

APPENDIX C

SCENARIO 3B WITH LA MEDIA ROAD

1. Scenario 3B With La Media Road Land Use Summary & Trip Generation File
2. Revised Otay Mesa 3B – 2030 Street Network Plot
3. Revised Otay Mesa CPU 2030 3B ADT Plot (With La Media Road)
4. SANDAG 2050 Regional Transportation Plan (excerpt, pg. A-17)
5. CALTRANS Ramp Meter Rate E-Mail
6. I-805 Peak Hour Volume Data
7. City Requested ADT Adjustments
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9. Buildout Recommended Lane Configurations – Alternative 3B With La Media Road
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11. Intersection LOS Worksheets

| Otay Mesa Buildout (3B) Land Use Summary | | | |
|---|--------------------------------------|---------------|-------------------|
| Land Use | Input Vehicle Trip Generation | | |
| | Type | Amount | Veh. Trips |
| Single Family | du | 4,273 | 37,570 |
| Multi-Family | du | 14,501 | 116,056 |
| Elementary school | site | 7 | 8,295 |
| Junior College | student | 5,000 | 9,095 |
| Senior High School | student | 4,800 | 8,230 |
| *IBT - Office | ksf | 2,771 | 39,103 |
| *L-R Office | ksf | 362 | 5,760 |
| *Heavy Industry | ksf | 8,458 | 34,962 |
| *IBT- Industrial Park | ksf | 8,034 | 64,283 |
| *IBT - Business Park | ksf | 5,356 | 87,819 |
| *Industrial Park | ksf | 6,020 | 97,463 |
| *Light Industry LGR IP | ksf | 12,685 | 101,497 |
| *IBT - Manufacturing | ksf | 2,678 | 10,823 |
| Commercial Airport | Flt | 682 | 1,368 |
| ✓ Community Commercial | ksf | 3,848 | 269,768 |
| ✓ Neighborhood Commercial | ksf | 69 | 8,295 |
| Gas Station w/fdmt | pump | 27 | 6,710 |
| * IBT- Warehouse | ksf | 8,034 | 40,060 |
| Truck Storage | acre | 30 | 920 |
| Warehouse or Storage | ksf | 63 | 315 |
| Active Park | acre | 166 | 7,284 |
| Cross Border Facility (CBF) | Passenger | 17,225 | 31,205 |
| Lodging - Hotel (BRWN FLD & CBF) | room | 570 | 5,693 |
| Air & Space Museum (BRWN FLD) | | 360 | 732 |
| Restaurant (BRWN FLD) | | 30 | 12,000 |
| Park & Ride (BRWN FLD) | Site | 1 | 297 |
| Solar Field (BRWN FLD) | | 67 | 5 |
| Communication or Utility | acre | 6 | 18 |
| OMPOE in/out Laden | truck | 2,000 | 8,096 |
| OMPOE in/out unladen | truck | 4,000 | 16,192 |
| Church | site | 5 | 205 |
| Police or Fire Station | site | 11 | 225 |
| Other Health Care | ksf | 293 | 14,681 |
| Grand Total: | | | 1,045,025 |

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* Industrial Square footage total of 54,461,000

✓ Commercial square footage total of 3,917,000

| Zone | Code | Name | Land Use | Type | Amount | Person | Vehicle |
|------|------|-----------------------------|----------|-------|--------|--------|---------|
| 4429 | 101 | SINGLE FAMILY | | du | 500.0 | 10080. | 7034. |
| 4429 | 4112 | RIGHT-OF-WAY | | acre | 62.0 | 0. | 0. |
| 4429 | 7601 | ACTIVE PARK | | acre | 5.0 | 400. | 263. |
| 4429 | 9101 | INACTIVE USE | | acre | 249.7 | 0. | 0. |
| 4429 | 9710 | MULTI-FAMILY (UNDER2000/AC) | | du | 670.0 | 9346. | 6563. |
| 4429 | | TOTAL | | | | 19826. | 13860. |
| 4431 | 6102 | CHURCH | | acre | 5.0 | 267. | 204. |
| 4431 | 7601 | ACTIVE PARK | | acre | 11.0 | 723. | 487. |
| 4431 | 9711 | GAS STATION w/FPMT (RUMB) | | buimp | 12.0 | 7466. | 1790. |
| 4431 | 9719 | OTHER HEALTH CARE (KSF) | | ksf | 292.7 | 19786. | 14681. |
| 4431 | | TOTAL | | | | 23254. | 17158. |
| 4443 | 101 | SINGLE FAMILY | | du | 1069.0 | 13469. | 9399. |
| 4443 | 4112 | RIGHT-OF-WAY | | acre | 47.4 | 0. | 0. |
| 4443 | 7601 | ACTIVE PARK | | acre | 5.3 | 353. | 217. |
| 4443 | 9101 | INACTIVE USE | | acre | 263.2 | 0. | 0. |
| 4443 | 9710 | MULTI-FAMILY (UNDER2000/AC) | | du | 330.0 | 3767. | 2641. |
| 4443 | | TOTAL | | | | 17584. | 12273. |
| 4450 | 4112 | RIGHT-OF-WAY | | acre | 14.6 | 0. | 0. |
| 4450 | 9101 | INACTIVE USE | | acre | 187.3 | 0. | 0. |
| 4450 | | TOTAL | | | | 0. | 0. |
| 4460 | 9713 | LIGHT INDUSTRY LRG TP (KSF) | | ksf | 810.9 | 8226. | 6648. |
| 4460 | | TOTAL | | | | 8226. | 6648. |
| 4463 | 4112 | RIGHT-OF-WAY | | acre | 15.8 | 0. | 0. |
| 4463 | 9101 | INACTIVE USE | | acre | 168.4 | 0. | 0. |
| 4463 | | TOTAL | | | | 0. | 0. |
| 4464 | 4112 | RIGHT-OF-WAY | | acre | 24.4 | 0. | 0. |
| 4464 | 9733 | COMMUNITY COMMERCIAL (KSF) | | ksf | 770.9 | 77088. | 54542. |
| 4464 | | TOTAL | | | | 77088. | 54542. |
| 4467 | 101 | SINGLE FAMILY | | du | 357.0 | 4676. | 3403. |
| 4467 | 4112 | RIGHT-OF-WAY | | acre | 75.4 | 0. | 0. |
| 4467 | 7601 | ACTIVE PARK | | acre | 7.0 | 466. | 307. |
| 4467 | 9101 | INACTIVE USE | | acre | 112.7 | 0. | 0. |
| 4467 | 9710 | MULTI-FAMILY (UNDER2000/AC) | | du | 216.0 | 2462. | 1729. |
| 4467 | | TOTAL | | | | 7603. | 5438. |
| 4472 | 4112 | RIGHT-OF-WAY | | acre | 40.0 | 0. | 0. |
| 4472 | 9101 | INACTIVE USE | | acre | 238.3 | 0. | 0. |
| 4472 | 9715 | LIGHT INDUSTRY LRG IP (KSF) | | ksf | 725.0 | 7177. | 5801. |

| Zone | Code | Name | Land Use | Type | Amount | Person | Vehicle |
|------|------|---------------------------------|----------|------|--------|--------|---------|
| 4472 | 4717 | INDUSTRIAL PARK (KSF) | | ksf | 777.0 | 15340. | 12749. |
| 4472 | 9725 | ALTERNATIVE MUSEUM (MUSEUM - D) | | ksf | 360.0 | 1080. | 732. |

| | | | | | | |
|------|------|-------------------------------|------|--------|--------|--------|
| 4472 | 9770 | SOLAR FIELD (GRWN FLD) | acre | 66.5 | 7. | 5. |
| 4472 | | TOTAL | | | 23804. | 19277. |
| 4479 | 4112 | RIGHT-OF-WAY | acre | 60.5 | 0. | 0. |
| 4479 | 9715 | LIGHT INDUSTRY LRG BLD(KSF) | ksf | 1960.2 | 19406. | 15684. |
| 4479 | 9734 | HEAVY INDUSTRY (KSF) | ksf | 1960.2 | 9501. | 8103. |
| 4479 | | TOTAL | | | 29207. | 23787. |
| 4496 | 4112 | RIGHT-OF-WAY | acre | 6.4 | 0. | 0. |
| 4496 | 9101 | INACTIVE USE | acre | 54.7 | 0. | 0. |
| 4496 | 9710 | MULTI-FAMILY (UNDER2000/AC) | du | 1625.0 | 11582. | 8131. |
| 4496 | 9741 | NEIGHBORHOOD COMMERCIAL (KSF) | ksf | 33.2 | 5630. | 3583. |
| 4496 | | TOTAL | | | 17212. | 12113. |
| 4497 | 4112 | RIGHT-OF-WAY | acre | 16.0 | 0. | 0. |
| 4497 | 9101 | INACTIVE USE | acre | 67.0 | 0. | 0. |
| 4497 | 9715 | LIGHT INDUSTRY LRG BLD(KSF) | ksf | 1916.6 | 18975. | 15335. |
| 4497 | | TOTAL | | | 18975. | 15335. |
| 4499 | 101 | SINGLE FAMILY | du | 173.0 | 1550. | 1081. |
| 4499 | 4112 | RIGHT-OF-WAY | acre | 54.9 | 0. | 0. |
| 4499 | 7601 | ACTIVE PARK | acre | 4.9 | 326. | 215. |
| 4499 | 9101 | INACTIVE USE | acre | 32.9 | 0. | 0. |
| 4499 | 9710 | MULTI-FAMILY (UNDER2000/AC) | du | 630.0 | 7182. | 5042. |
| 4499 | 9714 | WAREHOUSING OR STORAGE (KSF) | ksf | 53.2 | 385. | 315. |
| 4499 | | TOTAL | | | 9443. | 6653. |
| 4505 | 4112 | RIGHT-OF-WAY | acre | 31.0 | 0. | 0. |
| 4505 | 6806 | ELEMENTARY SCHOOL | site | 1.0 | 2119. | 1183. |
| 4505 | 7601 | ACTIVE PARK | acre | 15.0 | 999. | 657. |
| 4505 | 9101 | INACTIVE USE | acre | 21.0 | 0. | 0. |
| 4505 | 9710 | MULTI-FAMILY (UNDER2000/AC) | du | 1576.0 | 17989. | 17629. |
| 4505 | | TOTAL | | | 21107. | 14472. |
| 4511 | 4112 | RIGHT-OF-WAY | acre | 3.7 | 0. | 0. |
| 4511 | 6806 | ELEMENTARY SCHOOL | acre | 2.0 | 4237. | 2370. |
| 4511 | 9733 | COMMUNITY COMMERCIAL (KSF) | ksf | 234.7 | 73470. | 15606. |
| 4511 | | TOTAL | | | 27707. | 18976. |
| 4517 | 101 | SINGLE FAMILY | du | 425.0 | 5481. | 3825. |
| 4517 | 4112 | RIGHT-OF-WAY | acre | 78.1 | 0. | 0. |
| 4517 | 9101 | INACTIVE USE | acre | 64.4 | 0. | 0. |
| 4517 | | TOTAL | | | 5481. | 3825. |
| 4520 | 4112 | RIGHT-OF-WAY | acre | 76.8 | 0. | 0. |
| 4520 | 9733 | COMMUNITY COMMERCIAL (KSF) | ksf | 326.7 | 32670. | 23115. |
| 4520 | | TOTAL | | | 32670. | 23115. |
| 4521 | 4112 | RIGHT-OF-WAY | acre | 10.0 | 0. | 0. |
| 4521 | 9733 | COMMUNITY COMMERCIAL (KSF) | acre | 271.7 | 27168. | 19277. |
| 4521 | | TOTAL | | | 27168. | 19277. |
| 4522 | 4112 | RIGHT-OF-WAY | acre | 16.7 | 0. | 0. |
| 4522 | 9101 | INACTIVE USE | acre | 24.7 | 0. | 0. |
| 4522 | 9733 | JOB WAREHOUSE (KSF) | ksf | 161.6 | 986. | 806. |
| 4522 | 9746 | JOB-BUSINESS PARK (KSF) | ksf | 107.7 | 2154. | 1796. |
| 4522 | 9737 | JOB-INDUSTRIAL PARK (KSF) | ksf | 151.6 | 1600. | 1293. |

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| zone | code | Name | Land Use | Type | Amount | Trips | |
|------|------|------------------------------|----------|------|--------|--------|---------|
| | | | | | | Person | Vehicle |
| 4522 | 9738 | 1BT-MANUFACTURING (KSF) | | ksf | 53.9 | 269. | 218. |
| 4522 | 9747 | 1BT-OFFICE(KSF-53.9;ZN 4522) | | ksf | 53.9 | 1373. | 1053. |
| 4522 | | TOTAL | | | | 1642. | 1271. |
| 4524 | 4112 | RIGHT-OF-WAY | | acre | 20.9 | 0. | 0. |
| 4524 | 9735 | 1BT-WAREHOUSE (KSF) | | ksf | 379.4 | 2315. | 1892. |
| 4524 | 9736 | 1BT-BUSINESS PARK(KSF) | | ksf | 252.9 | 5050. | 4147. |
| 4524 | 9737 | 1BT INDUSTRIAL PARK(KSF) | | ksf | 379.4 | 3756. | 3036. |
| 4524 | 9738 | 1BT-MANUFACTURING (KSF) | | ksf | 126.5 | 632. | 511. |
| 4524 | 9749 | 1BT-OFFICE(KSF-126;ZN 4524) | | ksf | 126.5 | 2618. | 2007. |
| 4524 | | TOTAL | | | | 14380. | 11593. |
| 4525 | 4112 | RIGHT-OF-WAY | | acre | 20.0 | 0. | 0. |
| 4525 | 9735 | 1BT-WAREHOUSE (KSF) | | ksf | 370.5 | 2260. | 1847. |
| 4525 | 9736 | 1BT-BUSINESS PARK(KSF) | | ksf | 247.0 | 4940. | 4049. |
| 4525 | 9737 | 1BT INDUSTRIAL PARK(KSF) | | ksf | 370.5 | 3668. | 2964. |
| 4525 | 9738 | 1BT MANUFACTURING (KSF) | | ksf | 123.5 | 617. | 499. |
| 4525 | 9750 | 1BT-OFFICE(KSF-123;ZN 4525) | | ksf | 123.5 | 7569. | 5969. |
| 4525 | | TOTAL | | | | 14053. | 11329. |
| 4526 | 101 | SINGLE FAMILY | | du | 75.0 | 945. | 659. |
| 4526 | 4112 | RIGHT-OF-WAY | | acre | 14.6 | 0. | 0. |
| 4526 | 9101 | INACTIVE USE | | acre | 45.0 | 0. | 0. |
| 4526 | 9710 | MULTI FAMILY(UNDER200U/AC) | | du | 340.0 | 3876. | 2721. |
| 4526 | 9733 | COMMUNITY COMMERCIAL (KSF) | | ksf | 248.3 | 24829. | 17567. |
| 4526 | | TOTAL | | | | 29650. | 20948. |
| 4527 | 4112 | RIGHT-OF-WAY | | acre | 20.5 | 0. | 0. |
| 4527 | 9735 | 1BT-WAREHOUSE (KSF) | | ksf | 423.4 | 2583. | 2111. |
| 4527 | 9736 | 1BT-BUSINESS PARK(KSF) | | ksf | 287.3 | 5645. | 4625. |
| 4527 | 9737 | 1BT-INDUSTRIAL PARK(KSF) | | ksf | 423.4 | 4102. | 3388. |
| 4527 | 9738 | 1BT-MANUFACTURING (KSF) | | ksf | 141.1 | 705. | 570. |
| 4527 | 9751 | 1BT-OFFICE(KSF-141;ZN 4527) | | ksf | 141.1 | 2837. | 2174. |
| 4527 | | TOTAL | | | | 15962. | 12871. |
| 4528 | 4112 | RIGHT-OF-WAY | | acre | 16.7 | 0. | 0. |
| 4528 | 9717 | INDUSTRIAL PARK(KSF) | | ksf | 199.6 | 3991. | 3277. |
| 4528 | 9733 | COMMUNITY COMMERCIAL (KSF) | | ksf | 478.9 | 47892. | 33885. |
| 4528 | | TOTAL | | | | 51883. | 37156. |
| 4529 | 4112 | RIGHT OF WAY | | acre | 17.0 | 0. | 0. |
| 4529 | 9735 | 1BT-WAREHOUSE (KSF) | | ksf | 128.7 | 724. | 592. |
| 4529 | 9736 | 1BT-BUSINESS PARK(KSF) | | ksf | 79.1 | 1582. | 1297. |
| 4529 | 9737 | 1BT INDUSTRIAL PARK(KSF) | | ksf | 118.7 | 1175. | 949. |
| 4529 | 9738 | 1BT-MANUFACTURING (KSF) | | ksf | 39.5 | 198. | 160. |
| 4529 | 9747 | 1BT-OFFICE(KSF-53.9;ZN 4522) | | ksf | 39.5 | 1009. | 773. |
| 4529 | | TOTAL | | | | 4687. | 3771. |
| 4530 | 4112 | RIGHT-OF-WAY | | acre | 42.2 | 0. | 0. |
| 4530 | 9717 | INDUSTRIAL PARK(KSF) | | ksf | 217.4 | 4347. | 3564. |
| 4530 | 9733 | COMMUNITY COMMERCIAL (KSF) | | ksf | 521.7 | 52157. | 36910. |
| 4530 | | TOTAL | | | | 56515. | 40474. |

