Buildout Conditions

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (ft)	Prop. Queued	Eff. Stop Rate	Aver Speed (mph)
NB Healdsburg Avenue										
3L	L	295	2.0	0.455	12.1	LOS B	126	0.84	0.85	22.0
8T	T	234	2.1	0.455	5.0	LOS A	126	0.89	0.60	24.0
8R	R	98	2.0	0.456	6.7	LOS A	126	0.89	0.73	23.5
Approach		627	2.1	0.455	8.6	LOS A	126	0.87	0.74	22.9
WB Mill Street										
1L	L	58	1.7	0.322	12.6	LOS B	53	0.74	0.90	22.0
6T	T	103	1.9	0.322	5.8	LOS A	53	0.74	0.70	24.7
6R	R	46	2.2	0.322	6.6	LOS A	53	0.74	0.75	24.4
Approach		207	1.9	0.322	7.9	LOS A	53	0.74	0.77	23.7
SB Healdsburg Avenue										
7L	L	16	6.2	0.533	12.6	LOS B	111	0.70	0.95	22.0
4T	T	237	2.1	0.536	5.7	LOS A	111	0.70	0.75	24.9
4R	R	193	2.1	0.536	7.2	LOS A	111	0.70	0.80	24.3
Approach		446	2.2	0.536	6.6	LOS A	111	0.70	0.78	24.5
Vine Street										
15L	L	2	33.3	0.429	13.6	LOS B	100	0.82	0.96	21.5
12T	T	328	2.1	0.434	6.6	LOS A	100	0.82	0.82	24.4
12R	R	272	1.8	0.290	5.0	LOS A	44	0.53	0.55	24.8
Approach		603	2.2	0.434	6.0	LOS A	100	0.69	0.70	24.6
EB Mill Street										
5L	L	500	2.0	0.809	21.0	LOS C	352	0.99	1.28	18.7
2T	T	89	2.2	0.811	13.7	LOS B	352	0.99	1.27	20.7
2R	R	99	2.0	0.811	15.4	LOS B	352	0.99	1.20	19.9
Approach		689	2.0	0.809	19.3	LOS B	352	0.99	1.26	19.1
All Vehicles		2572	2.1	0.811	10.4	LOS B	352	0.82	0.88	22.3

Symbols which may appear in this table:

PM Peak Hour - General Plan Buildout Conditions
General Plan Update EIR
City of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Healdsburg Avenue/Exchange Avenue

Cycle (sec): 80 Critical Vol./Cap.(X): 0.479
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 14.6
Optimal Cycle: 32 Level of Service: B

Table with columns for Street Name (Healdsburg Ave, Exchange Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Protected, Split Phase), Rights (Include), and Lanes.

Table with columns for Volume Module (Count, Date, 29 Apr 2002, 4:30 - 5:30 pm) and various traffic metrics like Base Vol, Growth Adj, Initial Bse, Added Vol, etc.

Table with columns for Saturation Flow Module (Sat/Lane, Adjustment, Lanes, Final Sat.)

Table with columns for Capacity Analysis Module (Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.)

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

PM Peak Hour - General Plan Buildout Conditions
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City of Healdsburg

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Front Street/Healdsburg Avenue

Average Delay (sec/veh): 6.6 Worst Case Level Of Service: D[29.8]

Table with columns for Street Name (Front St, Healdsburg Ave), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Table with columns for Volume Module (Count, Date, 13 Jan 2000, 4:00-6:00 p.m.) and various traffic metrics like Base Vol, Growth Adj, Initial Bse, Added Vol, etc.

Table with columns for Critical Gap Module (Critical Gp, FollowUpTim)

Table with columns for Capacity Module (Conflict Vol, Potent Cap., Move Cap., Volume/Cap)

Table with columns for Level of Service Module (2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS)

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

PM Peak Hour - General Plan Buildout Conditions
General Plan Update EIR
City of Healdsburg

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #27 Old Redwood Hwy/US 101 SB Ramps
Average Delay (sec/veh): 11.0 Worst Case Level Of Service: D[31.7]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include US 101 SB Ramps and Old Redwood Hwy with various movement and control details.

Table with columns: Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns: Critical Gap Module, Critical Gap, FollowUpTim, and various gap-related metrics.

Table with columns: Capacity Module, Conflict Vol, Potent Cap., Move Cap., Volume/Cap., and various capacity-related metrics.

Table with columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS, and various LOS-related metrics.

PM Peak Hour - General Plan Buildout Conditions
General Plan Update EIR
City of Healdsburg

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Healdsburg Ave/US 101 NB Ramps
Average Delay (sec/veh): 4.6 Worst Case Level Of Service: B[13.8]

Table with columns: Street Name, Approach, Movement, Control, Rights, Lanes. Rows include US 101 NB Ramps and Healdsburg Ave with various movement and control details.

Table with columns: Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns: Critical Gap Module, Critical Gap, FollowUpTim, and various gap-related metrics.

Table with columns: Capacity Module, Conflict Vol, Potent Cap., Move Cap., Volume/Cap., and various capacity-related metrics.

Table with columns: Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS, and various LOS-related metrics.

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

PM Peak Hour - General Plan Buildout Conditions
General Plan Update EIR
City of Healdsburg

Turning Movement Report
pm

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 Healdsburg Ave/Parkland Farms Blvd													
Base	0	188	160	10	310	0	0	0	0	105	0	5	778
Added	0	106	239	25	329	0	0	0	0	125	0	4	828
Total	0	294	399	35	639	0	0	0	0	230	0	9	1606
#2 Healdsburg Ave/Grove St													
Base	63	271	3	0	314	107	104	0	50	0	0	1	913
Added	1	62	0	0	201	253	284	0	1	0	0	0	802
Total	64	333	3	0	515	360	388	0	51	0	0	1	1715
#3 Healdsburg Avenue/Sunnyvale Drive													
Base	0	253	69	31	340	0	0	0	0	46	0	15	755
Added	0	77	17	24	189	0	0	0	0	12	0	3	322
Total	0	330	86	55	529	0	0	0	0	58	0	18	1077
#4 US 101 SB Ramps/Dry Creek Rd													
Base	0	0	0	108	0	9	0	220	154	440	198	0	1129
Added	0	0	0	60	0	5	0	33	20	355	88	0	561
Total	0	0	0	168	0	14	0	253	174	795	286	0	1690
#5 US 101 NB Ramps/Dry Creek Road													
Base	72	0	421	0	0	0	14	306	0	0	588	222	1623
Added	20	0	385	0	0	0	5	87	0	0	423	83	1003
Total	92	0	806	0	0	0	19	393	0	0	1011	305	2626
#6 Grove Street/Dry Creek Road													
Base	126	72	103	34	84	115	117	483	88	83	486	45	1836
Added	130	62	50	71	102	282	254	89	129	44	94	16	1323
On-ram	-9	0	0	0	0	0	0	0	0	0	0	0	-9
Total	247	134	153	105	186	397	371	572	217	127	580	61	3150
#7 Healdsburg Ave/Dry Creek Rd-March Ave													
Base	214	263	49	69	279	132	145	215	173	69	237	44	1889
Added	35	68	1	4	181	86	75	49	87	1	23	3	613
Total	249	331	50	73	460	218	220	264	260	70	260	47	2502
#8 University Street/March Avenue													
Base	76	68	22	1	41	25	20	33	106	10	17	1	420
Added	1	17	22	24	10	0	0	52	2	14	25	3	170
Total	77	85	44	25	51	25	20	85	108	24	42	4	590
#9 Healdsburg Avenue/Powell Avenue													
Base	0	423	50	123	417	0	0	0	0	77	0	133	1223
Added	0	108	12	72	166	0	0	0	0	8	0	23	389
Total	0	531	62	195	583	0	0	0	0	85	0	156	1612

PM Peak Hour - General Plan Buildout Conditions
General Plan Update EIR
City of Healdsburg