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| Zone | Code | Name | Land Use | Type | Amount | Rips | |
|------|------|-------------------------------|----------|------|--------|--------|---------|
| | | | | | | Person | Vehicle |
| 4531 | 4112 | RIGHT OF WAY | | acre | 33.2 | 0. | 0. |
| 4531 | 4113 | COMMUNICATION OR UTILITY | | acre | 2.1 | 8. | 8. |
| 4531 | 9715 | LIGHT INDUSTRY LRG IP(KSF) | | ksf | 1128.0 | 11167. | 9625. |
| 4531 | 9734 | HEAVY INDUSTRY (KSF) | | ksf | 149.0 | 749. | 629. |
| 4531 | | TOTAL | | | | 11925. | 9652. |
| 4532 | 4112 | RIGHT-OF-WAY | | acre | 8.2 | 0. | 0. |
| 4532 | 9715 | LIGHT INDUSTRY LRG IP(KSF) | | ksf | 1337.1 | 13237. | 10698. |
| 4532 | | TOTAL | | | | 13237. | 10698. |
| 4545 | 4112 | RIGHT OF WAY | | acre | 23.3 | 0. | 0. |
| 4545 | 9101 | INACTIVE USE | | acre | 87.3 | 0. | 0. |
| 4545 | 9710 | MULTI-FAMILY (UNDER20DU/AC) | | du | 381.0 | 4343. | 3649. |
| 4545 | 9717 | INDUSTRIAL PARK (KSF) | | ksf | 776.2 | 15564. | 12759. |
| 4545 | 9733 | COMMUNITY COMMERCIAL (KSF) | | ksf | 17.0 | 1693. | 1202. |
| 4545 | | TOTAL | | | | 21606. | 17618. |
| 4546 | 101 | SINGLE FAMILY | | du | 59.0 | 743. | 519. |
| 4546 | 4112 | RIGHT-OF-WAY | | acre | 7.9 | 0. | 0. |
| 4546 | 4113 | COMMUNICATION OR UTILITY | | acre | 3.9 | 16. | 12. |
| 4546 | 9101 | INACTIVE USE | | acre | 134.1 | 0. | 0. |
| 4546 | 9710 | MULTI-FAMILY (UNDER20DU/AC) | | du | 40.0 | 456. | 320. |
| 4546 | | TOTAL | | | | 1215. | 851. |
| 4547 | 4112 | RIGHT-OF-WAY | | acre | 16.6 | 0. | 0. |
| 4547 | 7601 | ACTIVE PARK | | acre | 8.1 | 539. | 353. |
| 4547 | 9710 | MULTI-FAMILY (UNDER20DU/AC) | | du | 111.0 | 12665. | 8892. |
| 4547 | 9717 | INDUSTRIAL PARK (KSF) | | ksf | 951.9 | 18838. | 16263. |
| 4547 | 9733 | COMMUNITY COMMERCIAL (KSF) | | ksf | 13.2 | 1368. | 1110. |
| 4547 | | TOTAL | | | | 34611. | 26619. |
| 4548 | 4112 | RIGHT-OF-WAY | | acre | 18.2 | 0. | 0. |
| 4548 | 9717 | INDUSTRIAL PARK (KSF) | | ksf | 1417.9 | 28358. | 23247. |
| 4548 | | TOTAL | | | | 28358. | 23247. |
| 4549 | 4112 | RIGHT OF WAY | | acre | 18.2 | 0. | 0. |
| 4549 | 9101 | INACTIVE USE | | acre | 5.4 | 0. | 0. |
| 4549 | 9705 | JUNIOR COLLEGE (STUDENTS) | | stu | 5000.0 | 11500. | 9095. |
| 4549 | 9717 | INDUSTRIAL PARK (KSF) | | ksf | 179.2 | 3585. | 2939. |
| 4549 | | TOTAL | | | | 15085. | 12033. |
| 4550 | 4112 | RIGHT-OF-WAY | | acre | 9.3 | 0. | 0. |
| 4550 | 9735 | 1BT-WAREHOUSE (KSF) | | ksf | 200.1 | 1171. | 998. |
| 4550 | 9736 | 1BT-BUSINESS PARK (KSF) | | ksf | 133.4 | 2668. | 2158. |
| 4550 | 9737 | 1BT-INDUSTRIAL PARK (KSF) | | ksf | 200.1 | 1981. | 1601. |
| 4550 | 9738 | 1BT-MANUFACTURING (KSF) | | ksf | 66.7 | 334. | 270. |
| 4550 | 9746 | 1BT-OFFICE (KSF-156; 2N-4550) | | ksf | 66.7 | 1614. | 1237. |
| 4550 | | TOTAL | | | | 7819. | 6294. |
| 4551 | 4112 | RIGHT OF WAY | | acre | 45.0 | 0. | 0. |
| 4551 | 9735 | 1BT-WAREHOUSE (KSF) | | ksf | 502.3 | 3064. | 2505. |
| 4551 | 9736 | 1BT-BUSINESS PARK (KSF) | | ksf | 134.9 | 6698. | 5491. |
| 4551 | 9737 | 1BT-INDUSTRIAL PARK (KSF) | | ksf | 502.3 | 4973. | 4019. |
| 4551 | 9738 | 1BT-MANUFACTURING (KSF) | | ksf | 167.4 | 837. | 677. |
| 4551 | 9739 | 1BT-OFFICE (KSF-156; 2N-4551) | | ksf | 167.4 | 5222. | 2417. |
| 4551 | | TOTAL | | | | 12804. | 15168. |
| 4558 | 101 | SINGLE FAMILY | | du | 127.0 | 1575. | 1099. |
| 4558 | 4112 | RIGHT OF WAY | | acre | 3.6 | 0. | 0. |
| 4558 | 6806 | ELEMENTARY SCHOOL | | site | 1.0 | 2139. | 1183. |

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| | | | | | | |
|------|------|-------------------------------|------|--------|--------|--------|
| 4558 | 7601 | ACTIVE PARK | acre | 5.7 | 346. | 228. |
| 4558 | 9101 | INACTIVE USE | acre | 108.3 | 0. | 0. |
| 4558 | 9710 | MULTI-FAMILY(UNDER200U/AC) | du | 590.0 | 6726. | 4727. |
| 4558 | | TOTAL | | | 10766. | 7734. |
| 4560 | 4112 | RIGHT-OF-WAY | acre | 15.2 | 0. | 0. |
| 4560 | 6806 | ELEMENTARY SCHOOL | site | 1.0 | 7119. | 1153. |
| 4560 | 7601 | ACTIVE PARK | acre | 24.2 | 1612. | 1061. |
| 4560 | 9101 | INACTIVE USE | acre | 145.5 | 0. | 0. |
| 4560 | 9710 | MULTI-FAMILY(UNDER200U/AC) | du | 3754.0 | 42796. | 30043. |
| 4560 | | TOTAL | | | 46126. | 37291. |
| 4561 | 101 | SINGLE FAMILY | du | 765.0 | 9639. | 6776. |
| 4561 | 4112 | RIGHT-OF-WAY | acre | 3.8 | 0. | 0. |
| 4561 | 6806 | ELEMENTARY SCHOOL | site | 2.0 | 4237. | 2370. |
| 4561 | 7601 | ACTIVE PARK | acre | 70.7 | 1379. | 907. |
| 4561 | 9101 | INACTIVE USE | acre | 166.0 | 0. | 0. |
| 4561 | 9707 | IND OFF(<SF=98;ZN=4561,4575) | ksf | 98.0 | 2156. | 1653. |

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OTAY VESA Final 2030 3B (L3 FAR)
trip generation and land use by zone

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| Zone | Code | Name | Type | Amount | Trips | |
|------|------|------------------------------|------|--------|--------|---------|
| | | | | | Person | Vehicle |
| 4561 | 9710 | MULTI-FAMILY(UNDER200U/AC) | du | 2075.0 | 23085. | 16207. |
| 4561 | 9753 | COMMUNITY COMMERCIAL (KSF) | ksf | 77.0 | 4704. | 3379. |
| 4561 | | TOTAL | | | 46201. | 32197. |
| 4562 | 4112 | RIGHT-OF-WAY | acre | 13.4 | 0. | 0. |
| 4562 | 7601 | ACTIVE PARK | acre | 39.4 | 2624. | 1727. |
| 4562 | 9101 | INACTIVE USE | acre | 51.3 | 0. | 0. |
| 4562 | 9717 | INDUSTRIAL PARK(<SF) | ksf | 1178.9 | 23579. | 19379. |
| 4562 | 9725 | SENIOR HIGH SCHOOL(STUDENTS) | stu | 2400.0 | 9120. | 4135. |
| 4562 | | TOTAL | | | 35323. | 25172. |
| 4563 | 4112 | RIGHT-OF-WAY | acre | 4.9 | 0. | 0. |
| 4563 | 9735 | IBT-WAREHOUSE (KSF) | ksf | 1001.5 | 6109. | 4993. |
| 4563 | 9736 | IBT-BUSINESS PARK(KSF) | ksf | 667.6 | 13353. | 10946. |
| 4563 | 9737 | IBT-INDUSTRIAL PARK(<SF) | ksf | 1001.5 | 9915. | 8013. |
| 4563 | 9738 | IBT-MANUFACTURING (KSF) | ksf | 333.8 | 1669. | 1349. |
| 4563 | 9758 | IBT-OFFICE(KSF=333;ZN=4563) | ksf | 333.8 | 5441. | 4171. |
| 4563 | | TOTAL | | | 36487. | 29472. |
| 4564 | 4112 | RIGHT-OF-WAY | acre | 3.4 | 0. | 0. |
| 4564 | 9101 | INACTIVE USE | acre | 38.0 | 0. | 0. |
| 4564 | 9735 | IBT-WAREHOUSE (KSF) | ksf | 702.9 | 4287. | 3504. |
| 4564 | 9736 | IBT-BUSINESS PARK(KSF) | ksf | 468.6 | 9372. | 7683. |
| 4564 | 9737 | IBT-INDUSTRIAL PARK(<SF) | ksf | 702.9 | 6958. | 5624. |
| 4564 | 9738 | IBT-MANUFACTURING (KSF) | ksf | 234.3 | 1171. | 947. |
| 4564 | 9754 | IBT-OFFICE(KSF=234;ZN=4564) | ksf | 234.3 | 4170. | 3196. |
| 4564 | | TOTAL | | | 25959. | 20954. |
| 4565 | 4112 | RIGHT-OF-WAY | acre | 19.5 | 0. | 0. |
| 4565 | 9735 | IBT-WAREHOUSE (KSF) | ksf | 1035.5 | 6317. | 5163. |
| 4565 | 9736 | IBT-BUSINESS PARK(<SF) | ksf | 690.3 | 13807. | 11318. |
| 4565 | 9737 | IBT-INDUSTRIAL PARK(<SF) | ksf | 1035.5 | 10252. | 8285. |
| 4565 | 9738 | IBT-MANUFACTURING (KSF) | ksf | 345.2 | 1726. | 1395. |
| 4565 | 9750 | IBT-OFFICE(<SF=345;ZN=4565) | ksf | 345.2 | 5592. | 4286. |
| 4565 | | TOTAL | | | 37692. | 30447. |

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| | | | | | | |
|------|------|------------------------------|------|-------|--------|--------|
| 4566 | 4112 | RIGHT-OF-WAY | acre | 15.2 | 0. | 0. |
| 4566 | 9735 | IBT-WAREHOUSE (KSF) | ksf | 844.2 | 5150. | 4209. |
| 4566 | 9736 | IBT-BUSINESS PARK(KSF) | ksf | 567.8 | 11256. | 9227. |
| 4566 | 9737 | IBT-INDUSTRIAL PARK(KSF) | ksf | 844.2 | 8358. | 6754. |
| 4566 | 9738 | IBT-MANUFACTURING (KSF) | ksf | 282.4 | 1407. | 1137. |
| 4566 | 9735 | IBT-OFFICE(KSF 282.2ZM 4566) | ksf | 282.4 | 4784. | 3667. |
| 4566 | | TOTAL | | | 30954. | 24995. |
| 4567 | 4112 | RIGHT-OF-WAY | acre | 9.0 | 0. | 0. |
| 4567 | 9733 | COMMUNITY COMMERCIAL (KSF) | ksf | 95.4 | 5540. | 6750. |
| 4567 | 9735 | IBT WAREHOUSE (KSF) | ksf | 708.9 | 1274. | 1042. |
| 4567 | 9736 | IBT-BUSINESS PARK(KSF) | ksf | 139.3 | 2783. | 2283. |
| 4567 | 9737 | IBT-INDUSTRIAL PARK(KSF) | ksf | 208.9 | 2068. | 1671. |
| 4567 | 9738 | IBT-MANUFACTURING (KSF) | ksf | 59.6 | 348. | 281. |
| 4567 | 9746 | IBT-OFFICE(KSF-66.7;ZM 4550) | ksf | 69.6 | 1685. | 1292. |
| 4567 | | TOTAL | | | 17700. | 13319. |

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9 STAY MESA Final 2030 30 (.5 FAR) page 6
 this generation and land use by zone

| Zone | Code | Name | Land Use | Type | Amount | -----Trips----- Person vehicle | |
|------|------|------------------------------|----------|------|--------|-----------------------------------|--------|
| 4569 | 4112 | RIGHT-OF-WAY | | acre | 24.0 | 0. | 0. |
| 4569 | 9715 | LIGHT INDUSTRY LRG IP(KSF) | | ksf | 1986.8 | 10760. | 8696. |
| 4569 | | TOTAL | | | | 10760. | 8696. |
| 4570 | 4112 | RIGHT-OF-WAY | | acre | 11.0 | 0. | 0. |
| 4570 | 9715 | LIGHT INDUSTRY LRG IP(KSF) | | ksf | 1287.4 | 12745. | 10301. |
| 4570 | | TOTAL | | | | 12745. | 10301. |
| 4578 | 101 | SINGLE FAMILY | | du | 433.0 | 5481. | 3825. |
| 4578 | 4112 | RIGHT-OF-WAY | | acre | 3.8 | 0. | 0. |
| 4578 | 7601 | ACTIVE PARK | | acre | 13.6 | 906. | 596. |
| 4578 | 9101 | INACTIVE USE | | acre | 239.4 | 0. | 0. |
| 4578 | 9707 | L-R UF (KS-98;ZM4561,4578) | | ksf | 98.0 | 2156. | 1653. |
| 4578 | 9710 | MULTI-FAMILY(UNDER/ODD/AC) | | du | 1150.0 | 13110. | 9304. |
| 4578 | 9733 | COMMUNITY COMMERCIAL (KSF) | | ksf | 47.0 | 4704. | 3229. |
| 4578 | | TOTAL | | | | 26357. | 18606. |
| 4580 | 4112 | RIGHT-OF-WAY | | acre | 9.4 | 0. | 0. |
| 4580 | 9101 | INACTIVE USE | | acre | 5.0 | 0. | 0. |
| 4580 | 9715 | LIGHT INDUSTRY LRG IP(KSF) | | ksf | 83.0 | 827. | 664. |
| 4580 | 9733 | COMMUNITY COMMERCIAL (KSF) | | ksf | 352.7 | 35718. | 24918. |
| 4580 | | TOTAL | | | | 36040. | 25582. |
| 4581 | 4112 | RIGHT-OF-WAY | | acre | 11.0 | 0. | 0. |
| 4581 | 9715 | LIGHT INDUSTRY LRG IP(KSF) | | ksf | 2156.4 | 21349. | 17254. |
| 4581 | | TOTAL | | | | 21349. | 17254. |
| 4584 | 4112 | RIGHT-OF-WAY | | acre | 20.0 | 0. | 0. |
| 4584 | 9715 | LIGHT INDUSTRY LRG IP(KSF) | | ksf | 65.3 | 647. | 523. |
| 4584 | 9733 | COMMUNITY COMMERCIAL (KSF) | | ksf | 158.5 | 15851. | 11715. |
| 4584 | 9735 | IBT-WAREHOUSE (KSF) | | ksf | 177.1 | 1081. | 883. |
| 4584 | 9736 | IBT-BUSINESS PARK(KSF) | | ksf | 118.2 | 2162. | 1936. |
| 4584 | 9737 | IBT-INDUSTRIAL PARK(KSF) | | ksf | 177.1 | 1754. | 1417. |
| 4584 | 9738 | IBT-MANUFACTURING (KSF) | | ksf | 59.0 | 295. | 239. |
| 4584 | 9745 | IBT-OFFICE(KSF 59.0;ZM 4584) | | ksf | 59.0 | 1470. | 1127. |
| 4584 | | TOTAL | | | | 23460. | 17340. |

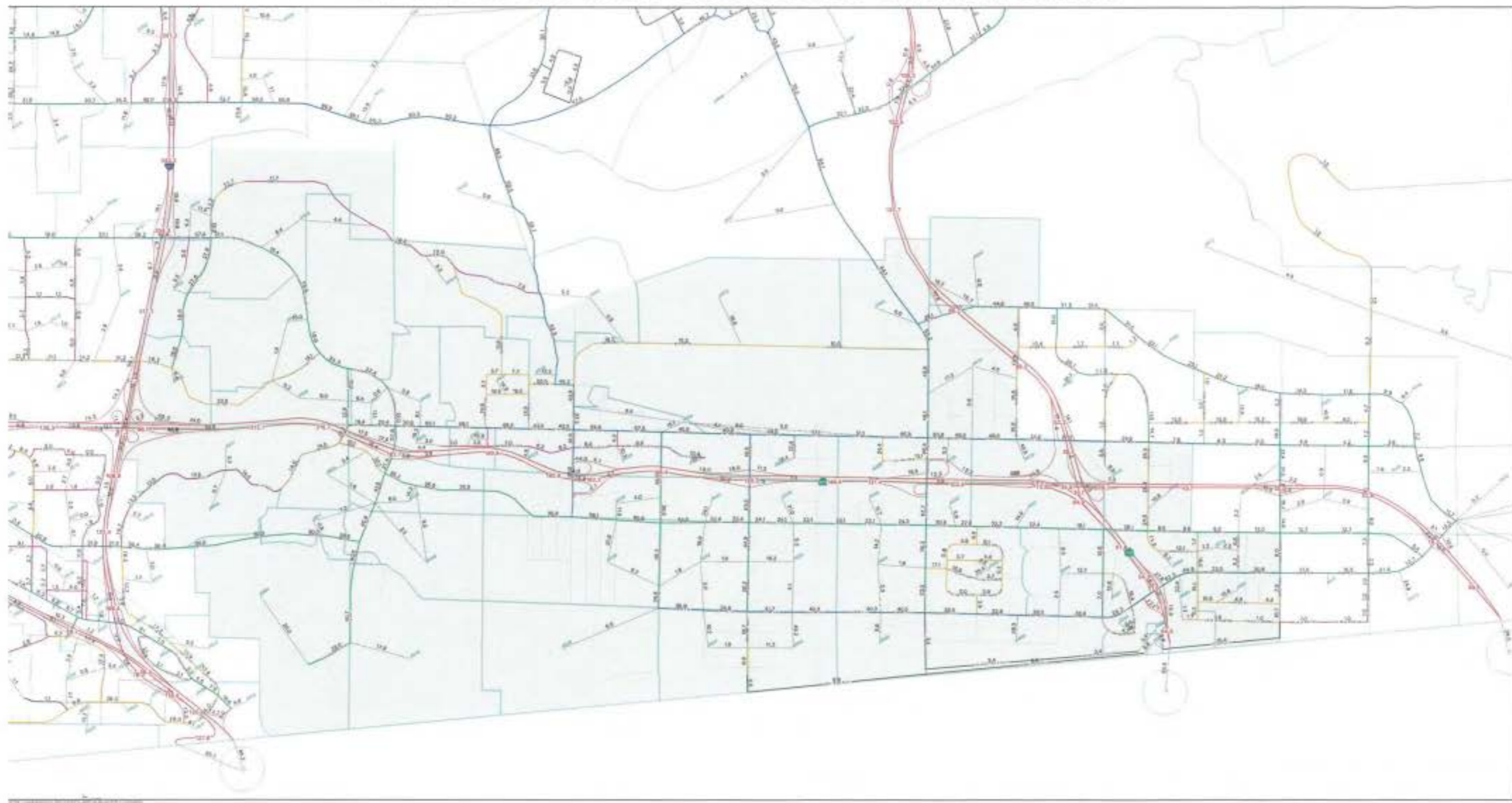
OTAY MESA Final 2030 3b (.5 PAR)
 Trip generation and land use by zone

| Zone | Code | Name | Type | Amount | Trips | |
|------|------|-------------------------------|-------|---------|--------|---------|
| | | | | | Person | Vehicle |
| 4585 | 4112 | RIGHT-OF-WAY | acre | 7.1 | 0. | 0. |
| 4586 | 9101 | INACTIVE USE | acre | 257.7 | 0. | 0. |
| 4586 | 9734 | HEAVY INDUSTRY (KSF) | kSF | 1887.7 | 9438. | 7603. |
| 4586 | | TOTAL | | | 9438. | 7603. |
| 4587 | 4112 | RIGHT-OF-WAY | acre | 10.9 | 0. | 0. |
| 4587 | 9734 | HEAVY INDUSTRY (KSF) | kSF | 3039.0 | 15195. | 12563. |
| 4587 | | TOTAL | | | 15195. | 12563. |
| 4588 | 4112 | RIGHT-OF-WAY | acre | 6.1 | 0. | 0. |
| 4588 | 9740 | CROSS BORDER FACILITY (PASS) | pass | 17225.0 | 48230. | 31203. |
| 4588 | 9741 | CROSS BORDER FAC-HOUSE (RM) | room | 300.0 | 4860. | 2096. |
| 4588 | 9742 | CROSS BORDER FAC-INDPRK(KSF) | kSF | 280.0 | 4088. | 3351. |
| 4588 | 9743 | CROSS BORDER FAC-GAS (PUMP) | pump | 12.0 | 2466. | 1790. |
| 4588 | 9744 | CROSS BORDER FAC-RETAIL(KSF) | kSF | 78.5 | 4420. | 3127. |
| 4588 | 9752 | IBT-OFFICE(KSF-270;ZN 4588) | kSF | 269.9 | 4643. | 3559. |
| 4588 | 9759 | IBT-WAREHOUSE(KSF-ZM4588) | kSF | 530.0 | 3233. | 2643. |
| 4588 | 9760 | IBT-BUSINESS PARK(KSF-4588) | kSF | 353.4 | 7068. | 5774. |
| 4588 | 9761 | IBT-INDUSTRIAL PARK(KSF-4588) | kSF | 530.0 | 5247. | 4241. |
| 4588 | 9762 | IBT-MANUFACTURING(KSF-4588) | kSF | 176.7 | 883. | 714. |
| 4588 | | TOTAL | | | 85138. | 59419. |
| 4589 | 9101 | INACTIVE USE | acre | 53.0 | 0. | 0. |
| 4589 | 9735 | IBT-WAREHOUSE (KSF) | kSF | 300.2 | 1831. | 1497. |
| 4589 | 9736 | IBT-BUSINESS PARK(KSF) | kSF | 200.2 | 4003. | 3282. |
| 4589 | 9737 | IBT-INDUSTRIAL PARK(KSF) | kSF | 300.2 | 2972. | 2402. |
| 4589 | 9738 | IBT-MANUFACTURING (KSF) | kSF | 100.1 | 500. | 404. |
| 4589 | 9742 | IBT-OFFICE(KSF-100;ZN 4589) | kSF | 100.1 | 2197. | 1680. |
| 4589 | 9771 | FIRE OR POLICE STATION | acre | 10.9 | 305. | 225. |
| 4589 | | TOTAL | | | 11804. | 9490. |
| 4590 | 4112 | RIGHT-OF-WAY | acre | 24.0 | 0. | 0. |
| 4590 | 9735 | IBT-WAREHOUSE (KSF) | kSF | 1078.1 | 6576. | 5373. |
| 4590 | 9736 | IBT-BUSINESS PARK(KSF) | kSF | 718.7 | 14375. | 11784. |
| 4590 | 9737 | IBT-INDUSTRIAL PARK(KSF) | kSF | 1078.1 | 10673. | 8626. |
| 4590 | 9738 | IBT-MANUFACTURING (KSF) | kSF | 359.4 | 1797. | 1452. |
| 4590 | 9757 | IBT-OFFICE(KSF 359;ZN 4590) | kSF | 359.4 | 5786. | 4435. |
| 4590 | | TOTAL | | | 39207. | 31672. |
| 4600 | 4001 | OFFICE IN/OUT LADEN(TRUCKS) | truck | 7000.0 | 10600. | 8096. |
| 4600 | | TOTAL | | | 10600. | 8096. |
| 4607 | 4002 | OFFICE IN/OUT UNLADEN(TRUCKS) | truck | 4000.0 | 21200. | 16192. |
| 4607 | | TOTAL | | | 21200. | 16192. |
| 4608 | 4112 | RIGHT-OF-WAY | acre | 22.0 | 0. | 0. |
| 4608 | 9101 | INACTIVE USE | acre | 44.0 | 0. | 0. |
| 4608 | 9710 | MULTI-FAMILY(UNDER20DU/AC) | du | 145.0 | 1653. | 1160. |
| 4608 | 9713 | HEAVY INDUSTRY LRG DP(KSF) | kSF | 108.5 | 1074. | 858. |
| 4608 | 9731 | NEIGHBORHOOD COMMERCIAL(KSF) | kSF | 35.9 | 6095. | 4317. |
| 4608 | 9734 | HEAVY INDUSTRY (KSF) | kSF | 1420.9 | 7101. | 5874. |
| 4608 | | TOTAL | | | 15926. | 12211. |

OTAY MESA Final 2030 3B (15 FAR)
 trip generation and land use by zone

| Zone | Code | Name | Type | Amount | -----trips----- | |
|------|------|-------------------------------|------|--------|-----------------|---------|
| | | | | | Person | Vehicle |
| 4609 | 9720 | TRUCK STORAGE (WRHSGSTRG) | acre | 30.0 | 1125. | 920. |
| 4609 | 9726 | COMMERCIAL AIRPORT (OM/FLD) | flu | 682.0 | 2124. | 1368. |
| 4609 | 9733 | COMMUNITY COMMERCIAL (KSF) | ksf | 157.9 | 18290. | 12941. |
| 4609 | 9763 | COMMERCIAL OFFICE (BRWN FLD) | ks+ | 165.9 | 3202. | 2454. |
| 4609 | 9764 | HOTEL (BRWN FLD) | four | 270.0 | 4374. | 2697. |
| 4609 | 9765 | GAS STATION (BRWN FLD) | ks+ | 3.2 | 4511. | 3130. |
| 4609 | 9766 | FAST FOOD REST (BRWN FLD) | ksf | 14.3 | 14098. | 9975. |
| 4609 | 9767 | HIGH T/O REST (BRWN FLD) | ks+ | 15.8 | 2861. | 2025. |
| 4609 | 9769 | PARK & RIDE (BRWN FLD) | acre | 0.7 | 389. | 297. |
| 4609 | | TOTAL | | | 50766. | 35806. |
| 4610 | 4117 | RIGHT OF-WAY | acre | 23.3 | 0. | 0. |
| 4610 | 9101 | INACTIVE USE | acre | 1.6 | 0. | 0. |
| 4610 | 9713 | MULTI-FAMILY (UNDER 2000/AC) | du | 110.0 | 1254. | 580. |
| 4610 | 9725 | SENIOR HIGH SCHOOL (STUDENTS) | stu | 2400.0 | 9120. | 4125. |
| 4610 | | TOTAL | | | 10374. | 4995. |
| 4611 | 7601 | ACTIVE PARK | acre | 5.8 | 386. | 254. |
| 4611 | 9101 | INACTIVE USE | acre | 23.8 | 0. | 0. |
| 4611 | 9710 | MULTI-FAMILY (UNDER 2000/AC) | du | 265.0 | 3021. | 2121. |
| 4611 | | TOTAL | | | 3407. | 2375. |

DRAFT - REVISED OTAY MESA CPU 2030 3B ADT PLOT - with La Media Connection



SANDAG Series 11
2030rc Network

Otay Mesa CPU Study

MSL 2 1992 LG
MSL 200 LG 200 LG
& with La Media connection

Legend

- Freeway
- Major
- Collector
- Local Collector
- Rural Light Collector
- Local
- Minor

#1 (Red) 2030rc Volume (1000s)

#2 (Green) 2030rc Volume (1000s)



Issued on 01/11

SANDAG is an Equal Opportunity Employer. Minorities and women are encouraged to apply.

REVISED OTAY MESA 3B - 2030 Street Network



OTAY MESA

SANDAG Series 11
2030 Revenue Constraint Network

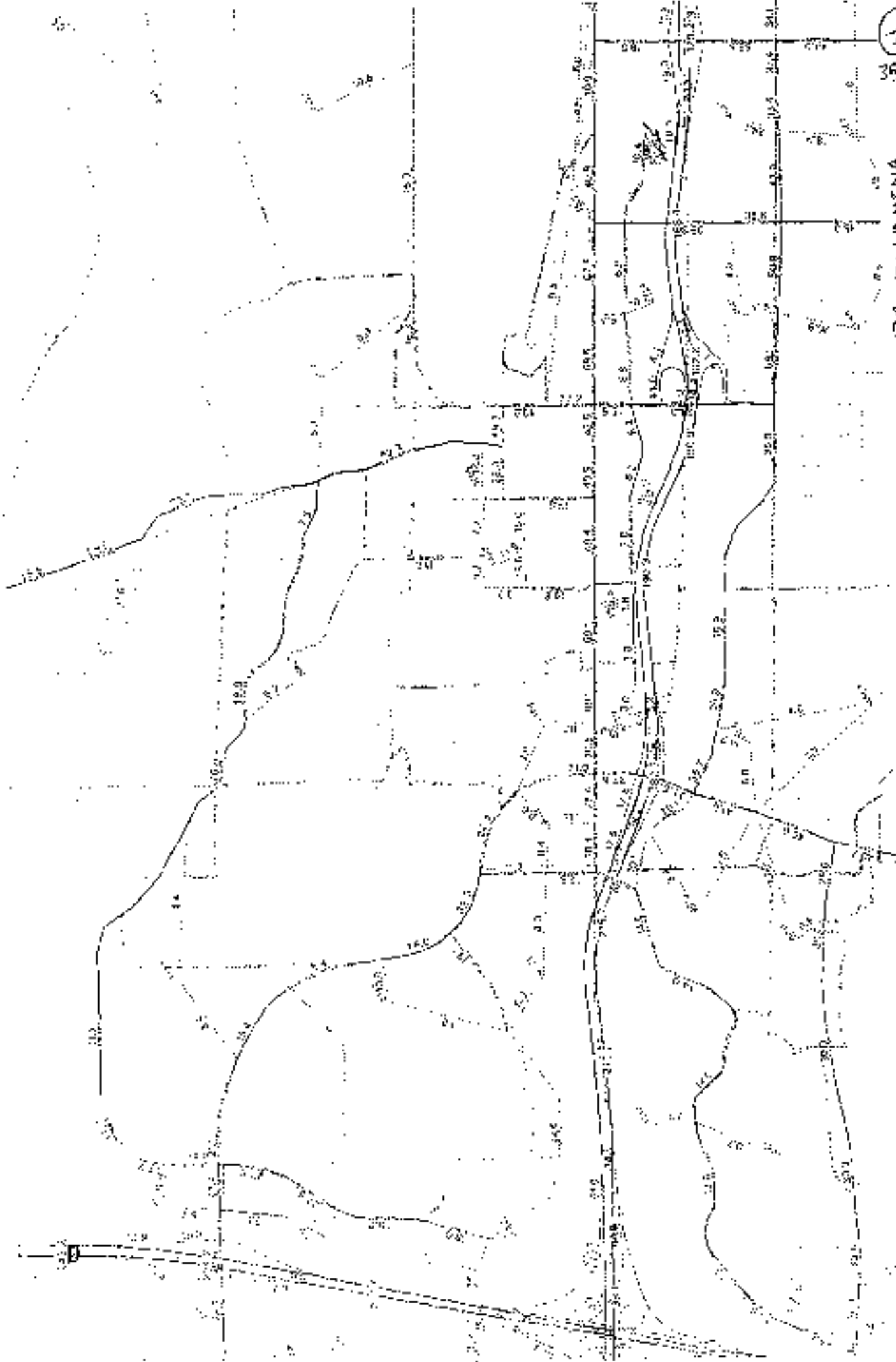
Legend

- Freeway
- Major
- Collector
- Local Collector
- Rural Collector
- Rural Light Collector
- Local
- Ramp