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#10 Fitch Street/Powell Avenue													
Base	43	0	112	0	0	0	0	186	39	55	127	0	563
Added	1	0	6	0	0	0	0	84	1	5	30	0	127
Total	44	0	118	0	0	0	0	270	40	60	157	0	690
#11 University Street/Powell Avenue													
Base	150	0	61	0	0	0	0	161	127	43	111	0	653
Added	38	0	14	0	0	0	0	54	43	9	19	0	177
Total	188	0	75	0	0	0	0	215	170	52	130	0	830
#12 Grove Street/Grant Street													
Base	8	82	77	47	81	8	11	8	6	77	2	57	464
Added	0	156	62	70	155	0	0	0	0	46	0	28	517
On-ram	0	0	0	0	-6	0	0	0	0	3	0	-3	-6
Total	8	238	139	117	230	8	11	8	6	126	2	82	975
#13 Healdsburg Avenue/Grant Street													
Base	25	372	24	28	366	57	79	42	37	21	38	20	1109
Added	14	114	0	24	133	22	22	13	14	0	10	3	369
Total	39	486	24	52	499	79	101	55	51	21	48	23	1478
#14 Fitch Street/Grant Street													
Base	9	74	12	12	60	19	14	36	9	5	28	28	306
Added	0	4	3	0	4	2	2	35	0	3	11	0	64
Total	9	78	15	12	64	21	16	71	9	8	39	28	370
#15 University Street/Grant Street													
Base	10	189	0	0	133	6	10	0	15	0	0	0	363
Added	11	48	0	0	48	3	4	0	34	0	0	0	148
Total	21	237	0	0	181	9	14	0	49	0	0	0	511
#16 Healdsburg Avenue/Piper Street													
Base	35	353	66	157	362	9	3	19	40	85	15	133	1277
Added	0	128	2	0	147	0	0	0	0	2	0	0	279
Total	35	481	68	157	509	9	3	19	40	87	15	133	1556
#17 Healdsburg Avenue/North Street													
Base	31	313	58	44	347	70	44	101	37	40	72	46	1203
Added	12	116	0	20	120	8	11	24	32	0	18	3	364
Total	43	429	58	64	467	78	55	125	69	40	90	49	1567
#18 Vine Street/Matheson Street													
Base	174	288	82	7	329	47	80	85	168	78	69	15	1422
Added	28	135	9	34	130	8	14	0	8	12	0	20	398
On-ram	0	0	0	0	9	0	0	0	0	0	0	0	9
Total	202	423	91	41	468	55	94	85	176	90	69	35	1829

PM Peak Hour - General Plan Buildout Conditions
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 City of Healdsburg

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#19 Healdsburg Avenue/Matheson Street													
Base	46	332	77	68	252	101	83	106	36	39	133	53	1326
Added	23	118	1	32	120	0	0	36	17	1	18	10	376
Total	69	450	78	100	372	101	83	142	53	40	151	63	1702
#20 Fitch Street/Matheson Street													
Base	7	38	5	43	35	35	67	145	10	2	90	40	517
Added	0	0	0	22	0	0	0	28	0	0	12	4	66
Total	7	38	5	65	35	35	67	173	10	2	102	44	583
#21 University Street/Matheson Street													
Base	22	136	7	48	83	19	23	173	20	10	96	33	670
Added	0	64	14	8	36	0	0	50	0	8	16	7	203
Total	22	200	21	56	119	19	23	223	20	18	112	40	873
#22 U.S. 101 NB Ramp/Westside Road													
Base	0	0	0	0	0	0	42	295	0	0	205	160	702
Added	14	0	90	0	0	0	54	55	0	0	117	16	346
Ramps	75	0	250	0	0	0	0	-90	0	0	158	0	393
Total	89	0	340	0	0	0	96	260	0	0	480	176	1441
#23 U.S. 101 SB Ramp/Westside Road													
Base	0	0	0	103	0	28	0	254	0	0	205	0	590
Added	0	0	0	11	0	23	0	98	80	60	71	0	343
Ramps	0	0	0	0	0	0	0	-90	90	233	0	0	233
Total	0	0	0	114	0	51	0	262	170	293	276	0	1166
#25 Healdsburg Avenue/Exchange Avenue													
Base	33	775	50	59	171	681	52	6	66	38	5	79	2015
Added	3	208	0	0	92	93	0	0	0	0	0	0	396
Ramps	0	-325	0	0	0	-314	0	0	0	0	0	0	-639
Total	36	658	50	59	263	460	52	6	66	38	5	79	1772
#26 Front Street/Healdsburg Avenue													
Base	5	15	13	108	15	36	36	98	15	11	125	228	705
Added	0	0	0	39	0	5	9	94	0	0	141	70	358
Total	5	15	13	147	15	41	45	192	15	11	266	298	1063
#27 Old Redwood Hwy/US 101 SB Ramps													
Base	0	0	0	10	1	248	0	311	35	218	199	0	1022
Added	0	0	0	41	0	44	0	38	0	310	35	0	468
Total	0	0	0	51	1	292	0	349	35	528	234	0	1490
#28 Healdsburg Ave/US 101 NB Ramps													
Base	14	0	188	0	0	0	196	141	0	0	411	13	963
Added	0	0	190	0	0	0	4	75	0	0	345	69	683
Total	14	0	378	0	0	0	200	216	0	0	756	82	1646

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Town of Healdsburg

Turning Movement Report
pm + Alt 3

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 Healdsburg Ave/Parkland Farms Blvd													
Base	0	188	160	10	310	0	0	0	0	105	0	5	778
Added	0	108	239	25	330	0	0	0	0	125	0	4	831
Total	0	296	399	35	640	0	0	0	0	230	0	9	1609
#2 Healdsburg Ave/Grove St													
Base	63	271	3	0	314	107	104	0	50	0	0	1	913
Added	1	63	0	0	202	253	284	0	1	0	0	0	804
Total	64	334	3	0	516	360	388	0	51	0	0	1	1717
#3 Healdsburg Avenue/Sunnyvale Drive													
Base	0	253	69	31	340	0	0	0	0	46	0	15	755
Added	0	79	22	24	191	0	0	0	0	16	0	3	335
Total	0	332	91	55	531	0	0	0	0	62	0	18	1090
#4 US 101 SB Ramps/Dry Creek Rd													
Base	0	0	0	108	0	9	0	220	154	440	198	0	1129
Added	0	0	0	60	0	5	0	35	20	355	91	0	566
Total	0	0	0	168	0	14	0	255	174	795	289	0	1695
#5 US 101 NB Ramps/Dry Creek Road													
Base	72	0	421	0	0	0	14	306	0	0	588	222	1623
Added	20	0	385	0	0	0	5	90	0	0	426	83	1009
Total	92	0	806	0	0	0	19	396	0	0	1014	305	2632
#6 Grove Street/Dry Creek Road													
Base	126	72	103	34	84	115	117	483	88	83	486	45	1836
Added	134	67	50	71	106	282	254	89	132	44	94	16	1339
On-ram	-9	0	0	0	0	0	0	0	0	0	0	0	-9
Total	251	139	153	105	190	397	371	572	220	127	580	61	3166
#7 Healdsburg Ave/Dry Creek Rd-March Ave													
Base	214	263	49	69	279	132	145	215	173	69	237	44	1889
Added	35	75	1	4	186	86	75	49	87	1	23	3	625
Total	249	338	50	73	465	218	220	264	260	70	260	47	2514
#8 University Street/March Avenue													
Base	76	68	22	1	41	25	20	33	106	10	17	1	420
Added	1	17	28	24	10	0	0	52	2	18	25	3	180
Total	77	85	50	25	51	25	20	85	108	28	42	4	600
#9 Healdsburg Avenue/Powell Avenue													
Base	0	423	50	123	417	0	0	0	0	77	0	133	1223
Added	0	120	12	72	175	0	0	0	0	8	0	23	410
Total	0	543	62	195	592	0	0	0	0	85	0	156	1633

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#10 Fitch Street/Powell Avenue													
Base	43	0	112	0	0	0	0	186	39	55	127	0	563
Added	1	0	13	0	0	0	0	84	1	10	30	0	139
Total	44	0	125	0	0	0	0	270	40	65	157	0	702
#11 University Street/Powell Avenue													
Base	150	0	61	0	0	0	0	161	127	43	111	0	653
Added	38	0	16	0	0	0	0	55	43	10	20	0	182
Total	188	0	77	0	0	0	0	216	170	53	131	0	835
#12 Grove Street/Grant Street													
Base	8	82	77	47	81	8	11	8	6	77	2	57	464
Added	0	164	67	70	162	0	0	0	0	50	0	28	541
On-ram	0	0	0	0	-6	0	0	0	0	3	0	-3	-6
Total	8	246	144	117	237	8	11	8	6	130	2	82	999
#13 Healdsburg Avenue/Grant Street													
Base	25	372	24	28	366	57	79	42	37	21	38	20	1109
Added	14	126	0	24	142	22	22	13	14	0	10	3	390
Total	39	498	24	52	508	79	101	55	51	21	48	23	1499
#14 Fitch Street/Grant Street													
Base	9	74	12	12	60	19	14	36	9	5	28	28	306
Added	0	11	3	0	9	2	2	35	0	3	11	0	76
Total	9	85	15	12	69	21	16	71	9	8	39	28	382
#15 University Street/Grant Street													
Base	10	189	0	0	133	6	10	0	15	0	0	0	363
Added	11	49	0	0	50	3	4	0	34	0	0	0	151
Total	21	238	0	0	183	9	14	0	49	0	0	0	514
#16 Healdsburg Avenue/Piper Street													
Base	35	353	66	157	362	9	3	19	40	85	15	133	1277
Added	0	140	2	0	156	0	0	0	0	2	0	0	300
Total	35	493	68	157	518	9	3	19	40	87	15	133	1577
#17 Healdsburg Avenue/North Street													
Base	31	313	58	44	347	70	44	101	37	40	72	46	1203
Added	12	128	0	20	130	8	11	24	32	0	18	3	386
Total	43	441	58	64	477	78	55	125	69	40	90	49	1589
#18 Vine Street/Matheson Street													
Base	174	288	82	7	329	47	80	85	168	78	69	15	1422
Added	29	149	9	34	141	8	14	0	9	12	0	20	425
On-ram	0	0	0	0	9	0	0	0	0	0	0	0	9
Total	203	437	91	41	479	55	94	85	177	90	69	35	1856