- Signal
- All-Way Stop
- Other



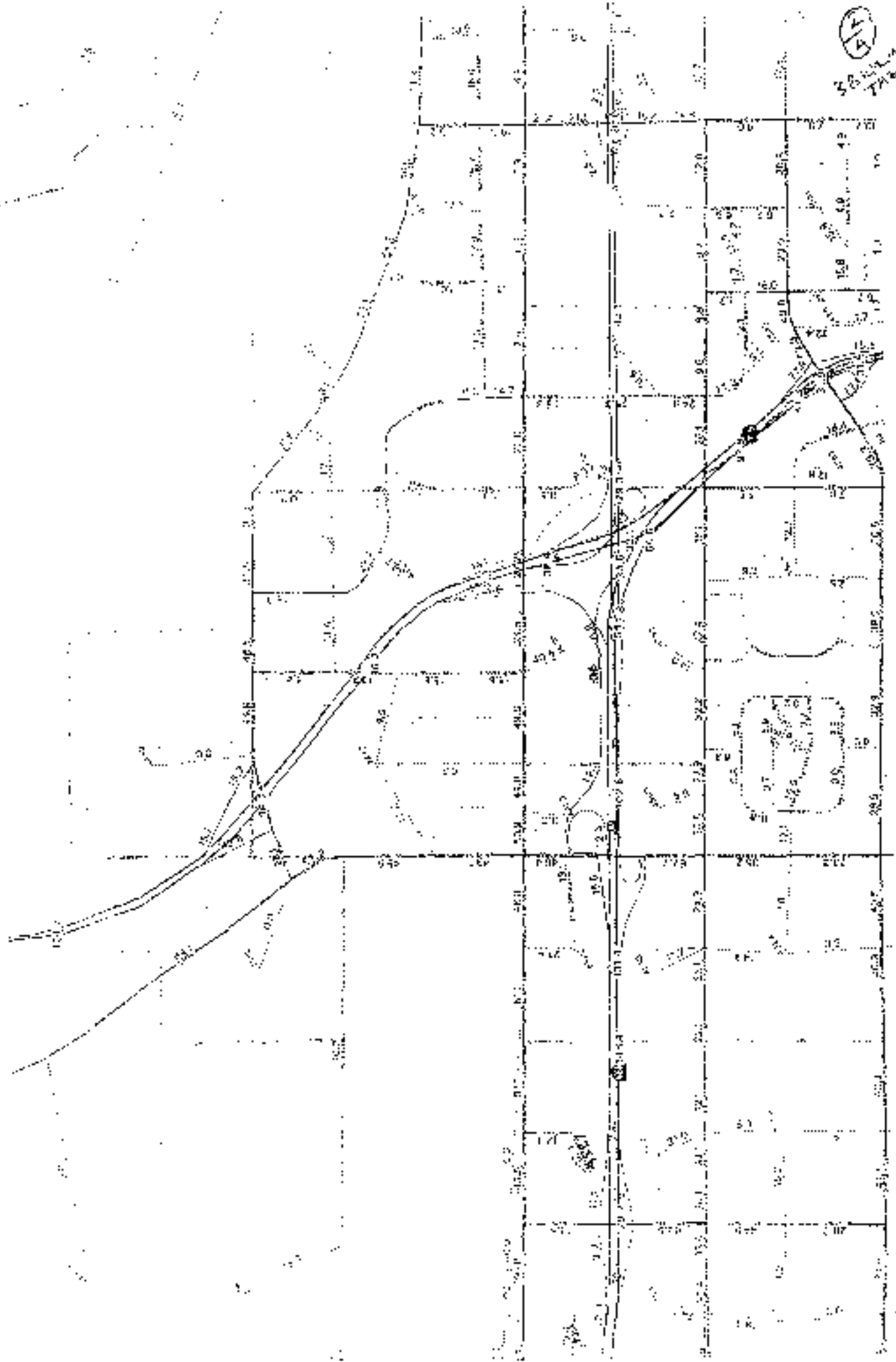
December 10, 2010



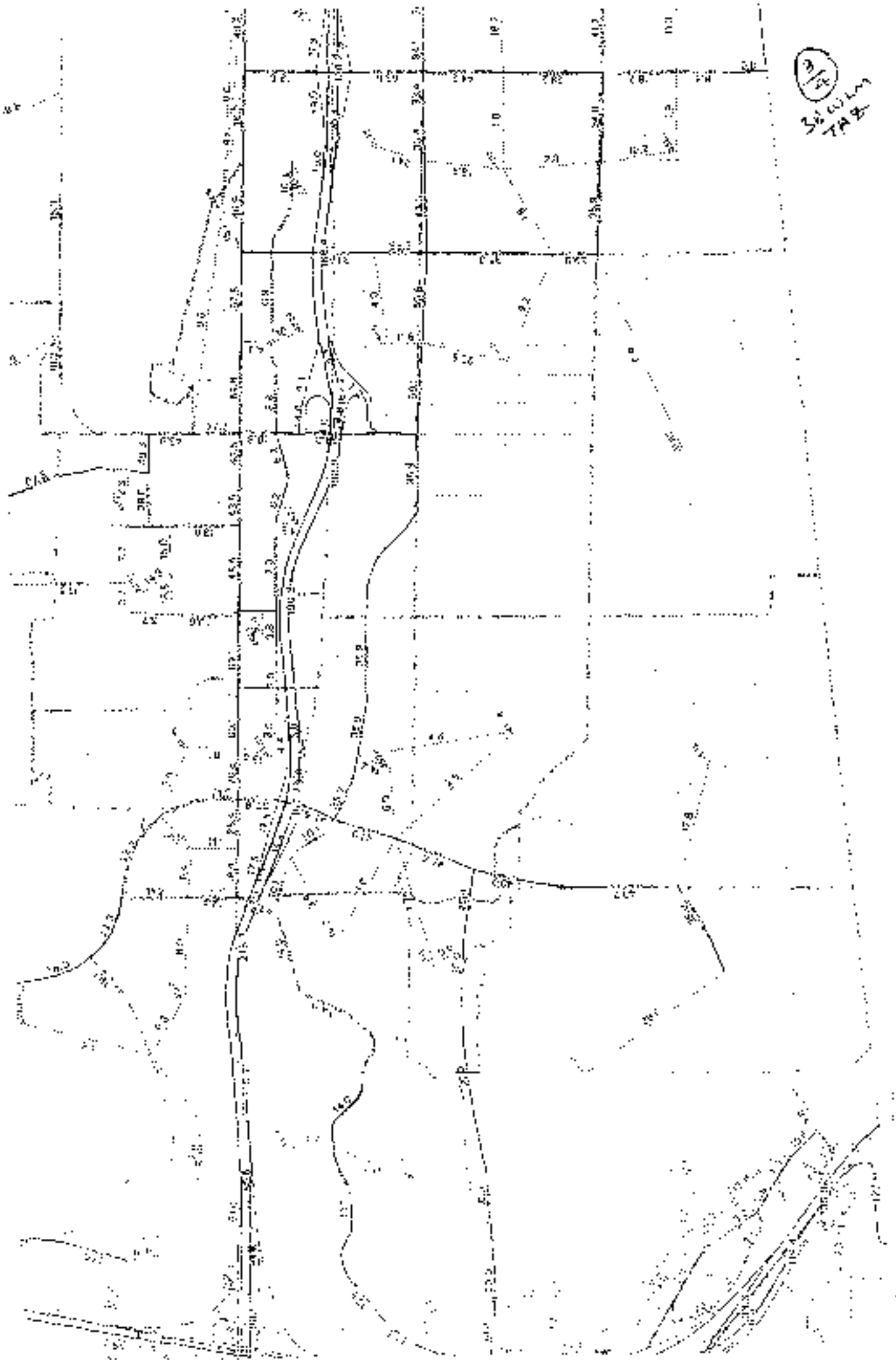
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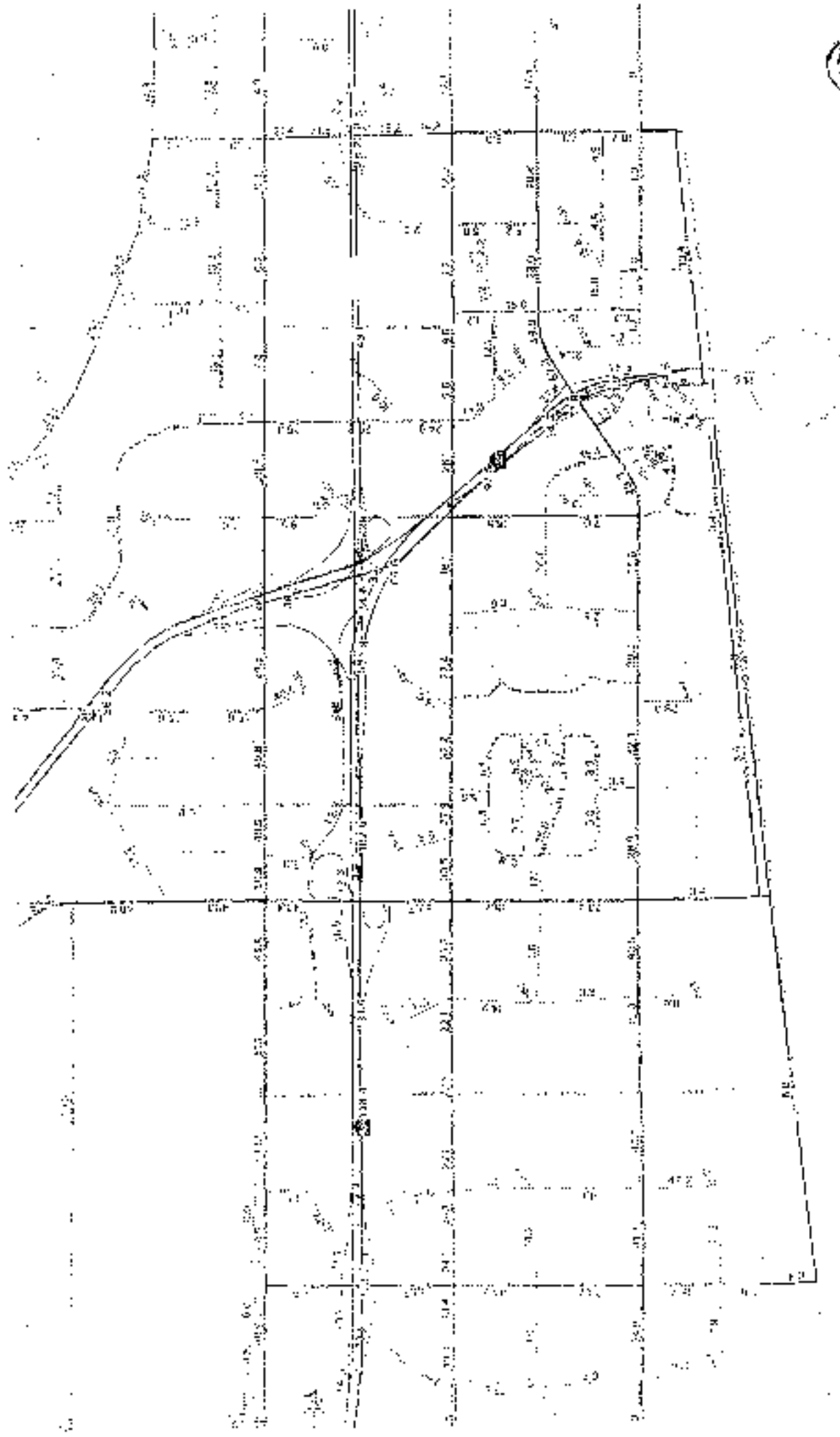


Table A.3 – Phased Highway Projects - Revenue Constrained Plan (Continued)

| Year Built By | Freeway | From | To | Existing | Improvements | (\$ Millions - 2010 Dollars) | |
|---------------|------------------|---|----------------------|---------------|--------------|------------------------------|-----------------|
| | | | | | | Cost | Cumulative Cost |
| 2020 | SR 196 SR 125 | South to East (Freeway Connector) | | | | \$ 175 | \$ 7,362 |
| 2030 | I-5 | Mar | Manhasset Ave | SR-240W | TC-40V | \$ 600 | \$ 7,962 |
| 2030 | I-5 | Palmer St | SR-5 | SR | SR-24V | \$ 200 | \$ 8,162 |
| 2037 | I-5 | 1st St Mudge | SR-15 | SR-41 (2.00M) | SR-14 (4M) | \$ 40 | \$ 8,202 |
| 2030 | I-5 | Wardlaw Ave | Palmer Airport Rd | SR-41 (4M) | TC-40V | \$ 1,250 | \$ 9,452 |
| 2030 | I-5 (N) 4a | West to East (Freeway Connector) | | | | \$ 60 | \$ 9,512 |
| 2030 | I-5/SR 50 | South to East (Freeway Connector) | | | | \$ 170 | \$ 9,682 |
| 2030 | I-5/SR 118 | East to South and North to West (I-5/50 Connector) | | | | \$ 105 | \$ 9,787 |
| 2030 | SR 808 | SR 808 | Palmer St | SR | SR-40M | \$ 150 | \$ 9,937 |
| 2030 | SR 8 | SR 15 | Mud Valley | SR | SR-40V | \$ 280 | \$ 10,217 |
| 2030 | I-605 | Mission Valley Viaduct | SR 57 | SR-10P | SR-10P (4M) | \$ 500 | \$ 10,717 |
| 2030 | SR 57 | Mud Valley St | SR 15 | SR-40V | TC | \$ 570 | \$ 11,287 |
| 2030 | SR 947 SR 125 | West to North (Freeway Connector) | | | | \$ 180 | \$ 11,467 |
| 2030 | SR 125 | SR 15 | I-2 | SR | TC | \$ 215 | \$ 11,682 |
| 2030 | SR 240 | Orange County | I-5 | I-5 | TC | \$ 78 | \$ 11,760 |
| 2030 | I-5 | Palmer Airport Rd | SR 15 | SR-40 (4M) | SR-40V | \$ 1,000 | \$ 12,760 |
| 2030 | I-5 | SR 77 | Wardlaw Blvd | SR | SR-40V | \$ 490 | \$ 13,250 |
| 2035 | I-5 (SR 118) | South to West and East to North (I-5/118 Connector) | | | | \$ 80 | \$ 13,330 |
| 2030 | SR 77 | SR 15 | I-5 | SR | SR-40V | \$ 225 | \$ 13,555 |
| 2040 | I-5/SR 77 | East to West and West to North (I-5/77 Connector) | | | | \$ 175 | \$ 13,730 |
| 2040 | I-5/SR 8 | West to East and East to South (I-5/8 Connector) | | | | \$ 170 | \$ 13,900 |
| 2040 | I-5/SR 77 | South to East (Freeway Connector) | | | | \$ 60 | \$ 13,960 |

ADA COMPLIANCE PLAN NUMBER SR-105

Source: California Statewide Transportation Planning Products, Inc. (2010) California Highways

CALIFORNIA MOST RESTRICTIVE METER RATE



From: Douglas Hooper [douglas_hooper@dol.ca.gov]
Sent: Thursday, November 18, 2010 4:44 PM
To: sam@urcar.com
Subject: SR 905 ramp meter info to date

Good afternoon Sam,

Please excuse my delay in getting back. These are the locations I have lifted discussing with my coworkers:

SR 905

Orinda Blvd - 2 SBV lanes and 2 cars per green La Meda Rd - same as above

SR 995

La Meda Rd (SR) - 1 SBV and 1 TBV with 2 cars per green La Valle Rd (SR) - same as above

For now I would assume the most restrictive cycling rate to be 11 cars/cycle for all the on-ramps.

Another one of my coworkers will be gone through this month and could ask more details then if needed.

Hope this info will suffice.

Douglas Hooper
Traffic Operations
Ramp Metering and Congestion Monitoring
Office (925) 467-4329
Fax (925) 467-3943

1. 2 SBV LANES * 2 CARS PER GREEN PER LANE = 4 CARS PER GREEN CYCLE.

2. $\frac{2400 \text{ SECONDS PER HOUR}}{15 \text{ SECONDS PER CYCLE}} = 240 \text{ CYCLES PER HOUR}$

3. 240 CYCLES PER HOUR / 4 CARS PER GREEN CYCLE = 60 CARS PER HOUR METER RATE

PEAK HOUR VOLUME DATA

Peak hour volume data consists of hourly volume relationships and data location. The hourly volumes are expressed as a percentage of the Annual Average Daily Traffic (AADT). The percentages are shown for both the AM and the PM peak periods.

The principle data described here are the **K factor**, the **D factor** and their product (KD). The K factor is the percentage of AADT during the peak hour for both directions of travel. The D factor is the percentage of the peak hour travel in the peak direction. KD multiplied with the AADT gives the one way peak period directional flow rate or the design hourly volume (DHV). The design hourly volume is used for either Operational Analysis or Design Analysis. Refer to the 2000 Highway Capacity Manual for more details.

Following is a glossary of terms used in this listing of peak hour volume data:

| | |
|---------|--|
| Dir | Indicates direction of travel for peak volume |
| AADT | Annual Average Daily Traffic in vehicles per day (vpd). |
| AM Peak | Represents the morning peak period for traffic analysis |
| CS | Control Station Number. Caltrans identification number for monitoring site. |
| CO | County abbreviation used by Caltrans |
| D | D factor. The percentage of traffic in the peak direction during the peak hour. Values in this book are derived by dividing the measured DHV by the sum of both directions of travel during the peak hour. |
| DAY | Day of week for the peak volume. |
| DDHV | The directional design hour volume, in vehicles per hour (vph) $DDHV = AADT \times K \times D$. See equation (8-1) on page 8-11 of the 2000 Highway Capacity Manual. |
| DI | Caltrans has twelve transportation districts statewide. This abbreviation identifies the district in which the count station is located. |
| HR | The ending time for the peak hour volume listed. The volume observed from 1 to 2 would be recorded as 2. |

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CASTRANS TRAFFIC VOLUMES
 LATEST TRAFFIC YEAR SELECTED
 PEAK HOUR VOLUME DATA

PAGE * 44

| I | RPT | CO | PRE | FM | CS | LGS | YR | Dir | AM PEAK | | | PM PEAK | | | HR | DAY | Mnth | Dir | | | | | |
|----|-----|-----|-----|------|-----|-----|----|-----|---------|------|-------|---------|----|-----|-----|-----|-------|------|-------|------|----|-----|-----|
| | | | | | | | | | 1 WAY | 5 | 6 | 1 WAY | 5 | 6 | | | | | | | | | |
| 01 | 700 | W01 | 1 | 935 | 839 | A | 71 | R | 1094 | 8.74 | 62.36 | 1.43 | 1 | THU | SEP | W | 0710 | 8.84 | 56.44 | 4.2 | 16 | THU | SEP |
| 02 | 800 | SE | 1 | 847 | 821 | A | 19 | S | 2831 | 5.9 | 57.84 | 4.32 | 0 | SAT | OCT | S | 3230 | 5.49 | 56.1 | 5.43 | 17 | FRI | OCT |
| 03 | 805 | SD | 0 | 1407 | 851 | 0 | 09 | R | 5901 | 7 | 54.74 | 3.18 | 7 | SUN | JAN | S | 6937 | 7.55 | 57.96 | 6.45 | 18 | WED | DEC |
| 04 | 907 | SD | 0 | 1854 | 914 | A | 74 | N | 1035 | 7.05 | 54.04 | 4.54 | 1 | WED | APR | S | 4054 | 7.84 | 54.73 | 4.57 | 17 | MON | MAY |
| 05 | 905 | SD | 0 | 1117 | 800 | 0 | 19 | S | 9224 | 1.14 | 56.55 | 4.83 | 1 | TUE | MAY | S | 3045 | 7.19 | 58.05 | 5.6 | 15 | FRI | OCT |
| 06 | 901 | SD | 0 | 1451 | 828 | 0 | 19 | N | 10132 | 7.11 | 55.32 | 4.54 | 7 | WED | JUN | S | 3435 | 7.44 | 58.74 | 6.07 | 18 | FRI | APR |
| 07 | 903 | SD | 0 | 1409 | 963 | 0 | 19 | S | 10591 | 7.54 | 56.42 | 4.54 | 7 | TUE | SEP | N | 10702 | 7.36 | 58.35 | 4.71 | 15 | FRI | JUN |
| 08 | 901 | SD | 0 | 1413 | 927 | 0 | 19 | N | 8517 | 7.44 | 61.22 | 4.33 | 1 | THU | MAR | S | 9350 | 6.45 | 65.10 | 5.51 | 16 | TUE | OCT |
| 09 | 907 | SD | 0 | 1705 | 928 | 0 | 19 | N | 11114 | 8.25 | 69.1 | 5.33 | 7 | WED | MAY | S | 10664 | 8.49 | 56.03 | 5.6 | 17 | SUN | MAR |
| 10 | 901 | SD | 0 | 1705 | 929 | 0 | 19 | N | 7075 | 7.7 | 55.81 | 4.3 | 7 | MON | JUN | S | 8574 | 8 | 58.34 | 4.71 | 16 | THU | MAY |
| 11 | 905 | SD | 0 | 2615 | 653 | A | 03 | N | 7307 | 7.47 | 64.7 | 3.65 | 0 | FRI | AUG | S | 8414 | 7.54 | 57.76 | 4.86 | 15 | TUE | MAR |
| 12 | 805 | SD | 0 | 2601 | 870 | A | 17 | S | 7153 | 8.12 | 54.82 | 5.27 | 6 | WED | NOV | S | 3480 | 7.57 | 60.75 | 4.75 | 17 | TUE | MAR |
| 13 | 801 | W01 | 1 | 1120 | 100 | R | 18 | S | 6889 | 7.6 | 56.65 | 4.57 | 6 | TUE | JUL | S | 7135 | 8.2 | 56.52 | 4.63 | 17 | WED | APR |
| 14 | 807 | W01 | 1 | 2501 | 127 | A | 08 | S | 7520 | 6.01 | 53.03 | 3.43 | 0 | MON | JUN | S | 7657 | 5.98 | 52.67 | 5.41 | 16 | WED | JUN |
| 15 | 905 | SD | 0 | 1120 | 117 | A | 17 | N | 2342 | 8.77 | 54.75 | 4.08 | 7 | WED | DEC | L | 2530 | 5.57 | 55.23 | 5.79 | 16 | TUE | SEP |
| 16 | 907 | SD | 0 | 1161 | 917 | A | 14 | R | 2809 | 7.25 | 60.62 | 5.05 | 1 | TUE | APR | W | 3107 | 7.10 | 58.97 | 5.66 | 16 | FRI | FEB |
| 17 | 908 | SD | 0 | 1140 | 104 | 0 | 09 | A | 1146 | 6.19 | 57.12 | 3.95 | 11 | TUE | OCT | S | 1612 | 8.33 | 54.06 | 5.25 | 17 | FRI | SEP |

"D" USE 60/40
 "K" USE 8/70
 IS BUS PEAK HOUR & DIRECTIONAL SPLIT

1/2
 (M/P)

From: Huffman, Victoria [VHuffman@saniego.gov]
Sent: Wednesday, January 26, 2011 5:51 PM
To: Lisa@urbansystems.net; sam@urbansystems.net
Cc: Gonsalves, Ann
Subject: Possible ADT Adjustments

1/27
3.6/1000
12/10/11

Hi Sam,

Here's the list of ADTs with zero occupancy loadings that might require some degree of adjustment:

Adjusted Occupancy Plans: (SEE Appendix B)

4600
4615
4700
4541
1583
4088
4581
4569
1572
4149
4608 Loading okay but assume loading point is signified on this world perhaps tremendous number of frames at California Valley Road

Scenario 2B (could work and without La Meria kids)

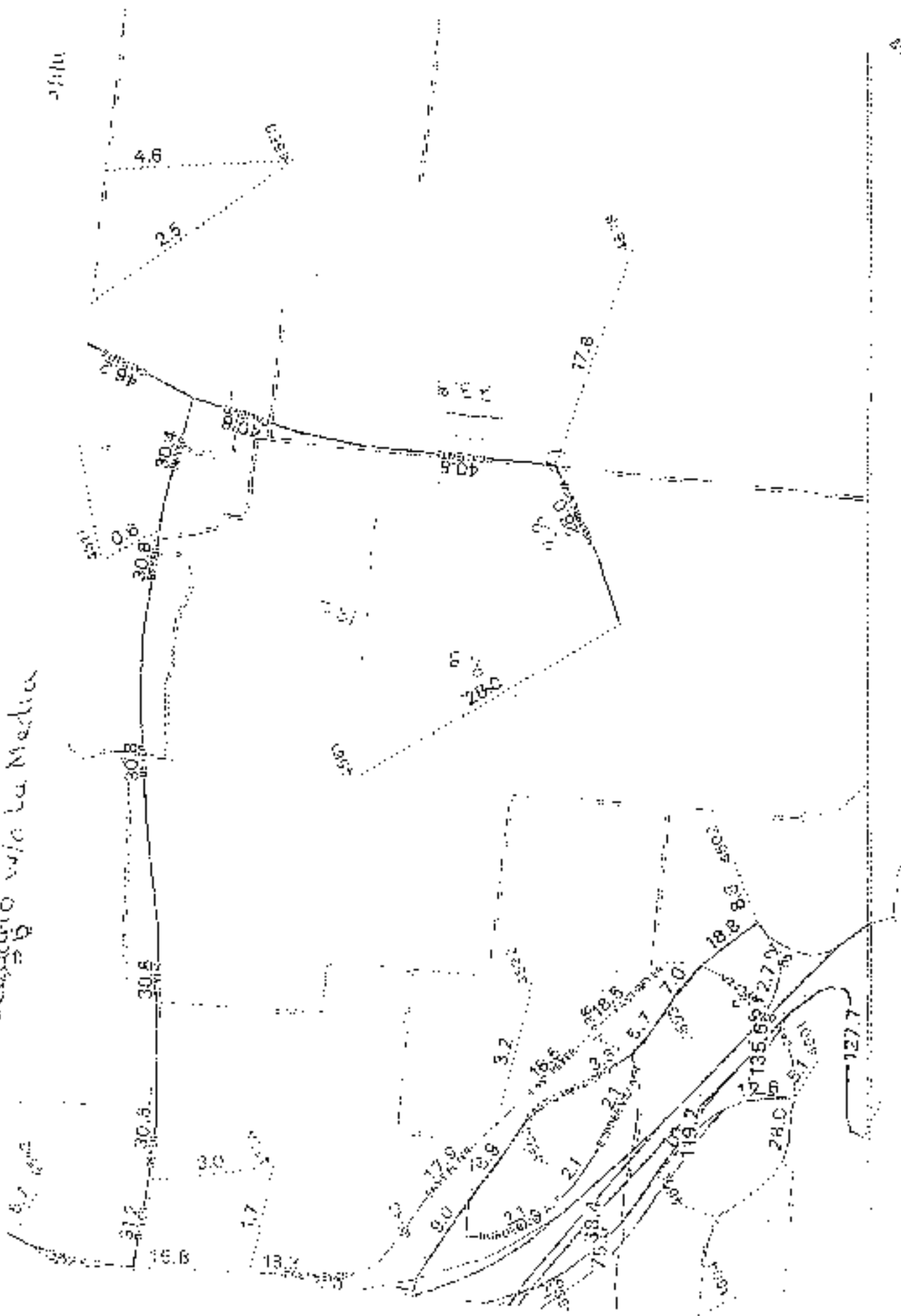
SEE ATTACHED PLANS (I will mention to engineer)

4501
4540
4597
4580
4597
4591
4569
4532
4567
4608 Loading okay but assume loading point is signified (Does this change anything to the ADTs?)