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 Town of Healdsburg

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#19 Healdsburg Avenue/Matheson Street													
Base	46	332	77	68	252	101	83	106	36	39	133	53	1326
Added	23	130	18	32	129	0	0	36	17	14	18	10	427
Total	69	462	95	100	381	101	83	142	53	53	151	63	1753
#20 Fitch Street/Matheson Street													
Base	7	38	5	43	35	35	67	145	10	2	90	40	517
Added	0	0	0	22	0	6	7	38	0	0	20	4	97
Total	7	38	5	65	35	41	74	183	10	2	110	44	614
#21 University Street/Matheson Street													
Base	22	136	7	48	83	19	23	173	20	10	96	33	670
Added	0	64	14	8	36	6	7	53	0	8	18	7	221
Total	22	200	21	56	119	25	30	226	20	18	114	40	891
#22 U.S. 101 NB Ramp/Westside Road													
Base	0	0	0	0	0	0	42	295	0	0	205	160	702
Added	14	0	90	0	0	0	54	66	0	0	120	26	370
Ramps	75	0	250	0	0	0	0	-90	0	0	158	0	393
Total	89	0	340	0	0	0	96	271	0	0	483	186	1465
#23 U.S. 101 SB Ramp/Westside Road													
Base	0	0	0	103	0	28	0	254	0	0	205	0	590
Added	0	0	0	19	0	23	0	100	80	60	75	0	357
Ramps	0	0	0	0	0	0	0	-90	90	233	0	0	233
Total	0	0	0	122	0	51	0	264	170	293	280	0	1180
#25 Healdsburg Avenue/Exchange Avenue													
Base	33	775	50	59	171	681	52	6	66	38	5	79	2015
Added	3	306	0	0	95	205	0	0	0	0	0	0	609
Ramps	0	-325	0	0	0	-314	0	0	0	0	0	0	-639
Total	36	756	50	59	266	572	52	6	66	38	5	79	1985
#26 Front Street/Healdsburg Avenue													
Base	5	15	13	108	15	36	36	98	15	11	125	228	705
Added	0	0	0	39	0	5	9	97	0	0	143	70	363
Total	5	15	13	147	15	41	45	195	15	11	268	298	1068
#27 Old Redwood Hwy/US 101 SB Ramps													
Base	0	0	0	10	1	248	0	311	35	218	199	0	1022
Added	0	0	0	41	0	44	0	41	0	310	38	0	474
Total	0	0	0	51	1	292	0	352	35	528	237	0	1496
#28 Healdsburg Ave/US 101 NB Ramps													
Base	14	0	188	0	0	0	196	141	0	0	411	13	963
Added	0	0	190	0	0	0	4	78	0	0	349	69	690
Total	14	0	378	0	0	0	200	219	0	0	760	82	1653

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Trip Generation Report

Forecast for pm

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
2	Saggio Hills	74.00	SFR	0.65	0.36	48	27	75	1.4
	Zone 2 Subtotal					48	27	75	1.4
5	Affordable H	500.00	SFR	0.65	0.36	325	180	505	9.7
	Zone 5 Subtotal					325	180	505	9.7
7	16977 Healds	394.13	General Indust	0.12	0.86	47	339	386	7.4
	Zone 7 Subtotal					47	339	386	7.4
9	Parkland Far	43.00	Single Family	0.65	0.36	28	15	43	0.8
	Zone 9 Subtotal					28	15	43	0.8
10	Chiquita	66.00	Multi-Family	0.38	0.20	25	13	38	0.7
	Zone 10 Subtotal					25	13	38	0.7
11	N. Rosewood	34.00	Single Family	0.65	0.36	22	12	34	0.7
	Zone 11 Subtotal					22	12	34	0.7
12	N. Grove Com	285.21	General Light	0.12	0.86	34	245	279	5.3
12	N. Grove Com	0.00	Manufacturing	0.27	0.47	0	0	0	0.0
	Zone 12 Subtotal					34	245	279	5.3
13	Healdsburg A	0.00	Industrial	1.19	1.52	0	0	0	0.0
13	Healdsburg A	79.66	Retail	1.19	1.52	95	121	216	4.1
	Zone 13 Subtotal					95	121	216	4.1
14	Callahan	58.00	Single Family	0.65	0.36	38	21	59	1.1
	Zone 14 Subtotal					38	21	59	1.1
15	Dry Creek Co	15.00	Commercial	1.19	1.52	18	23	41	0.8
15	Dry Creek Co	150.00	Hotel	0.21	0.28	32	42	74	1.4
	Zone 15 Subtotal					50	65	115	2.2
16	County growt	1.00	General	50.00	50.00	50	50	100	1.9
	Zone 16 Subtotal					50	50	100	1.9
17	Grove SP Com	157.80	Commercial	1.19	1.52	188	240	428	8.2
17	Grove SP Com	6.25	Industrial	0.12	0.86	1	5	6	0.1
	Zone 17 Subtotal					189	245	434	8.3
18	Grove SP Res	145.00	Single Family	0.65	0.36	94	52	146	2.8
	Zone 18 Subtotal					94	52	146	2.8

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
19	Piedmont Ter	45.00	Single Family	0.65	0.36	29	16	45	0.9
19	Piedmont Ter	69.00	Apartment	0.38	0.20	26	14	40	0.8
	Zone 19 Subtotal					55	30	85	1.6
20	1081 Healdsb	19.99	Retail	1.19	1.52	24	30	54	1.0
	Zone 20 Subtotal					24	30	54	1.0
21	Grant St Vil	39.00	SFR	0.65	0.36	25	14	39	0.7
	Zone 21 Subtotal					25	14	39	0.7
22	Healdsburg C	11.00	Multi-Family	0.38	0.20	4	2	6	0.1
22	Healdsburg C	15.00	SFR	0.65	0.36	10	5	15	0.3
	Zone 22 Subtotal					14	7	21	0.4
23	20-25-95 W G	60.00	Multi-Family	0.38	0.20	23	12	35	0.7
23	20-25-95 W G	5.00	Single Family	0.65	0.36	3	2	5	0.1
	Zone 23 Subtotal					26	14	40	0.8
24	Central Heal	89.00	Commercial	1.19	1.52	106	135	241	4.6
24	Central Heal	20.00	Office	0.25	1.24	5	25	30	0.6
	Zone 24 Subtotal					111	160	271	5.2
25	Creekside	17.00	Apartments	0.38	0.20	6	3	9	0.2
25	Creekside	14.00	Single Family	0.65	0.36	9	5	14	0.3
	Zone 25 Subtotal					15	8	23	0.4
26	Plaza Hotel/	36.00	Hotel	0.21	0.28	8	10	18	0.3
26	Plaza Hotel/	66.35	Commercial/Ret	1.19	1.52	79	101	180	3.5
26	Plaza Hotel/	0.00	Multi-Family	0.38	0.20	0	0	0	0.0
	Zone 26 Subtotal					87	111	198	3.8
27	Coghlan-Hidd	9.00	SFR	0.65	0.36	6	3	9	0.2
	Zone 27 Subtotal					6	3	9	0.2
28	146 Healdsbu	23.00	Hotel	0.21	0.28	5	6	11	0.2
28	146 Healdsbu	111.73	Retail	0.00	0.00	0	0	0	0.0
	Zone 28 Subtotal					5	6	11	0.2
29		18.00	Multi-Family	0.38	0.20	7	4	11	0.2
29		3.00	SFR	0.65	0.36	2	1	3	0.1
	Zone 29 Subtotal					9	5	14	0.3
30	County Growt	1.00	General	35.00	200.00	35	200	235	4.5
	Zone 30 Subtotal					35	200	235	4.5
31		295.86	Industrial	0.12	0.86	36	254	290	5.6
31		386.03	Retail	1.19	1.52	459	587	1046	20.1

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
Zone 31 Subtotal						495	841	1336	25.6
32	32 Healdsbur	32.67	Industrial	0.12	0.86	4	28	32	0.6
32	32 Healdsbur	30.36	Retail/MF	1.19	1.52	36	46	82	1.6
Zone 32 Subtotal						40	74	114	2.2
33		55.00	Multi-Family	0.00	0.00	0	0	0	0.0
TOTAL						1992	2888	4880	93.6

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 Town of Healdsburg

Trip Generation Report

Forecast for Alt 3

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
28	146 Healdsbu	111.73	Retail	1.19	1.52	133	170	303	5.8
Zone 28 Subtotal						133	170	303	5.8
33		55.00	Multi-Family	0.38	0.20	21	11	32	0.6
Zone 33 Subtotal						21	11	32	0.6
TOTAL						154	181	335	6.4

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Turning Movement Report
pm + Alt 3

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#1 Healdsburg Ave/Parkland Farms Blvd													
Base	0	188	160	10	310	0	0	0	0	105	0	5	778
Added	0	108	239	25	330	0	0	0	0	125	0	4	831
Total	0	296	399	35	640	0	0	0	0	230	0	9	1609
#2 Healdsburg Ave/Grove St													
Base	63	271	3	0	314	107	104	0	50	0	0	1	913
Added	1	63	0	0	202	253	284	0	1	0	0	0	804
Total	64	334	3	0	516	360	388	0	51	0	0	1	1717
#3 Healdsburg Avenue/Sunnyvale Drive													
Base	0	253	69	31	340	0	0	0	0	46	0	15	755
Added	0	79	22	24	191	0	0	0	0	16	0	3	335
Total	0	332	91	55	531	0	0	0	0	62	0	18	1090
#4 US 101 SB Ramps/Dry Creek Rd													
Base	0	0	0	108	0	9	0	220	154	440	198	0	1129
Added	0	0	0	60	0	5	0	35	20	355	91	0	566
Total	0	0	0	168	0	14	0	255	174	795	289	0	1695
#5 US 101 NB Ramps/Dry Creek Road													
Base	72	0	421	0	0	0	14	306	0	0	588	222	1623
Added	20	0	385	0	0	0	5	90	0	0	426	83	1009
Total	92	0	806	0	0	0	19	396	0	0	1014	305	2632
#6 Grove Street/Dry Creek Road													
Base	126	72	103	34	84	115	117	483	88	83	486	45	1836
Added	134	67	50	71	106	282	254	89	132	44	94	16	1339
On-ram	-9	0	0	0	0	0	0	0	0	0	0	0	-9
Total	251	139	153	105	190	397	371	572	220	127	580	61	3166
#7 Healdsburg Ave/Dry Creek Rd-March Ave													
Base	214	263	49	69	279	132	145	215	173	69	237	44	1889
Added	35	75	1	4	186	86	75	49	87	1	23	3	625
Total	249	338	50	73	465	218	220	264	260	70	260	47	2514
#8 University Street/March Avenue													
Base	76	68	22	1	41	25	20	33	106	10	17	1	420
Added	1	17	28	24	10	0	0	52	2	18	25	3	180
Total	77	85	50	25	51	25	20	85	108	28	42	4	600
#9 Healdsburg Avenue/Powell Avenue													
Base	0	423	50	123	417	0	0	0	0	77	0	133	1223
Added	0	120	12	72	175	0	0	0	0	8	0	23	410
Total	0	543	62	195	592	0	0	0	0	85	0	156	1633

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#10 Fitch Street/Powell Avenue													
Base	43	0	112	0	0	0	0	186	39	55	127	0	563
Added	1	0	13	0	0	0	0	84	1	10	30	0	139
Total	44	0	125	0	0	0	0	270	40	65	157	0	702
#11 University Street/Powell Avenue													
Base	150	0	61	0	0	0	0	161	127	43	111	0	653
Added	38	0	16	0	0	0	0	55	43	10	20	0	182
Total	188	0	77	0	0	0	0	216	170	53	131	0	835
#12 Grove Street/Grant Street													
Base	8	82	77	47	81	8	11	8	6	77	2	57	464
Added	0	164	67	70	162	0	0	0	0	50	0	28	541
On-ram	0	0	0	0	-6	0	0	0	0	3	0	-3	-6
Total	8	246	144	117	237	8	11	8	6	130	2	82	999
#13 Healdsburg Avenue/Grant Street													
Base	25	372	24	28	366	57	79	42	37	21	38	20	1109
Added	14	126	0	24	142	22	22	13	14	0	10	3	390
Total	39	498	24	52	508	79	101	55	51	21	48	23	1499
#14 Fitch Street/Grant Street													
Base	9	74	12	12	60	19	14	36	9	5	28	28	306
Added	0	11	3	0	9	2	2	35	0	3	11	0	76
Total	9	85	15	12	69	21	16	71	9	8	39	28	382
#15 University Street/Grant Street													
Base	10	189	0	0	133	6	10	0	15	0	0	0	363
Added	11	49	0	0	50	3	4	0	34	0	0	0	151
Total	21	238	0	0	183	9	14	0	49	0	0	0	514
#16 Healdsburg Avenue/Piper Street													
Base	35	353	66	157	362	9	3	19	40	85	15	133	1277
Added	0	140	2	0	156	0	0	0	0	2	0	0	300
Total	35	493	68	157	518	9	3	19	40	87	15	133	1577
#17 Healdsburg Avenue/North Street													
Base	31	313	58	44	347	70	44	101	37	40	72	46	1203
Added	12	128	0	20	130	8	11	24	32	0	18	3	386
Total	43	441	58	64	477	78	55	125	69	40	90	49	1589
#18 Vine Street/Matheson Street													
Base	174	288	82	7	329	47	80	85	168	78	69	15	1422
Added	29	149	9	34	141	8	14	0	9	12	0	20	425
On-ram	0	0	0	0	9	0	0	0	0	0	0	0	9
Total	203	437	91	41	479	55	94	85	177	90	69	35	1856

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Town of Healdsburg

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#19 Healdsburg Avenue/Matheson Street													
Base	46	332	77	68	252	101	83	106	36	39	133	53	1326
Added	23	130	18	32	129	0	0	36	17	14	18	10	427
Total	69	462	95	100	381	101	83	142	53	53	151	63	1753
#20 Fitch Street/Matheson Street													
Base	7	38	5	43	35	35	67	145	10	2	90	40	517
Added	0	0	0	22	0	6	7	38	0	0	20	4	97
Total	7	38	5	65	35	41	74	183	10	2	110	44	614
#21 University Street/Matheson Street													
Base	22	136	7	48	83	19	23	173	20	10	96	33	670
Added	0	64	14	8	36	6	7	53	0	8	18	7	221
Total	22	200	21	56	119	25	30	226	20	18	114	40	891
#22 U.S. 101 NB Ramp/Westside Road													
Base	0	0	0	0	0	0	42	295	0	0	205	160	702
Added	14	0	90	0	0	0	54	66	0	0	120	26	370
Ramps	75	0	250	0	0	0	0	-90	0	0	158	0	393
Total	89	0	340	0	0	0	96	271	0	0	483	186	1465
#23 U.S. 101 SB Ramp/Westside Road													
Base	0	0	0	103	0	28	0	254	0	0	205	0	590
Added	0	0	0	19	0	23	0	100	80	60	75	0	357
Ramps	0	0	0	0	0	0	0	-90	90	233	0	0	233
Total	0	0	0	122	0	51	0	264	170	293	280	0	1180
#25 Healdsburg Avenue/Exchange Avenue													
Base	33	775	50	59	171	681	52	6	66	38	5	79	2015
Added	3	306	0	0	95	205	0	0	0	0	0	0	609
Ramps	0	-325	0	0	0	-314	0	0	0	0	0	0	-639
Total	36	756	50	59	266	572	52	6	66	38	5	79	1985
#26 Front Street/Healdsburg Avenue													
Base	5	15	13	108	15	36	36	98	15	11	125	228	705
Added	0	0	0	39	0	5	9	97	0	0	143	70	363
Total	5	15	13	147	15	41	45	195	15	11	268	298	1068
#27 Old Redwood Hwy/US 101 SB Ramps													
Base	0	0	0	10	1	248	0	311	35	218	199	0	1022
Added	0	0	0	41	0	44	0	41	0	310	38	0	474
Total	0	0	0	51	1	292	0	352	35	528	237	0	1496
#28 Healdsburg Ave/US 101 NB Ramps													
Base	14	0	188	0	0	0	196	141	0	0	411	13	963
Added	0	0	190	0	0	0	4	78	0	0	349	69	690
Total	14	0	378	0	0	0	200	219	0	0	760	82	1653