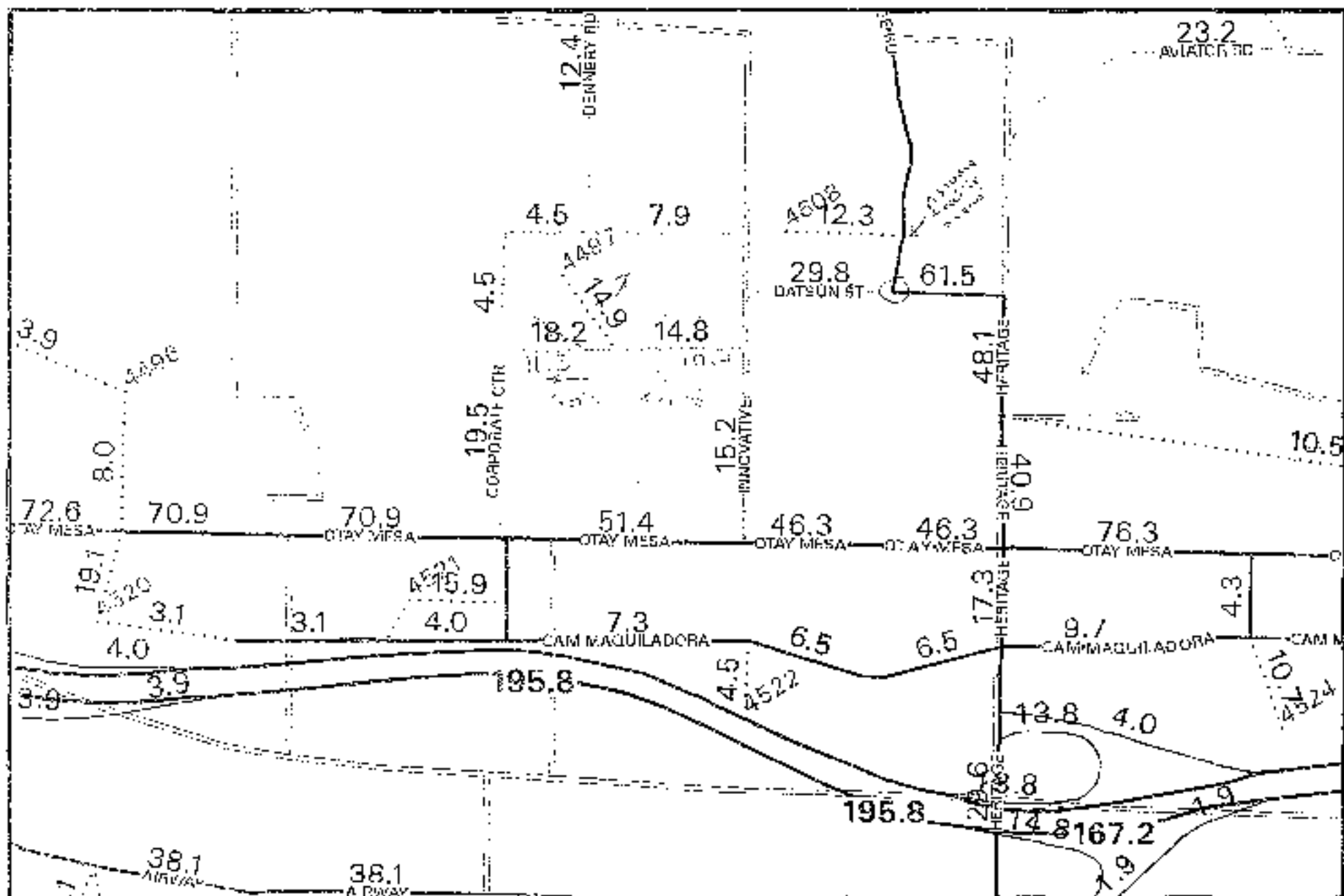
As I also mentioned to you on the phone today, there are some minor circulation element changes that are not shown in the drawings which may need to be added to the proposed circulation element layout. I'll send you a sketch showing those when I'm back in the office. (SJM)

Thanks,
Victoria

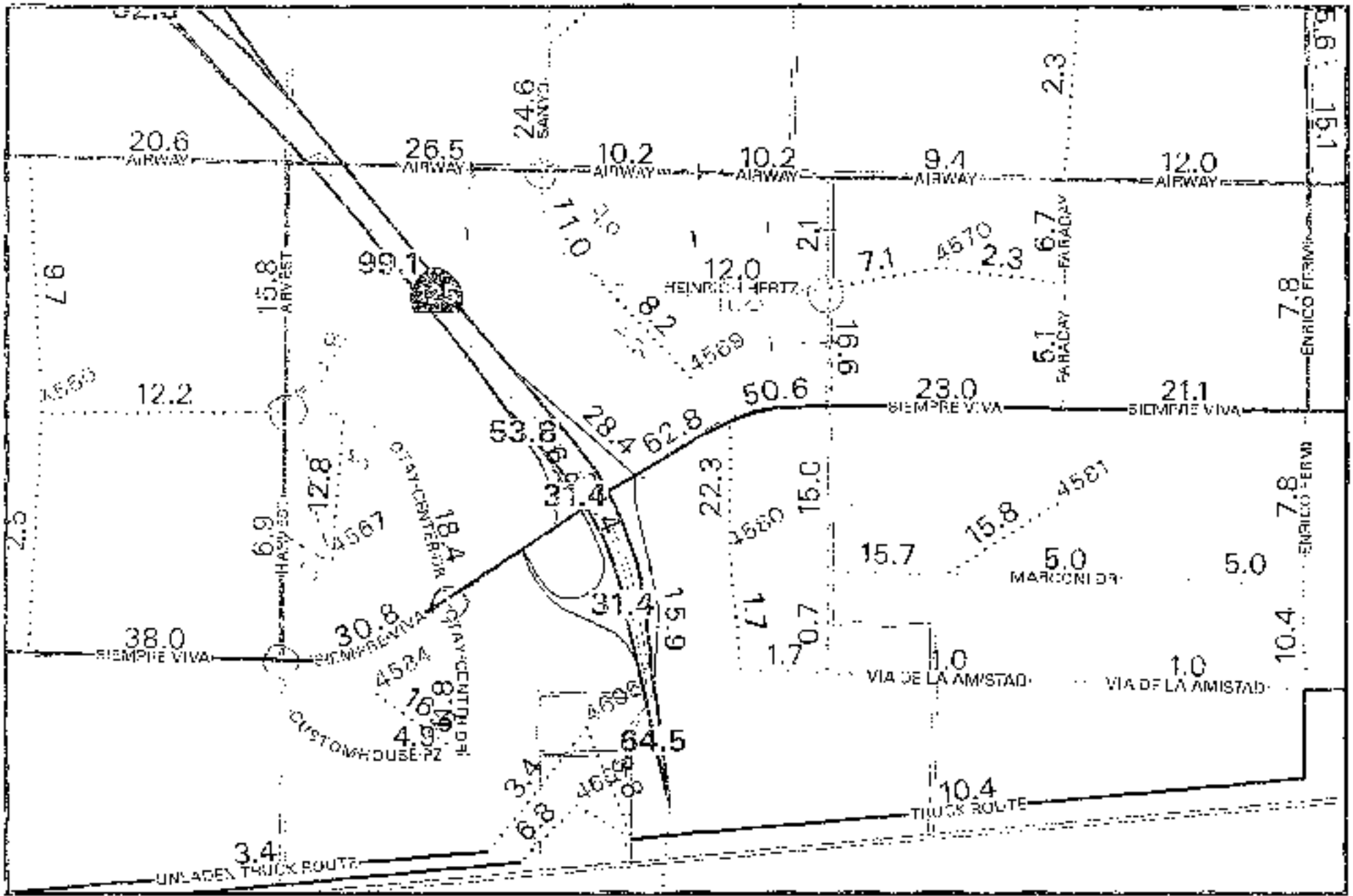
Scazzano via la Medica



2/2/11
12/11

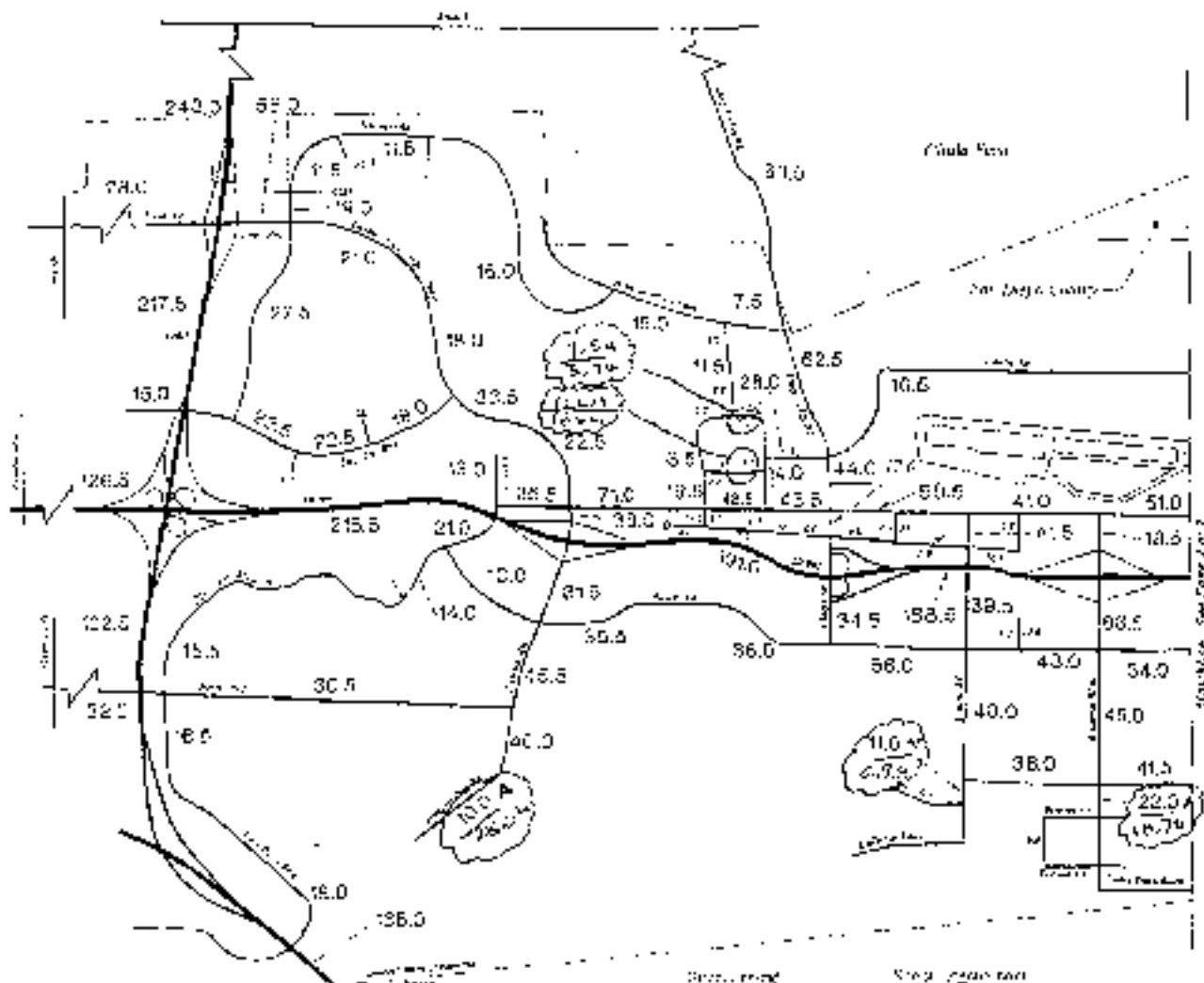


2/16
 11/14



4/6
 1/10
 1/10

116
2/20/11
MSJ



LEGEND

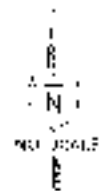
XXX.X - Average Daily Traffic Volume (ADT) in vehicles per day
 --- - City Area boundary

Abbreviations

- LA - La Medina Rd
- SA - San Diego Ave
- CC - City Center
- MS - Mission San Diego
- ST - San Torrey Pines Rd
- DK - Exposition Way
- CS - Camino San Diego
- W - Water Street

Scenario 311

- VA - Via Santa Homeys
- RO - Route 16
- RD - Redwood
- UL - Ulm
- CS - Camino San Diego
- ST - San Torrey Pines
- RD - Route 16



SCENARIO

Scenario 311 With La Medina Road Average Daily Traffic
 (Average Daily Traffic Volume) (ADT) (Vehicles per Day)

1/1
3/26/11
NOT

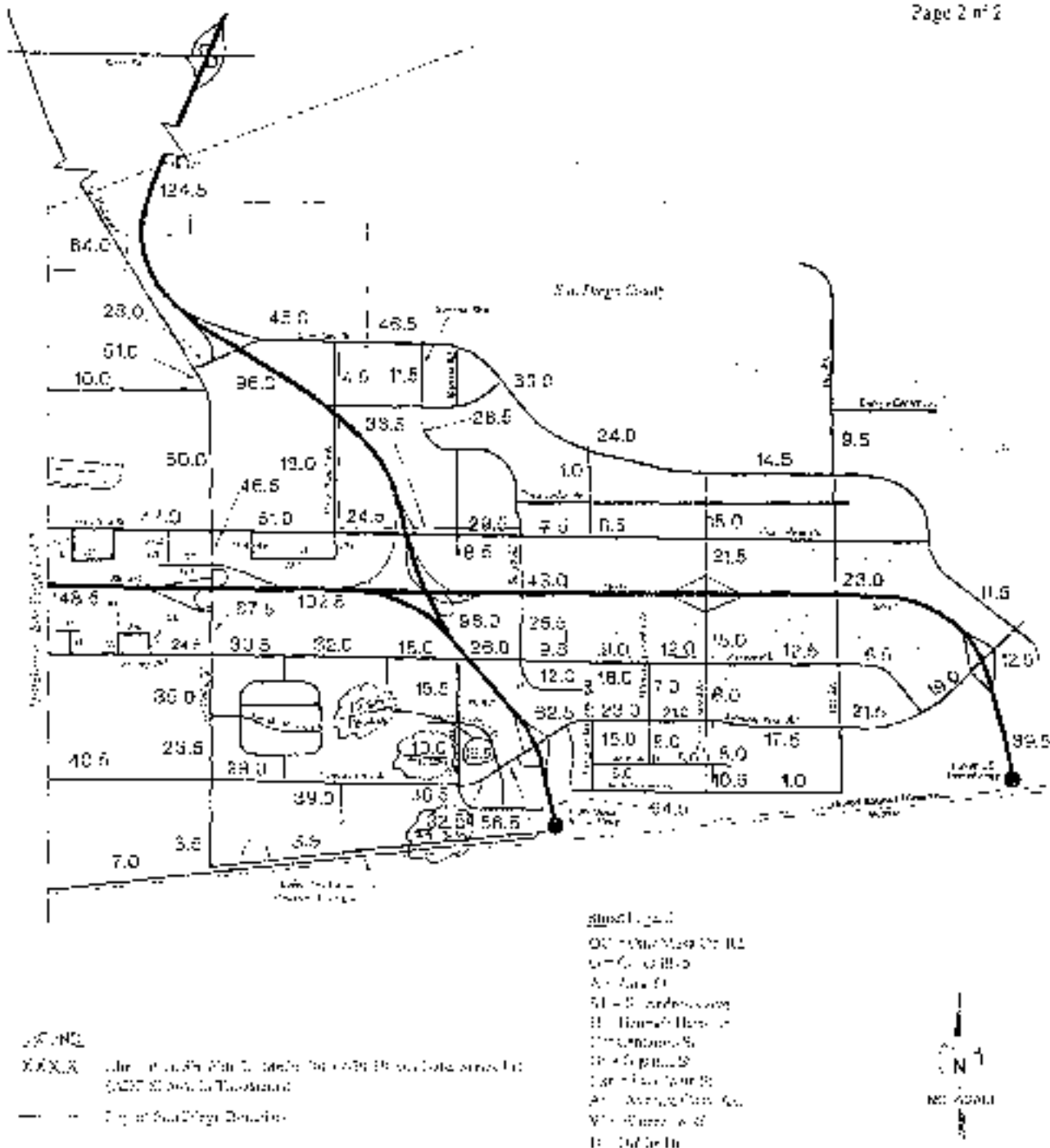
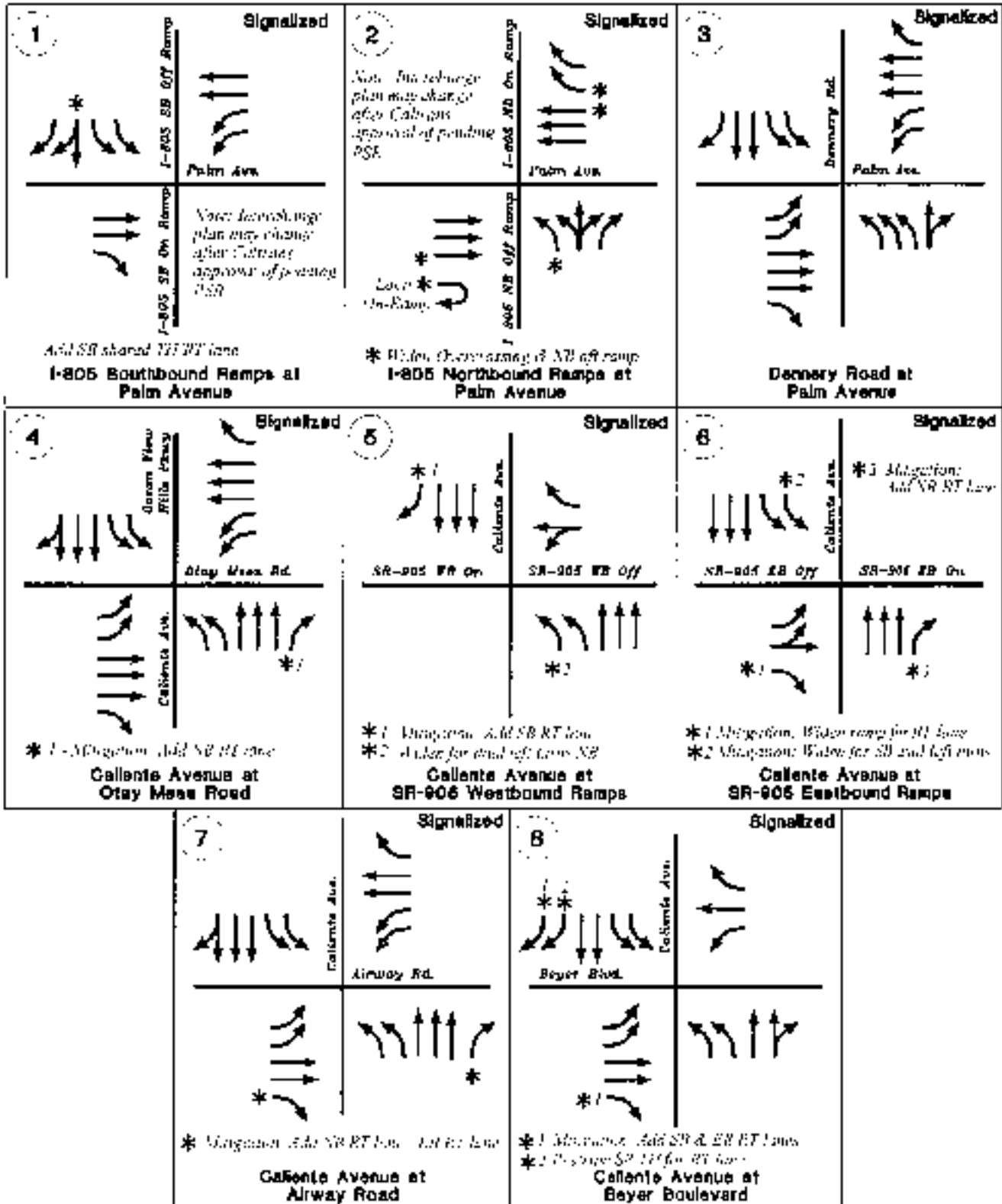


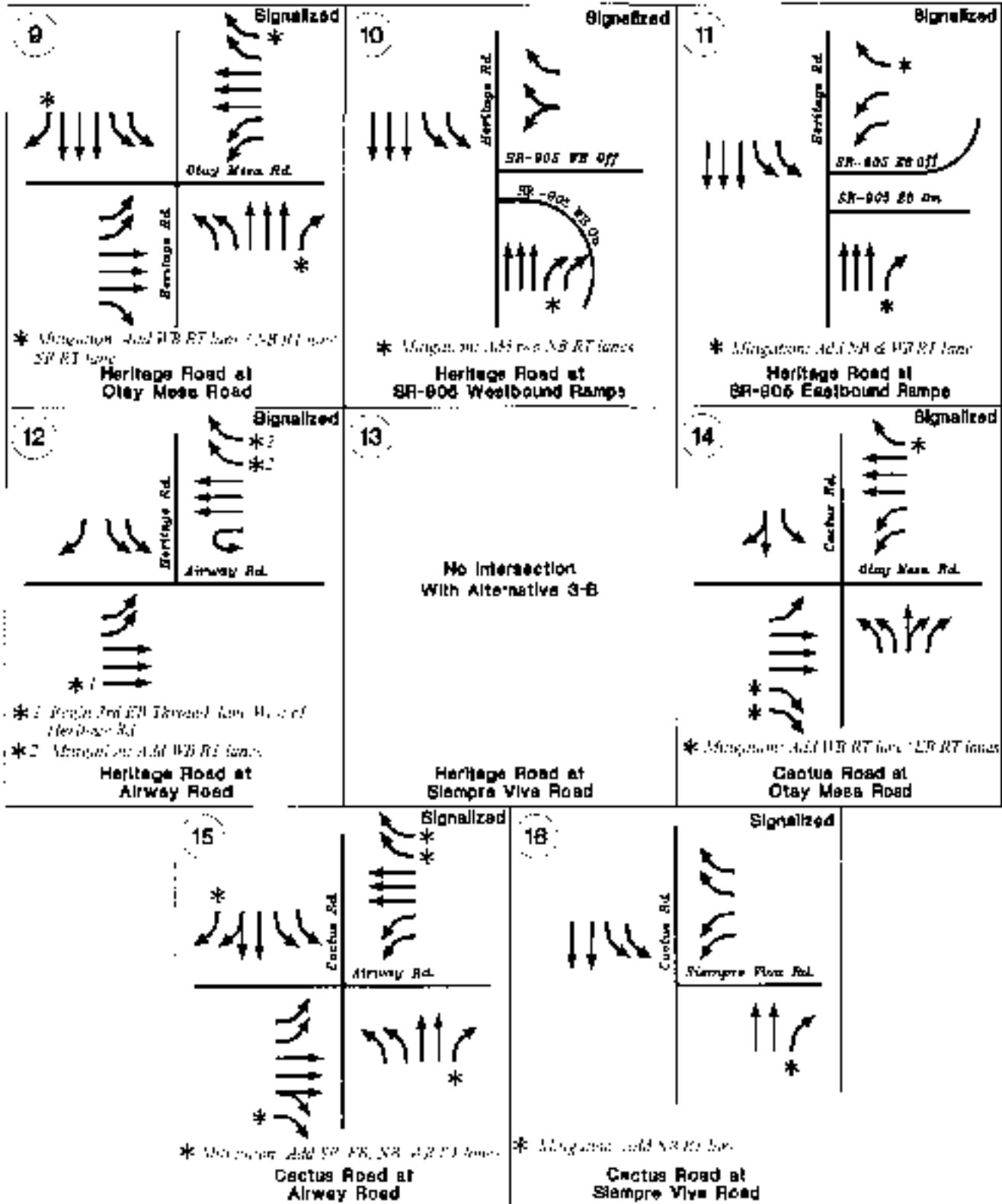
FIGURE 4
Scenario 33 With La Mesa Road Average Daily Traffic
(With City Administrator's Stamp: (X) APPROVED (Y) UNAPPROVED)

APPENDIX C - ATTACHMENT 9

Buildout Recommended Lane Configurations - Alternative 3-B
With La Mediz Road



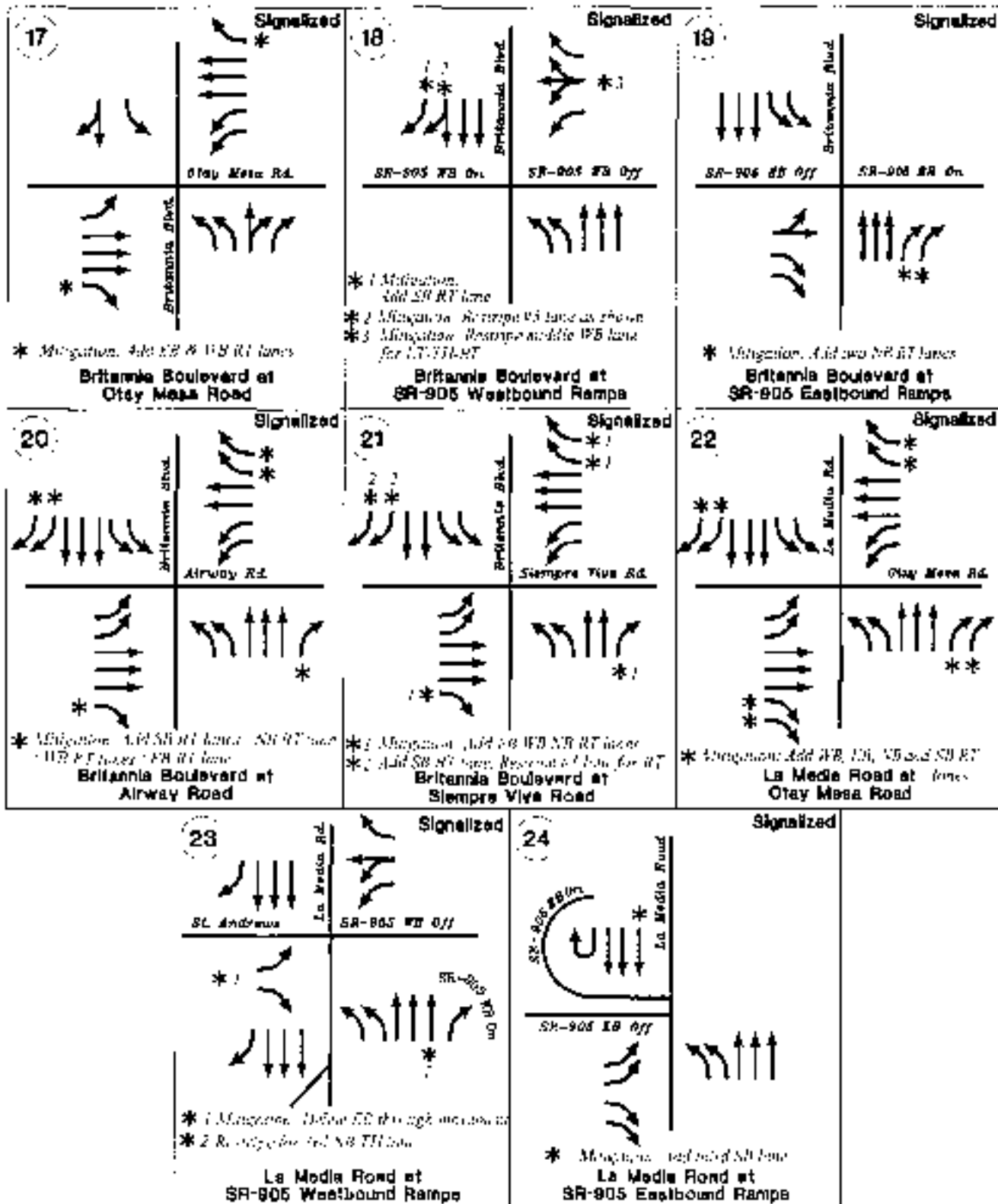
Buildout Recommended Lane Configurations - Alternative 3-B With La Media Road



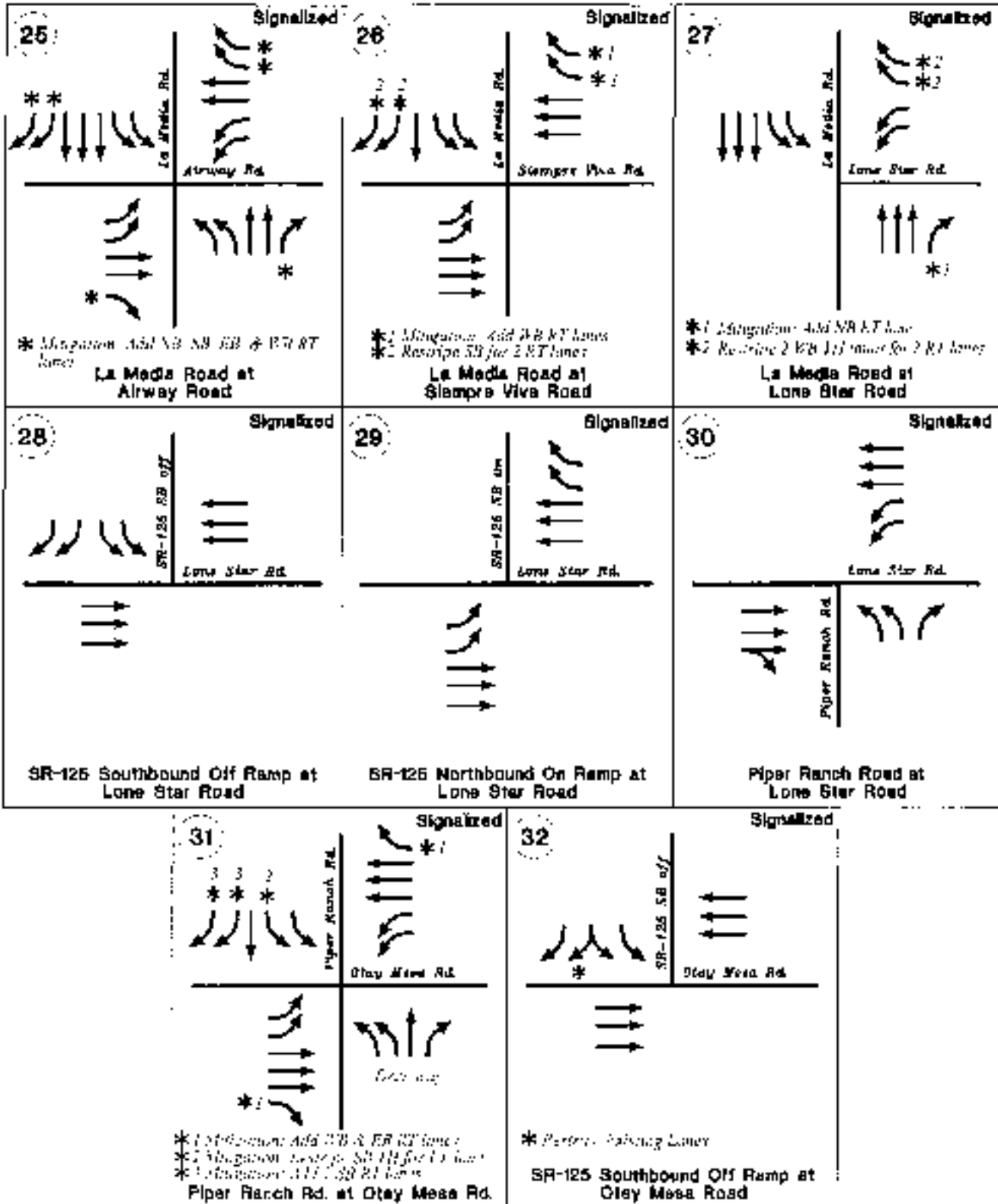
APPENDIX C - ATTACHMENT 9

Buildout Recommended Lane Configurations - Alternative 3-B

With La Media Road



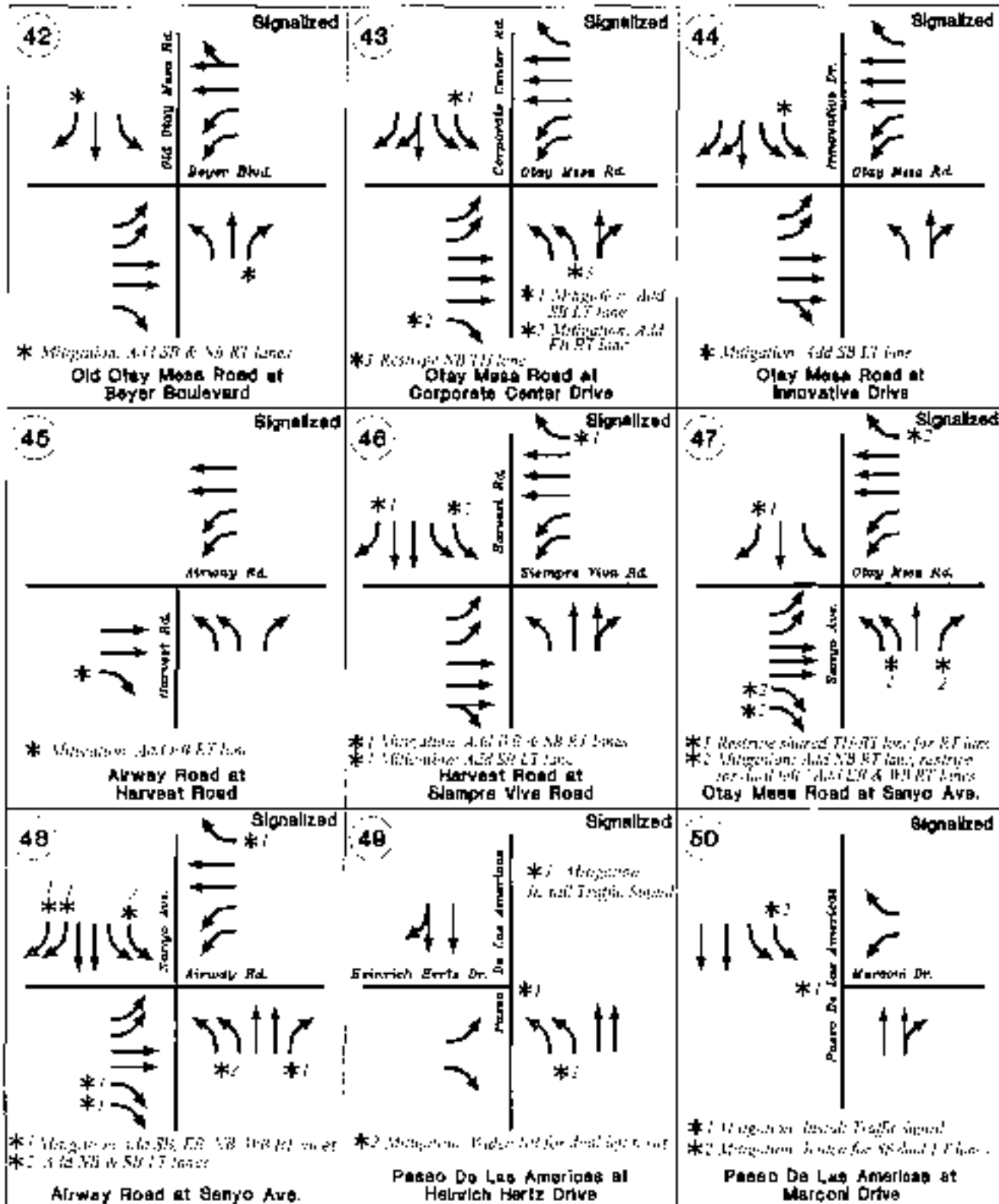
Buildout Recommended Lane Configurations - Alternative 3-B With Le Media Road