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Town of Healdsburg

Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
#34 Healdsburg Ave/Passalqua Rd													
Base	0	204	0	0	311	0	0	0	0	0	0	0	515
Added	0	76	16	22	34	0	0	0	0	9	0	12	169
Total	0	280	16	22	345	0	0	0	0	9	0	12	684
#35 Healdsburg Ave/Fire Station Access-RJW Lumber													
Base	10	193	0	0	320	13	0	0	0	0	0	0	536
Added	44	68	0	0	40	3	24	0	315	0	0	0	494
Total	54	261	0	0	360	16	24	0	315	0	0	0	1030
#125 Healdsburg Avenue/Vine SB out													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	90	171	0	0	160	0	0	0	73	0	0	0	494
Total	90	171	0	0	160	0	0	0	73	0	0	0	494
#126 Healdsburg Ave-Vine St/Westside Rd-Mill St													
Base	390	223	70	5	563	47	101	97	120	116	47	11	1790
Added	50	203	16	8	187	39	55	0	35	10	0	3	606
On-ram	0	0	0	0	-195	87	0	0	-90	-29	29	0	-198
Total	440	426	86	13	555	173	156	97	65	97	76	14	2198
#127 Vine Street/Mill Street													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	13	0	75	79	77	0	0	71	17	332
Total	0	0	0	13	0	75	79	77	0	0	71	17	332
#160 Healdsburg Avenue/Piper Street													
Base	32	327	61	145	335	8	3	18	37	79	14	123	1182
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	32	327	61	145	335	8	3	18	37	79	14	123	1182
#170 Healdsburg Avenue/North Street													
Base	28	298	70	39	261	79	50	98	28	58	97	62	1168
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	28	298	70	39	261	79	50	98	28	58	97	62	1168
#190 Healdsburg Avenue/Matheson Street													
Base	11	378	63	68	332	58	58	84	5	84	68	42	1251
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	11	378	63	68	332	58	58	84	5	84	68	42	1251
#240 Healdsburg Avenue-Vine Street/Mill Street													
Base	390	223	70	5	563	47	101	97	120	116	47	11	1790
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
New Ra	0	0	0	0	-195	87	0	0	-90	-29	29	0	-198
Total	390	223	70	5	368	134	101	97	30	87	76	11	1592

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Healdsburg Ave/Parkland Farms Blvd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.420
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 11.1
Optimal Cycle: 24 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes, and Volume Module. Includes data for Healdsburg Ave and Parkland Farms Blvd.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Town of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Healdsburg Ave/Grove St

Cycle (sec): 80 Critical Vol./Cap.(X): 0.599
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 17.9
Optimal Cycle: 40 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes, and Volume Module. Includes data for Healdsburg Ave and Grove St.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Town of Healdsburg

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Healdsburg Avenue/Sunnyvale Drive

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: C [16.2]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Healdsburg Ave and Sunnyvale Dr with various approach and movement details.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Critical Gap Module with columns for Critical Gap, FollowUpTim, and values.

Table for Capacity Module with columns for Conflict Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, and Movement.

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

PM Peak Hour - General Plan Buildout Conditions
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City of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 US 101 SB Ramps/Dry Creek Rd

Cycle (sec): 80 Critical Vol./Cap.(X): 0.842
Loss Time (sec): 6 (Y+R=4.0 sec) Average Delay (sec/veh): 27.4
Optimal Cycle: 65 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include US 101 SB Ramps and Dry Creek Rd.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Town of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 US 101 NB Ramps/Dry Creek Road

Cycle (sec): 80 Critical Vol./Cap.(X): 1.000
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 40.8
Optimal Cycle: 173 Level Of Service: D

Street Name: US 101 NB Ramps Dry Creek Rd
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 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 1 0 0 0 0 0 1 0 1

Volume Module: >> Count Date: 23 May 2006 << 4:15 - 5:15 pm
Base Vol: 72 0 421 0 0 0 14 306 0 0 588 222
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 72 0 421 0 0 0 14 306 0 0 588 222
Added Vol: 20 0 385 0 0 0 5 90 0 0 426 83
Overlap WB: 0 0 -225 0 0 0 0 0 0 0 0 0
Initial Fut: 92 0 581 0 0 0 19 396 0 0 1014 305
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 92 0 581 0 0 0 19 396 0 0 1014 305
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 92 0 581 0 0 0 19 396 0 0 1014 305
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: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 92 0 581 0 0 0 19 396 0 0 1014 305

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.96 1.00 0.86 1.00 1.00 1.00 0.95 1.00 1.00 1.00 1.00 0.85
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 1.00 1.00 0.00 0.00 1.00 1.00
Final Sat.: 1827 0 1631 0 0 0 1805 1900 0 0 1900 1615

Capacity Analysis Module:
Vol/Sat: 0.05 0.00 0.36 0.00 0.00 0.00 0.01 0.21 0.00 0.00 0.53 0.19
Crit Moves: ****
Green/Cycle: 0.36 0.00 0.36 0.00 0.00 0.00 0.01 0.54 0.00 0.00 0.53 0.53
Volume/Cap: 0.14 0.00 1.00 0.00 0.00 0.00 1.00 0.38 0.00 0.00 1.00 0.35
Delay/Veh: 17.6 0.0 63.2 0.0 0.0 0.0 246.2 10.7 0.0 0.0 47.0 11.0
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: 17.6 0.0 63.2 0.0 0.0 0.0 246.2 10.7 0.0 0.0 47.0 11.0
LOS by Move: B A E A A A F B A A D B
HCM2kAvgQ: 2 0 21 0 0 0 2 6 0 0 34 4

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Grove Street/Dry Creek Road

Cycle (sec): 100 Critical Vol./Cap.(X): 0.890
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 37.7
Optimal Cycle: 98 Level Of Service: D

Street Name: Grove St Dry Creek Rd
Approach: North Bound South Bound East Bound 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 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 0

Volume Module: >> Count Date: 6 Jun 2005 << 4:30 - 5:30 pm
Base Vol: 126 72 103 34 84 115 117 483 88 83 486 45
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: 126 72 103 34 84 115 117 483 88 83 486 45
Added Vol: 134 67 50 71 106 282 254 89 132 44 94 16
On-ramp Div: -9 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 251 139 153 105 190 397 371 572 220 127 580 61
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 251 139 153 105 190 397 371 572 220 127 580 61
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 251 139 153 105 190 397 371 572 220 127 580 61
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
FinalVolume: 251 139 153 105 190 397 371 572 220 127 580 61

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.51 0.51 0.83 0.59 0.59 0.83 0.90 0.86 0.86 0.90 0.88 0.88
Lanes: 0.64 0.36 1.00 0.36 0.64 1.00 1.00 1.44 0.56 1.00 1.81 0.19
Final Sat.: 626 347 1568 397 719 1568 1702 2355 906 1702 3037 319

Capacity Analysis Module:
Vol/Sat: 0.40 0.40 0.10 0.26 0.26 0.25 0.22 0.24 0.24 0.07 0.19 0.19
Crit Moves: ****
Green/Cycle: 0.45 0.45 0.45 0.45 0.45 0.45 0.24 0.35 0.35 0.11 0.21 0.21
Volume/Cap: 0.89 0.89 0.22 0.59 0.59 0.56 0.89 0.69 0.69 0.69 0.89 0.89
Delay/Veh: 44.8 44.8 16.9 22.3 22.3 21.2 56.9 29.6 29.6 53.7 51.3 51.3
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: 44.8 44.8 16.9 22.3 22.3 21.2 56.9 29.6 29.6 53.7 51.3 51.3
LOS by Move: D D B C C C E C C D D D
HCM2kAvgQ: 15 15 3 7 7 9 14 12 12 5 13 13

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Healdsburg Ave/Dry Creek Rd-March Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.744
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 36.0
Optimal Cycle: 66 Level Of Service: D

Street Name: Healdsburg Ave Dry Creek Rd-March Ave
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 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 1 0 0 1 0

Volume Module: >> Count Date: 8 Aug 2007 << 4:15 - 5:15 pm
Base Vol: 214 263 49 69 279 132 145 215 173 69 237 44
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: 214 263 49 69 279 132 145 215 173 69 237 44
Added Vol: 35 75 1 4 186 86 75 49 87 1 23 3
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 249 338 50 73 465 218 220 264 260 70 260 47
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 249 338 50 73 465 218 220 264 260 70 260 47
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 249 338 50 73 465 218 220 264 260 70 260 47
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
FinalVolume: 249 338 50 73 465 218 220 264 260 70 260 47

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.88 0.88 0.90 0.85 0.85 0.90 0.94 0.80 0.93 0.96 0.96
Lanes: 1.00 1.74 0.26 1.00 1.36 0.64 1.00 1.00 1.00 1.00 0.85 0.15
Final Sat.: 1702 2909 430 1702 2206 1034 1702 1792 1523 1769 1541 279