Buildout Recommended Lane Configurations - Alternative 3-B With La Meria Road

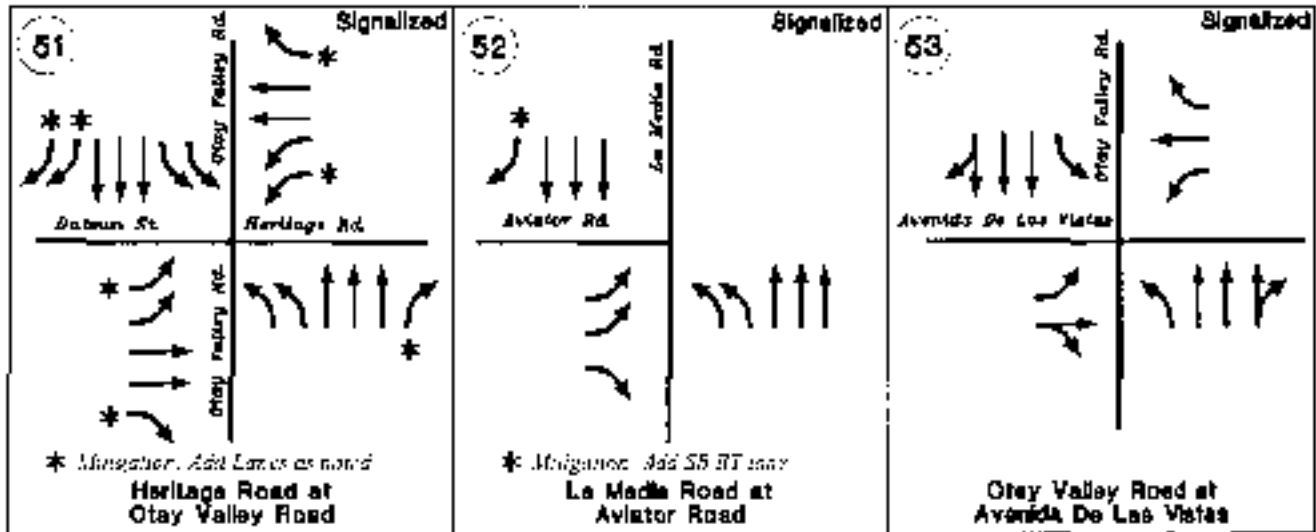
| | | |
|---|--|--|
| <p>33 Signalized</p> <p>SR-125 NB On Ramp Olney Mesa Rd.</p> <p>SR-125 Northbound On Ramp at Olney Mesa Road</p> | <p>34 Signalized</p> <p>Harvest Rd. Olney Mesa Rd.</p> <p>*1 Mitigation: Add EB or WB RT lanes *2 Mitigation: Add WB LT lane</p> <p>Harvest Road at Olney Mesa Road</p> | <p>35 Signalized</p> <p>Olney Center Dr. Siempre Viva Rd.</p> <p>* Mitigation: Add lanes as shown</p> <p>Olney Center Drive at Siempre Viva Road</p> |
| <p>36 Signalized</p> <p>Siempre Viva Rd.</p> <p>*1 Mitigation: Install Signal</p> <p>*2 Mitigation: Realign Ramps Add RT Lane</p> <p>SR-905 Southbound Ramps at Siempre Viva Road</p> | <p>37 Signalized</p> <p>SR-905 NB On Ramp Siempre Viva Rd.</p> <p>* Mitigation: Add WB RT lane</p> <p>SR-905 Northbound Ramps at Siempre Viva Road</p> | <p>38 Signalized</p> <p>Paseo de las Americas Siempre Viva Rd.</p> <p>*1 Mitigation: Add EB LT lane + WB RT lane *2 Realign SB Ramps of I-170 for RT Lane *3 Realign existing NB RT lane for (WB) I-170 lane</p> <p>Paseo de las Americas at Siempre Viva Road</p> |
| <p>39 Signalized</p> <p>Dannery Rd. Del Sol Blvd.</p> <p>Dannery Road at Del Sol Boulevard</p> | <p>40 Signalized</p> <p>Ocean View Hills Parkway Del Sol Blvd.</p> <p>*1 Mitigation: Realign the Existing LT RT *2 Mitigation: Add WB RT lane</p> <p>Ocean View Hills Parkway at Del Sol Boulevard</p> | <p>41 Signalized</p> <p>Ocean View Hills Parkway Street A</p> <p>* Mitigation: Add NB RT lane to EB RT lane</p> <p>Ocean View Hills Parkway at Street A</p> |

Buildout Recommended Lane Configurations - Alternative 3-B With La Media Road

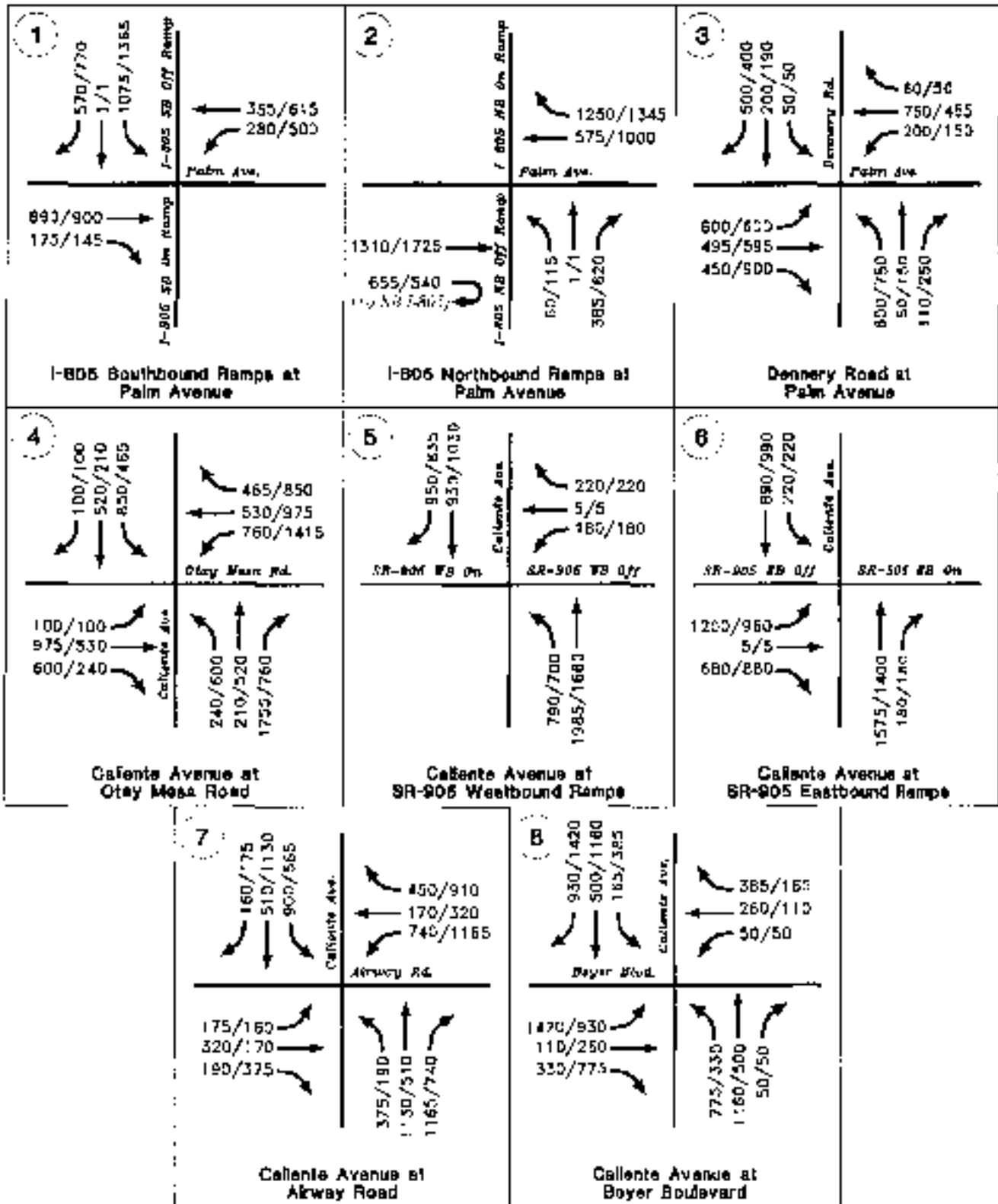


APPENDIX C - ATTACHMENT 9

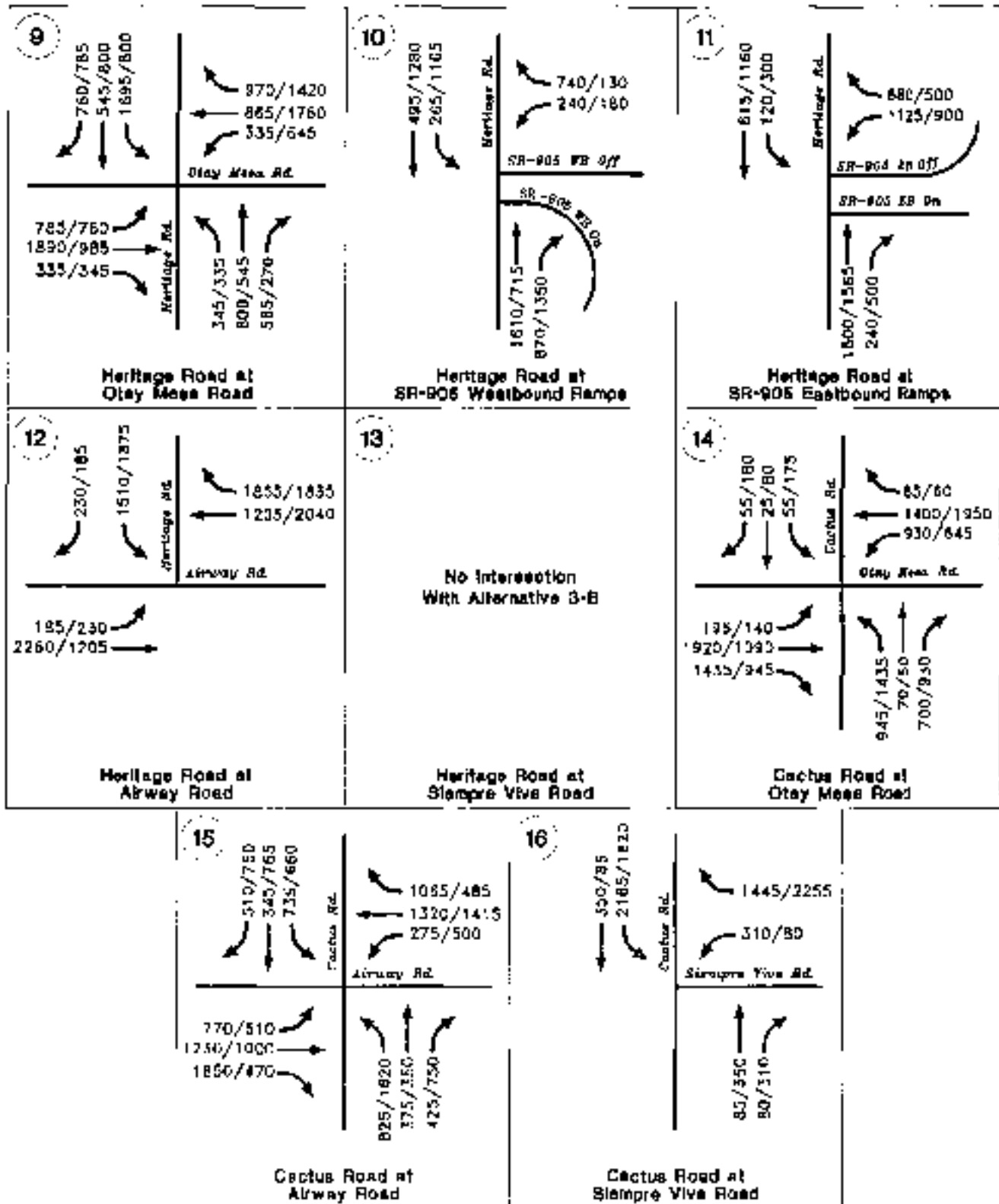
Buildout Recommended Lane Configurations - Alternative 3-B
With La Media Road



Buildout AM/PM Peak Hour Traffic - Alternative 3-B With La Media Road



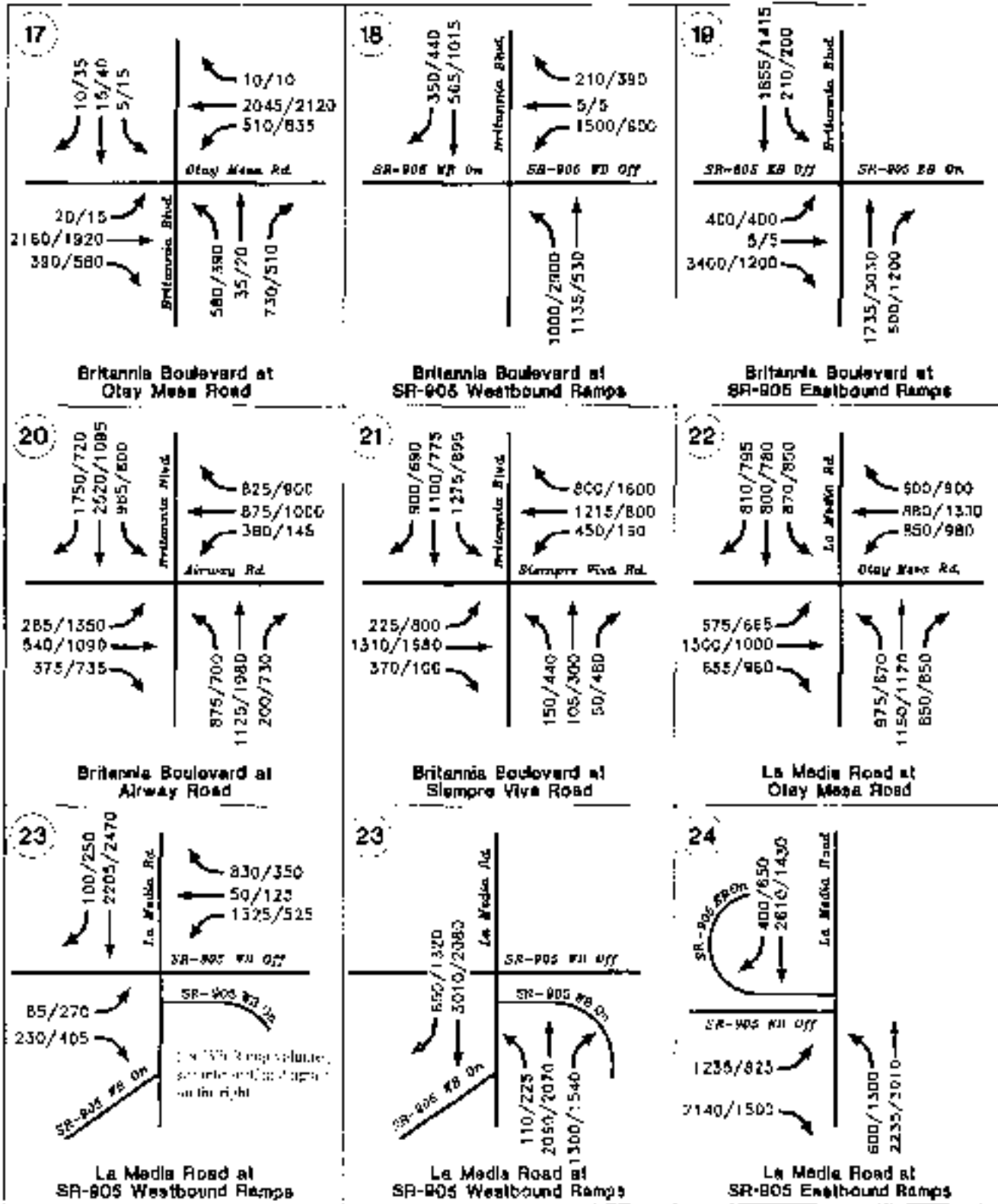
Buildout AM/PM Peak Hour Traffic - Alternative 3-B
With La Media Road



(8-20-18 Rev Date)

Revised (7-28-11)

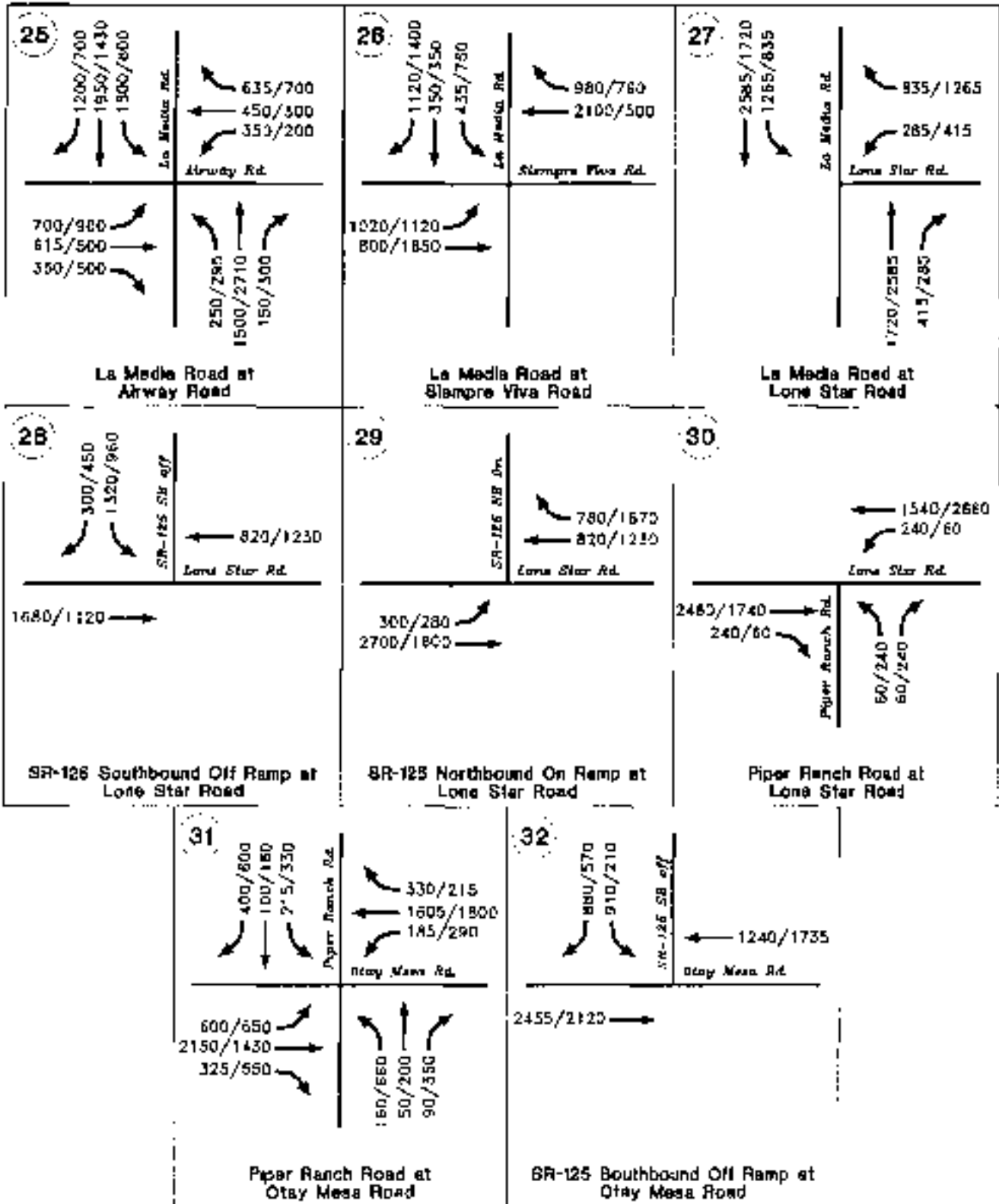
Buildout AM/PM Peak Hour Traffic - Alternative 3-B With La Media Road