Capacity Analysis Module:
Vol/Sat: 0.15 0.12 0.12 0.04 0.21 0.21 0.13 0.15 0.17 0.04 0.17 0.17
Crit Moves: ****
Green/Cycle: 0.20 0.35 0.35 0.13 0.28 0.28 0.17 0.33 0.33 0.08 0.23 0.23
Volume/Cap: 0.74 0.33 0.33 0.33 0.74 0.74 0.74 0.45 0.53 0.53 0.74 0.74
Delay/Veh: 46.6 24.0 24.0 40.5 35.9 35.9 49.0 27.3 28.5 48.3 43.2 43.2
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: 46.6 24.0 24.0 40.5 35.9 35.9 49.0 27.3 28.5 48.3 43.2 43.2
LOS by Move: D C C D D D D C C D D D
HCM2kAvgQ: 9 5 5 2 12 12 8 7 7 3 10 10

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #8 University Street/March Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.284
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.9
Optimal Cycle: 0 Level Of Service: A

Street Name: University St March Ave
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 Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 0 1! 0 0

Volume Module: >> Count Date: 6 Mar 2000 << 4:30-5:30 p.m.
Base Vol: 76 68 22 1 41 25 20 33 106 10 17 1
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: 76 68 22 1 41 25 20 33 106 10 17 1
Added Vol: 1 17 28 24 10 0 0 52 2 18 25 3
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 77 85 50 25 51 25 20 85 108 28 42 4
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 77 85 50 25 51 25 20 85 108 28 42 4
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 77 85 50 25 51 25 20 85 108 28 42 4
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
FinalVolume: 77 85 50 25 51 25 20 85 108 28 42 4

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.36 0.40 0.24 0.25 0.50 0.25 0.09 0.40 0.51 0.38 0.57 0.05
Final Sat.: 271 299 176 178 363 178 72 308 391 259 388 37

Capacity Analysis Module:
Vol/Sat: 0.28 0.28 0.28 0.14 0.14 0.14 0.28 0.28 0.28 0.11 0.11 0.11
Crit Moves: ****
Delay/Veh: 9.3 9.3 9.3 8.4 8.4 8.4 9.0 9.0 9.0 8.5 8.5 8.5
Delay 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
AdjDel/Veh: 9.3 9.3 9.3 8.4 8.4 8.4 9.0 9.0 9.0 8.5 8.5 8.5
LOS by Move: A A A A A A A A A A A A
ApproachDel: 9.3 8.4 9.0 8.5
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 9.3 8.4 9.0 8.5
LOS by Appr: A A A A
AllWayAvgQ: 0.4 0.4 0.4 0.1 0.1 0.1 0.3 0.3 0.3 0.1 0.1 0.1

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Healdsburg Avenue/Powell Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.557
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 18.9
Optimal Cycle: 45 Level Of Service: B

Street Name: Healdsburg Ave Powell Ave
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 Split Phase Split Phase
Rights: Include Include Include Include
Lanes: 1 0 1 0 1 1 0 0 1 0 0 0 1 0 0 1 0 0 1 0

Volume Module: >> Count Date: 14 May 2002 << 4:45 - 5:45 pm
Base Vol: 0 423 50 123 417 0 0 0 0 77 0 133
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: 0 423 50 123 417 0 0 0 0 77 0 133
Added Vol: 0 120 12 72 175 0 0 0 0 8 0 23
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 543 62 195 592 0 0 0 0 85 0 156
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 543 62 195 592 0 0 0 0 85 0 156
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 543 62 195 592 0 0 0 0 85 0 156
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
FinalVolume: 0 543 62 195 592 0 0 0 0 85 0 156

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 0.85 0.95 1.00 1.00 1.00 1.00 1.00 0.95 1.00 0.85
Lanes: 1.00 1.00 1.00 1.00 1.00 0.00 0.00 1.00 0.00 1.00 0.00 1.00
Final Sat.: 1900 1900 1615 1805 1900 0 0 1900 0 1805 0 1615

Capacity Analysis Module:
Vol/Sat: 0.00 0.29 0.04 0.11 0.31 0.00 0.00 0.00 0.00 0.05 0.00 0.10
Crit Moves: ****
Green/Cycle: 0.00 0.51 0.51 0.19 0.71 0.00 0.00 0.00 0.00 0.17 0.00 0.17
Volume/Cap: 0.00 0.56 0.07 0.56 0.44 0.00 0.00 0.00 0.00 0.27 0.00 0.56
Delay/Veh: 0.0 17.3 12.4 38.4 6.5 0.0 0.0 0.0 0.0 36.3 0.0 40.3
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 17.3 12.4 38.4 6.5 0.0 0.0 0.0 0.0 36.3 0.0 40.3
LOS by Move: A B B D A A A A D A D
HCM2kAvgQ: 0 12 1 6 8 0 0 0 0 2 0 5

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 Fitch Street/Powell Avenue

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: B[12.5]

Street Name: Fitch St Powell Ave
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 1 0 0 1 0 0 0

Volume Module: >> Count Date: 30 Nov 1999 << 4:30-5:30 p.m.
Base Vol: 40 0 104 0 0 0 0 172 36 51 118 0
Growth Adj: 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08 1.08
Initial Bse: 43 0 112 0 0 0 0 186 39 55 127 0
Added Vol: 1 0 13 0 0 0 0 84 1 10 30 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 44 0 125 0 0 0 0 270 40 65 157 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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 44 0 125 0 0 0 0 270 40 65 157 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 44 0 125 0 0 0 0 270 40 65 157 0

Critical Gap Module:
Critical Gp: 6.4 6.5 6.2 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 4.1 xxxxx xxxxxx
FollowUpTim: 3.5 4.0 3.3 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 2.2 xxxxx xxxxxx

Capacity Module:
Cnflct Vol: 577 577 290 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 310 xxxxx xxxxxx
Potent Cap.: 482 430 754 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 1262 xxxxx xxxxxx
Move Cap.: 462 407 754 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 1262 xxxxx xxxxxx
Volume/Cap: 0.10 0.00 0.17 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.05 xxxxx xxxxxx

Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 0.2 xxxxx xxxxxx
Control Del: xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 8.0 xxxxx xxxxxx
LOS by Move: *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 647 xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue: xxxxxx 1.0 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.2 xxxxx xxxxxx
Shrd ConDel: xxxxxx 12.5 xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 8.0 xxxxx xxxxxx
Shared LOS: * B *
ApproachDel: 12.5 xxxxxxxx xxxxxxxx xxxxxxxx
ApproachLOS: B * * * * *

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #11 University Street/Powell Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.506
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.2
Optimal Cycle: 0 Level Of Service: B

Street Name: University St Powell Ave
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 Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 0 0 0 1 0 0 0

Volume Module: >> Count Date: 9 May 2002 << 5:00 - 6:00 pm
Base Vol: 150 0 61 0 0 0 0 161 127 43 111 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
Initial Bse: 150 0 61 0 0 0 0 161 127 43 111 0
Added Vol: 38 0 16 0 0 0 0 55 43 10 20 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 188 0 77 0 0 0 0 216 170 53 131 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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 188 0 77 0 0 0 0 216 170 53 131 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 188 0 77 0 0 0 0 216 170 53 131 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: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 188 0 77 0 0 0 0 216 170 53 131 0

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.71 0.00 0.29 0.00 0.00 0.00 0.00 0.56 0.44 0.29 0.71 0.00
Final Sat.: 469 0 192 0 0 0 0 427 336 194 479 0

Capacity Analysis Module:
Vol/Sat: 0.40 xxxx 0.40 xxxx xxxx xxxx 0.51 0.51 0.27 0.27 xxxx
Crit Moves: ****
Delay/Veh: 11.2 0.0 11.2 0.0 0.0 0.0 0.0 11.9 11.9 9.9 9.9 0.0
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 11.2 0.0 11.2 0.0 0.0 0.0 0.0 11.9 11.9 9.9 9.9 0.0
LOS by Move: B * B * * * * B B A A *
ApproachDel: 11.2 xxxxxx 11.9 9.9
Delay Adj: 1.00 xxxxxx 1.00 1.00
ApprAdjDel: 11.2 xxxxxx 11.9 9.9
LOS by Appr: B * B A B
AllWayAvgQ: 0.6 0.6 0.6 0.0 0.0 0.0 0.9 0.9 0.9 0.3 0.3 0.3

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #12 Grove Street/Grant Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.537
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.9
Optimal Cycle: 0 Level Of Service: B

Street Name: Grove St Grant St
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 Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 1 0 0 1 0 0 0 0

Volume Module: >> Count Date: 8 May 2003 << 4:15 - 5:15 pm
Base Vol: 8 82 77 47 81 8 11 8 6 77 2 57
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 8 82 77 47 81 8 11 8 6 77 2 57
Added Vol: 0 164 67 70 162 0 0 0 0 50 0 28
On-ramp Div: 0 0 0 0 -6 0 0 0 0 3 0 -3
Initial Fut: 8 246 144 117 237 8 11 8 6 130 2 82
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 8 246 144 117 237 8 11 8 6 130 2 82
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 8 246 144 117 237 8 11 8 6 130 2 82
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: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 8 246 144 117 237 8 11 8 6 130 2 82

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.03 0.97 1.00 0.32 0.66 0.02 0.44 0.32 0.24 0.61 0.01 0.38
Final Sat.: 20 608 719 218 442 15 230 167 125 366 6 231

Capacity Analysis Module:
Vol/Sat: 0.40 0.40 0.20 0.54 0.54 0.54 0.05 0.05 0.05 0.35 0.35 0.35
Crit Moves: ****
Delay/Veh: 11.8 11.8 8.7 13.7 13.7 13.7 9.3 9.3 9.3 11.3 11.3 11.3
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 11.8 11.8 8.7 13.7 13.7 13.7 9.3 9.3 9.3 11.3 11.3 11.3
LOS by Move: B B A B B B A A A B B B
ApproachDel: 10.7 13.7 9.3 11.3
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 10.7 13.7 9.3 11.3
LOS by Appr: B B A B
AllWayAvgQ: 0.6 0.6 0.2 1.0 1.0 1.0 0.0 0.0 0.0 0.5 0.5 0.5

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 Healdsburg Avenue/Grant Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.575
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 18.4
Optimal Cycle: 39 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for Healdsburg Ave and Grant St.

Table with columns for Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, etc.

Table with columns for Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Delay/Veh, etc.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #14 Fitch Street/Grant Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.136
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 7.9
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for Fitch St and Grant St.

Table with columns for Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, etc.

Table with columns for Saturation Flow Module, Sat/Lane, Adjustment, Lanes, Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Delay/Veh, etc.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #15 University Street/Grant Street

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: B[10.1]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include University St and Grant Street with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Critical Gap, Critical Gp, and FollowUpTim, showing values for different gap durations.

Table with columns for Capacity Module, Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table with columns for Level Of Service Module, 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Healdsburg Avenue/Piper Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.529
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 16.1
Optimal Cycle: 35 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Healdsburg Ave and Piper St with various movement and control details.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Saturation Flow Module, Sat/Lane, Adjustment, Lanes, and Final Sat.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Healdsburg Avenue/North Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.507
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 13.3
Optimal Cycle: 34 Level Of Service: B

Table with columns for Street Name (Healdsburg Ave, North St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (7 Aug 2007), and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Vine Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.933
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 57.7
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name (Vine St, Matheson St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (9 Aug 2007), and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Saturation Flow Module with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Table for Capacity Analysis Module with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, etc.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions (Mitigated)
General Plan Update EIR
City of Healdsburg

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Vine Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.786
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 40.5
Optimal Cycle: 106 Level Of Service: D

Table with columns for Street Name (Vine St, Matheson St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (9 Aug 2007), and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. for the intersection.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Healdsburg Avenue/Matheson Street

Cycle (sec): 80 Critical Vol./Cap.(X): 0.613
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 20.6
Optimal Cycle: 41 Level Of Service: C

Table with columns for Street Name (Healdsburg Ave, Matheson St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Table with columns for Volume Module, Count, Date (30 Apr 2002), and various traffic volume metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. for the intersection.

Table with columns for Capacity Analysis Module, Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #20 Fitch Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.350
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.2
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name (Fitch St, Matheson St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, and Lanes.

Volume Module: >> Count Date: 8 Mar 2000 << 4:30-5:30 p.m.
Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:
Table with columns for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:
Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #21 University Street/Matheson Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.431
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.1
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (University St, Matheson St), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, and Lanes.

Volume Module: >> Count Date: 8 Aug 2007 << 4:30 - 5:30 p.m.
Table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:
Table with columns for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:
Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #22 U.S. 101 NB Ramp/Westside Road

Average Delay (sec/veh): 11.0 Worst Case Level Of Service: E[35.6]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Critical Gap Module with columns for Critical Gp, FollowUpTim, and various gap metrics.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 U.S. 101 SB Ramp/Westside Road

Average Delay (sec/veh): 11.4 Worst Case Level Of Service: F[62.4]

Table with columns for Approach, Movement, Control, Rights, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Table with columns for Volume Module, Count, Date, and various traffic metrics like Base Vol, Growth Adj, Initial Bse, etc.

Table for Critical Gap Module with columns for Critical Gp, FollowUpTim, and various gap metrics.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

HCM Signalized Intersection Capacity Analysis
24: Mill St & Healdsburg Avenue/ Vine St

Healdsburg 2025 General Plan Update-ADEIR



Movement	EBL	EBT	EBR	WBL	WBT	NBL2	NBL	NBT	NBR	SBL	SBT	SER
Lane Configurations	↖	↗		↖	↗	↖	↗	↖	↗	↖	↗	↖
Volume (vph)	475	85	103	59	113	144	164	251	92	15	411	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	0.95	0.88
Frt	1.00	0.92		1.00	1.00	1.00	0.96			1.00	1.00	0.85
Flt Protected	0.95	1.00		0.98	0.95	0.95	1.00			0.95	1.00	1.00
Satd. Flow (prot)	1770	1710		1831	1770	1770	1788			1770	3539	2787
Flt Permitted	0.95	1.00		0.98	0.95	0.95	1.00			0.95	1.00	1.00
Satd. Flow (perm)	1770	1710		1831	1770	1770	1788			1770	3539	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	475	85	103	59	113	144	164	251	92	15	411	500
RTOR Reduction (vph)	0	36	0	0	0	0	0	10	0	0	0	0
Lane Group Flow (vph)	475	152	0	0	172	144	164	333	0	15	411	500
Turn Type	Split			Split		Prot	Prot			Prot		custom
Protected Phases	4	4		8	8	5	5	2		1	6	3
Permitted Phases												
Actuated Green, G (s)	33.5	33.5		14.6	13.5	36.5	52.5			2.0	18.0	23.0
Effective Green, g (s)	33.5	33.5		14.6	13.5	36.5	52.5			2.0	18.0	23.0
Actuated g/C Ratio	0.27	0.27		0.12	0.11	0.30	0.43			0.02	0.15	0.19
Clearance Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)	484	467		218	195	527	766			29	520	523
v/s Ratio Prot	c0.27	0.09		c0.09	c0.08	0.09	0.19			0.01	c0.12	c0.18
v/s Ratio Perm												
v/c Ratio	0.98	0.32		0.79	0.74	0.31	0.43			0.52	0.79	0.96
Uniform Delay, d1	44.2	35.5		52.5	52.8	33.3	24.6			59.8	50.5	49.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00			1.00	1.00	1.00
Incremental Delay, d2	35.9	0.4		17.1	13.6	0.3	0.4			14.7	11.6	28.3
Delay (s)	80.1	35.9		69.6	66.4	33.7	25.0			74.5	62.1	77.6
Level of Service	F	D		E	E	C	C			E	E	E
Approach Delay (s)		67.6			69.6		36.4				62.5	
Approach LOS		E			E		D				E	

Intersection Summary			
HCM Average Control Delay	60.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	122.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
24: Mill St & Healdsburg Avenue/ Vine St

Healdsburg 2025 General Plan Update-ADEIR



Movement	EBL2	EBL	EBT	EBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SER
Lane Configurations	↖		↔	↗	↖	↗	↖	↗	↖	↗	↖	↗
Volume (vph)	190	285	85	103	144	164	251	92	15	238	173	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00		1.00	0.95	0.88	0.88
Frt	1.00	0.97	0.97	1.00	1.00	0.96			1.00	0.94	0.85	0.85
Flt Protected	0.95	0.97	0.97	0.95	0.95	1.00			0.95	1.00	1.00	1.00
Satd. Flow (prot)	1681	1663	1663	1770	1770	1788			1770	3316	2787	2787
Flt Permitted	0.95	0.97	0.97	0.95	0.95	1.00			0.95	1.00	1.00	1.00
Satd. Flow (perm)	1681	1663	1663	1770	1770	1788			1770	3316	2787	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	285	85	103	144	164	251	92	15	238	173	500
RTOR Reduction (vph)	0	0	10	0	0	0	12	0	0	0	0	0
Lane Group Flow (vph)	171	0	482	0	144	164	331	0	15	411	0	500
Turn Type	Perm	Split			Prot	Prot			Prot			custom
Protected Phases		4	4		5	5	2		1	6		3
Permitted Phases	4											
Actuated Green, G (s)	30.4	30.4		12.9	32.8	50.4			1.5	19.1		19.9
Effective Green, g (s)	30.4	30.4		12.9	32.8	50.4			1.5	19.1		19.9
Actuated g/C Ratio	0.31	0.31		0.13	0.33	0.51			0.02	0.19		0.20
Clearance Time (s)	4.0	4.0		4.0	4.0				4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0		3.0					3.0	3.0		3.0
Lane Grp Cap (vph)	520	514		232	591	917			27	644		564
v/s Ratio Prot				c0.29	c0.08	0.09	0.19		0.01	c0.12		c0.18
v/s Ratio Perm	0.10											
v/c Ratio	0.33	0.94		0.62	0.28	0.36			0.56	0.64		0.89
Uniform Delay, d1	26.1	33.0		40.4	24.0	14.3			48.1	36.4		38.1
Progression Factor	1.00	1.00		1.00	1.00	1.00			1.00	1.00		1.00
Incremental Delay, d2	0.4	24.9		5.1	0.3	0.2			22.5	4.8		15.5
Delay (s)	26.5	58.0		45.5	24.3	14.6			70.5	41.2		53.6
Level of Service	C	E		D	C	B			E	D		D
Approach Delay (s)		49.9			23.9					42.2		
Approach LOS		D			C					D		

Intersection Summary			
HCM Average Control Delay	41.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	98.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement Summary

Healdsburg Avenue/Mill Street-Vine Street

PM Peak Hour - Alternative 3 GP Buildout Conditions

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (ft)	Prop. Queued	Eff. Stop Rate	Aver Speed (mph)
NB Healdsburg Avenue										
3L	L	324	1.9	0.498	12.8	LOS B	146	0.86	0.88	21.7
8T	T	264	1.9	0.498	5.5	LOS A	146	0.91	0.69	23.9
8R	R	97	2.1	0.497	7.2	LOS A	146	0.91	0.78	23.4
Approach		685	1.9	0.498	9.2	LOS A	146	0.89	0.79	22.7
WB Mill Street										
1L	L	62	1.6	0.341	13.1	LOS B	58	0.76	0.92	21.8
6T	T	103	1.9	0.341	6.3	LOS A	58	0.76	0.77	24.6
6R	R	46	2.2	0.341	7.1	LOS A	58	0.76	0.78	24.3
Approach		211	1.9	0.341	8.5	LOS A	58	0.76	0.82	23.6
SB Healdsburg Avenue										
7L	L	16	6.3	0.571	13.1	LOS B	123	0.73	0.98	21.8
4T	T	251	2.0	0.567	6.3	LOS A	123	0.73	0.83	24.7
4R	R	193	2.1	0.568	7.7	LOS A	123	0.73	0.84	23.9
Approach		460	2.2	0.567	7.1	LOS A	123	0.73	0.84	24.3
Vine Street										
15L	L	2	33.3	0.500	14.7	LOS B	117	0.86	1.00	21.0
12T	T	340	2.1	0.471	7.8	LOS A	117	0.86	0.90	23.9
12R	R	272	1.8	0.291	5.2	LOS A	45	0.55	0.57	24.8
Approach		614	2.1	0.471	6.7	LOS A	117	0.72	0.75	24.2
EB Mill Street										
5L	L	500	2.0	0.845	23.8	LOS C	403	1.00	1.37	17.9
2T	T	89	2.2	0.841	16.5	LOS B	403	1.00	1.37	19.4
2R	R	108	1.9	0.844	18.1	LOS B	403	1.00	1.29	18.8
Approach		698	2.0	0.845	22.0	LOS C	403	1.00	1.36	18.2
All Vehicles		2668	2.0	0.845	11.6	LOS B	403	0.84	0.94	21.8

Symbols which may appear in this table:

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
General Plan Update EIR
Town of Healdsburg

Level of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #25 Healdsburg Avenue/Exchange Avenue

Cycle (sec): 80 Critical Vol./Cap.(X): 0.558
Loss Time (sec): 9 (Y+R=4.0 sec) Average Delay (sec/veh): 13.6
Optimal Cycle: 37 Level Of Service: B

Street Name: Healdsburg Ave Exchange Ave
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 Split Phase Split Phase
Rights: Include Include Include Include
Lanes: 1 0 1 1 0 1 0 1 0 1 0 0 1 0 0 0 1 0 0 1

Volume Module: >> Count Date: 29 Apr 2002 << 4:30 - 5:30 pm
Base Vol: 33 775 50 59 171 681 52 6 66 38 5 79
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: 33 775 50 59 171 681 52 6 66 38 5 79
Added Vol: 3 306 0 0 95 205 0 0 0 0 0 0
Ramps Diver: 0 -325 0 0 0 -314 0 0 0 0 0 0
Initial Fut: 36 756 50 59 266 572 52 6 66 38 5 79
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 36 756 50 59 266 572 52 6 66 38 5 79
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 36 756 50 59 266 572 52 6 66 38 5 79
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
FinalVolume: 36 756 50 59 266 572 52 6 66 38 5 79

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.94 0.94 0.95 1.00 0.85 0.91 0.91 0.91 0.96 0.96 0.85
Lanes: 1.00 1.88 0.12 1.00 1.00 1.00 0.42 0.05 0.53 0.88 0.12 1.00
Final Sat.: 1805 3356 222 1805 1900 1615 724 84 919 1609 212 1615

Capacity Analysis Module:
Vol/Sat: 0.02 0.23 0.23 0.03 0.14 0.35 0.07 0.07 0.07 0.02 0.02 0.05
Crit Moves: ****
Green/Cycle: 0.04 0.59 0.59 0.09 0.64 0.64 0.13 0.13 0.13 0.09 0.09 0.09
Volume/Cap: 0.56 0.38 0.38 0.38 0.22 0.56 0.56 0.56 0.56 0.27 0.27 0.56
Delay/Veh: 48.4 9.0 9.0 36.2 6.3 8.9 35.8 35.8 35.8 35.0 35.0 39.9
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: 48.4 9.0 9.0 36.2 6.3 8.9 35.8 35.8 35.8 35.0 35.0 39.9
LOS by Move: D A A D A A D D D D D D
HCM2kAvgQ: 2 6 6 2 3 8 4 4 4 1 1 3

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #26 Front Street/Healdsburg Avenue

Average Delay (sec/veh): 6.7 Worst Case Level Of Service: D[30.2]

Street Name: Front St Healdsburg Ave
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 1 0 0 0 0 1 0 0 0 0 0 1 0 0

Volume Module: >> Count Date: 13 Jan 2000 << 4:00-6:00 p.m.
Base Vol: 5 15 13 108 15 36 36 98 15 11 125 228
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: 5 15 13 108 15 36 36 98 15 11 125 228
Added Vol: 0 0 0 39 0 5 9 97 0 0 143 70
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 15 13 147 15 41 45 195 15 11 268 298
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 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 5 15 13 147 15 41 45 195 15 11 268 298
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 5 15 13 147 15 41 45 195 15 11 268 298

Critical Gap Module:
Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:
Conflict Vol: 760 881 203 746 739 417 566 xxxx xxxxx 210 xxxx xxxxx
Potential Cap.: 325 288 843 332 347 640 1016 xxxx xxxxx 1373 xxxx xxxxx
Move Cap.: 282 272 843 301 329 640 1016 xxxx xxxxx 1373 xxxx xxxxx
Volume/Cap: 0.02 0.06 0.02 0.49 0.05 0.06 0.04 xxxx xxxxx 0.01 xxxx xxxxx

Level of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx 0.0 xxxx xxxxx
Control Del:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 8.7 xxxx xxxxxx 7.6 xxxx xxxxxx
LOS by Move: * * * * * A * * A * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:xxxxx 374 xxxxxx xxxx 339 xxxxxx xxxx xxxx xxxxxx xxxx xxxx xxxxxx
SharedQueue:xxxxx 0.3 xxxxxx xxxxxx 3.7 xxxxxx xxxxxx xxxxxx xxxxxx xxxx xxxxxx
Shrd ConDel:xxxxx 15.5 xxxxxx xxxxxx 30.2 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxx xxxxxx
Shared LOS: * C * * D * * * * *
ApproachDel: 15.5 30.2 xxxxxxxx xxxxxxxx
ApproachLOS: C D * *

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 #27 Old Redwood Hwy/US 101 SB Ramps

Average Delay (sec/veh): 11.1 Worst Case Level Of Service: D[32.1]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Includes data for US 101 SB Ramps and Old Redwood Hwy.

Table with columns for Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, etc.

Table for Critical Gap Module with columns for Critical Gap, FollowUpTim, and various gap metrics.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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

PM Peak Hour - Alternative 3 General Plan Buildout Conditions
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Level of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #28 Healdsburg Ave/US 101 NB Ramps

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: B[13.9]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Includes data for US 101 NB Ramps and Healdsburg Ave.

Table with columns for Volume Module, Count, Date, and various traffic volume metrics like Base Vol, Growth Adj, etc.

Table for Critical Gap Module with columns for Critical Gap, FollowUpTim, and various gap metrics.

Table for Capacity Module with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level of Service Module with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

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