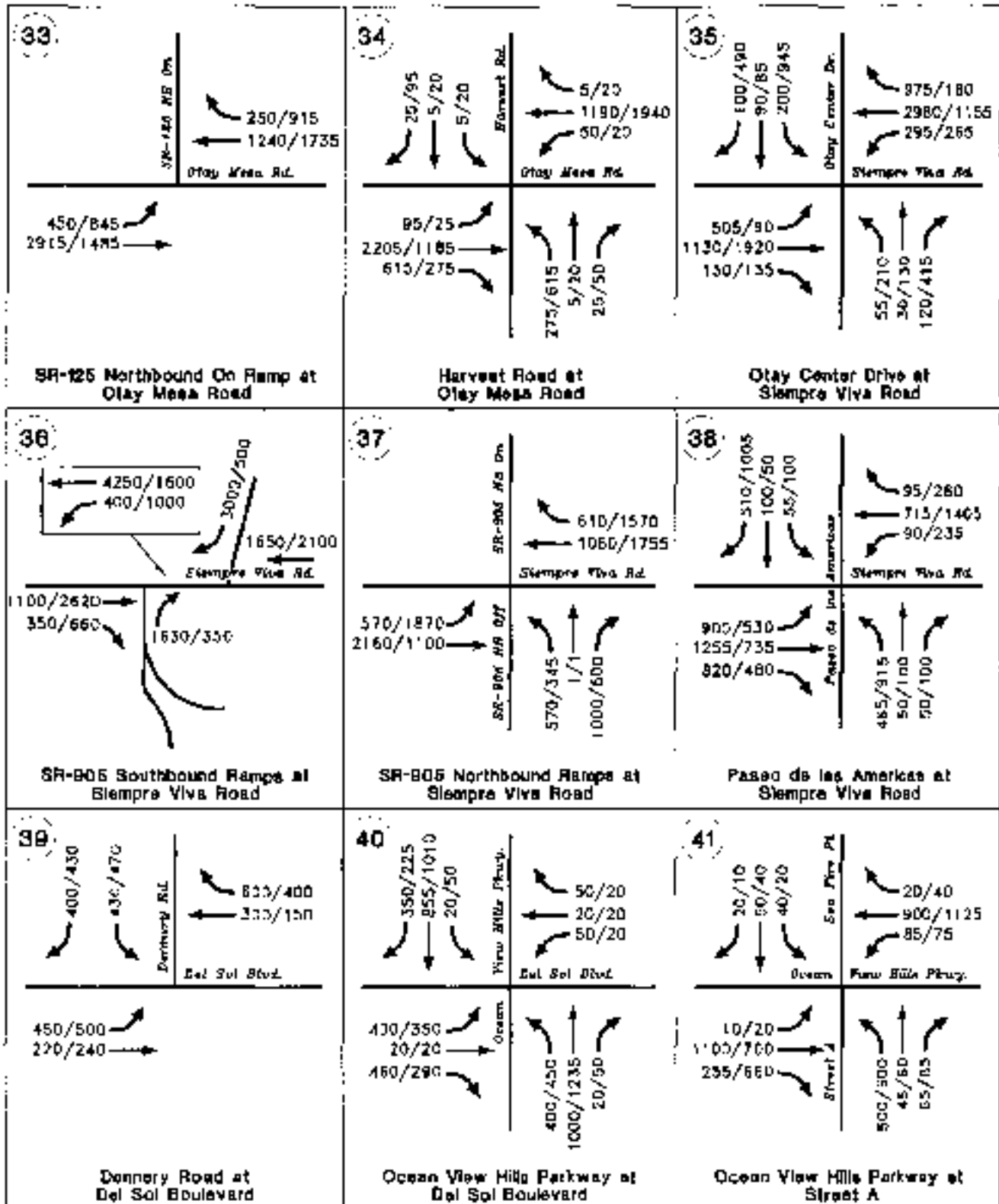
(9-30-10 Run Date)

Revised (7-22-11)

Buildout AM/PM Peak Hour Traffic - Alternative 3-B
With La Media Road



Buildout AM/PM Peak Hour Traffic - Alternative 3-B
With La Media Road



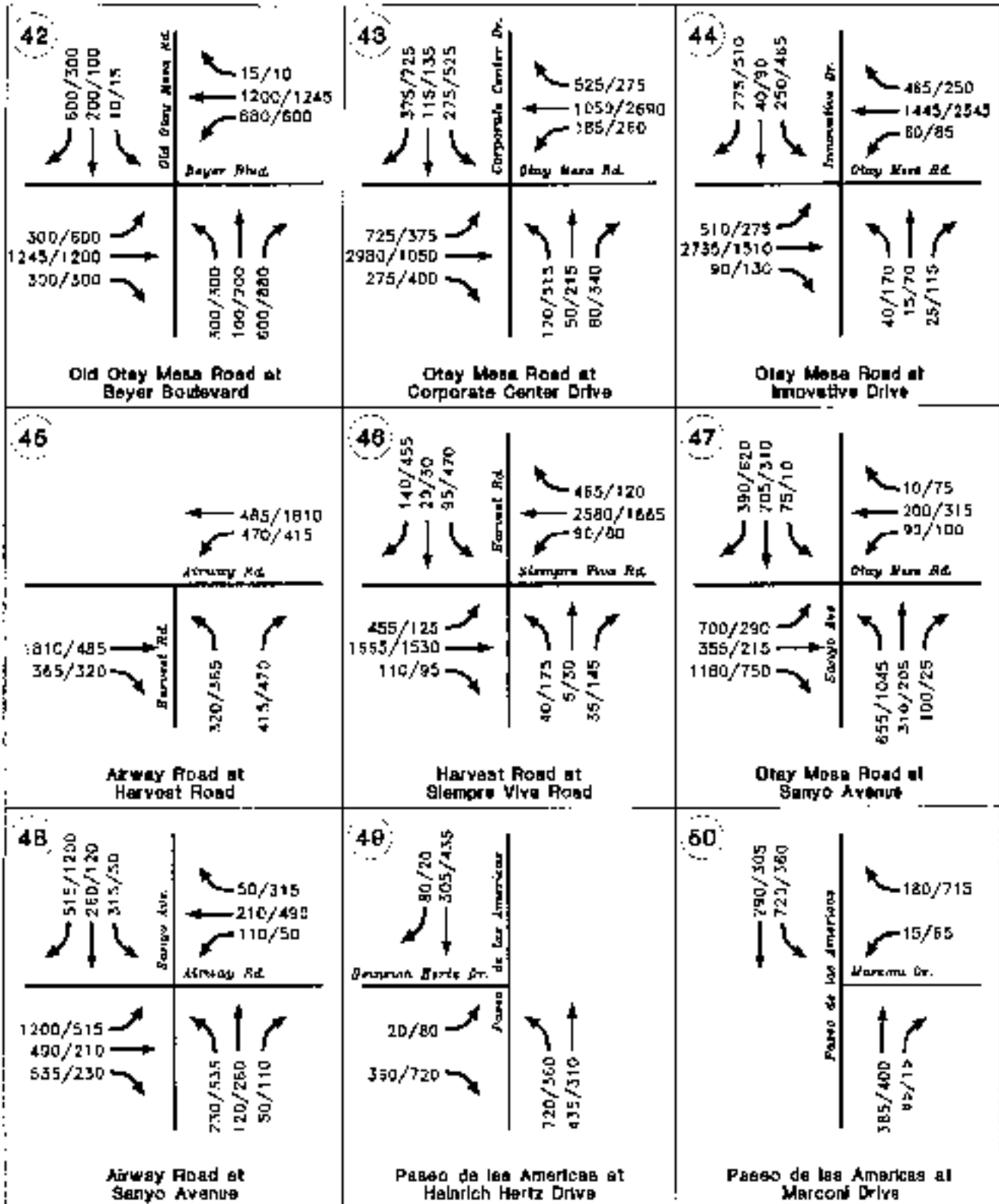
(8-30-13 Run Date)

Revised (7-23-11)

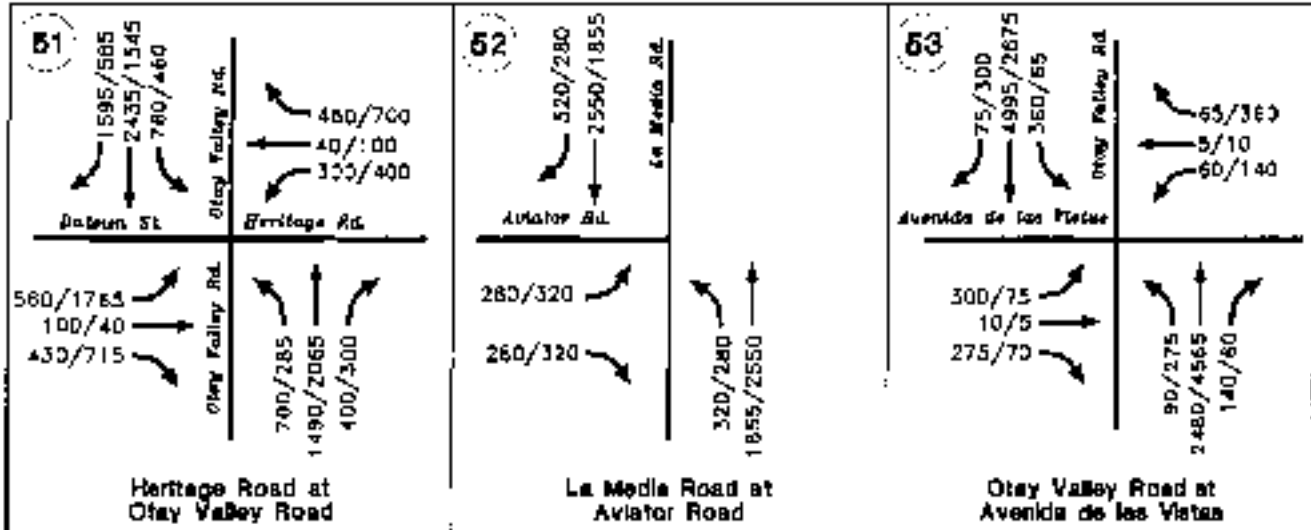
APPENDIX C - ATTACHMENT 10

Buildout AM/PM Peak Hour Traffic - Alternative 3-B

With La Media Road



Buildout AM/PM Peak Hour Traffic - Alternative 3-B
With La Media Road



(9-20-10 Run Date)

Revised (7-20-11)

-A
NM

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|----------------------------|--|--|
| Analyst | USA! | | | Intersection | PALM AV./I-805 SB RAMPS | | |
| Agency or Co. | SAN DIEGO | | | Area Type | All other areas | | |
| Date Performed | 03/04/11 | | | Jurisdiction | SAN DIEGO | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YEAR 2030 /ALT. 3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|----|------|------|------|------|----|----|----|----|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Numer. of Lanes | 0 | 2 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Lane group | | T | R | L | T | | | | | L | LTR | R |
| Volume (vph) | | 890 | 175 | 280 | 355 | | | | | 1075 | 1 | 570 |
| % heavy veh | | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 2 |
| PHF | | 0.95 | 0.95 | 0.95 | 0.95 | | | | | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | | A | A | A | A | | | | | A | A | A |
| Startup lost time | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Arrival type | | 5 | 5 | 5 | 5 | | | | | 5 | 5 | 5 |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | | | | 10 | | | 10 | | 150 |
| Lane Width | | 12.0 | 12.0 | 12.0 | 12.0 | | | | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | 0 | 0 | | | | | 0 | 0 | 0 |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 |

| Phasing | WB Only | Thru & RT | 03 | 04 | SB Only | 06 | 07 | 08 |
|-----------------------------------|-------------------|-------------------|------------|------------|------------------------|------------|------------|------------|
| Timing | G = 30.0 Y = 5 | G = 30.0 Y = 5 | G = Y = | G = Y = | G = 45.0 Y = 5 | G = Y = | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | Cycle Length C = 120.0 | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-----|--|----|--|-------|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 937 | 184 | 295 | 374 | | | | | 679 | 584 | 332 |
| Lane group cap | 887 | 405 | 859 | 2922 | | | | | 664 | 652 | 594 | |
| w/c ratio | 1.06 | 0.45 | 0.34 | 0.18 | | | | | 1.02 | 0.87 | 0.56 | |
| Green ratio | 0.25 | 0.25 | 0.25 | 0.54 | | | | | 0.39 | 0.38 | 0.38 | |
| Unif. delay d1 | 45.0 | 38.1 | 38.9 | 14.0 | | | | | 37.5 | 34.7 | 29.7 | |
| Delay factor k | 0.50 | 0.11 | 0.11 | 0.11 | | | | | 0.50 | 0.39 | 0.16 | |
| Incremental delay c2 | 46.7 | 5.8 | 0.2 | 0.0 | | | | | 40.8 | 11.7 | 1.2 | |
| PF factor | 0.778 | 0.778 | 0.778 | 0.212 | | | | | 0.600 | 0.600 | 0.600 | |
| Control delay | 81.2 | 30.4 | 29.0 | 3.0 | | | | | 63.3 | 32.5 | 19.0 | |
| Lane group LOS | F | C | C | A | | | | | F | C | B | |
| Approach delay | 72.9 | | | 14.5 | | | | | | 42.9 | | |
| Approach LOS | E | | | B | | | | | | D | | |
| Intersec. delay | 47.2 | | | Intersection LOS | | | | | | D | | |

1-1-A
4/2/14

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 3-B WITH LA MEDIA AM PEAK HOUR

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|-------|-------|-------|-------|----|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | T | R | L | T | | | | | L | LTR | R |
| Init queue/lane | | 0.0 | 0.0 | 0.0 | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | | 937 | 184 | 296 | 374 | | | | | 679 | 654 | 332 |
| Satflow per lane | | 1562 | 1620 | 1770 | 1960 | | | | | 1770 | 1738 | 1563 |
| Capacity/lane | | 687 | 405 | 863 | 2022 | | | | | 664 | 652 | 594 |
| Flow ratio | | 0.26 | 0.11 | 0.09 | 0.10 | | | | | 0.38 | 0.32 | 0.21 |
| v/c ratio | | 1.06 | 0.45 | 0.34 | 0.18 | | | | | 1.02 | 0.87 | 0.56 |
| f factor | | 1.000 | 1.000 | 1.000 | 1.500 | | | | | 1.000 | 1.050 | 1.500 |
| Arrival type | | 5 | 5 | 5 | 5 | | | | | 5 | 5 | 5 |
| Platoon ratio | | 1.67 | 1.67 | 1.67 | 1.67 | | | | | 1.67 | 1.67 | 1.67 |
| PF factor | | 1.00 | 0.85 | 0.83 | 0.22 | | | | | 1.00 | 0.89 | 0.73 |
| Q1 | | 16.4 | 4.4 | 3.4 | 0.8 | | | | | 22.6 | 15.4 | 6.4 |
| ks | | 0.5 | 0.5 | 0.5 | 0.8 | | | | | 0.6 | 0.6 | 0.6 |
| Q2 | | 7.6 | 0.4 | 0.3 | 0.2 | | | | | 6.4 | 3.2 | 0.7 |
| Q avg. | | 24.0 | 4.8 | 3.7 | 1.0 | | | | | 31.0 | 16.5 | 7.1 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|--|------|-----|-----|-----|--|--|--|--|------|------|------|
| lt% | | 1.7 | 2.0 | 2.0 | 2.1 | | | | | 1.6 | 1.7 | 1.9 |
| BCQ 0% | | 39.8 | 9.4 | 7.3 | 2.0 | | | | | 49.8 | 31.7 | 13.6 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|------|------|------|--|--|--|--|------|------|------|
| Q spacing | | 24.9 | 24.9 | 24.9 | 24.9 | | | | | 24.9 | 24.9 | 24.9 |
| Q storage | | 0 | 0 | 0 | 0 | | | | | 0 | 0 | 0 |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

2-25

| SHORT REPORT | | | | | | | | | | | | | | |
|---|--------------|-----------|-------|-------|------------------|------------------------|----------------------------|----------|-----|-------|-------|-------|-----|--|
| General Information | | | | | | Site Information | | | | | | | | |
| Analyst | USA! | | | | | Intersection | PALM AV./I-805 SB RAMP | | | | | | | |
| Agency or Co | SAN DIEGO | | | | | Area Type | All other areas | | | | | | | |
| Date Performed | 03/27/11 | | | | | Jurisdiction | SAN DIEGO | | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2035 /ALT. 3B WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| Num. of Lanes | 0 | 2 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | | |
| Lane group | | T | R | L | T | | | | | L | LTR | R | | |
| Volume (vph) | | 900 | 145 | 500 | 615 | | | | | 1365 | 1 | 770 | | |
| % Heavy veh | | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 2 | | |
| PIF | | 0.95 | 0.95 | 0.95 | 0.95 | | | | | 0.95 | 0.95 | 0.95 | | |
| Actuated (P/A) | | A | A | A | A | | | | | A | A | A | | |
| Startup los. time | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 | | |
| Arrival type | | 5 | 5 | 5 | 5 | | | | | 5 | 5 | 5 | | |
| U-Ill Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | |
| Perf/Bike/RTOR Volume | 10 | 5 | 0 | | | | 10 | | | 10 | 5 | 150 | | |
| Lane Width | | 12.0 | 12.0 | 12.0 | 12.0 | | | | | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N | | |
| Parking/hr | | | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | 0 | 0 | | | | | 0 | 0 | 0 | | |
| U-Ill Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 | | |
| Phasing | WB On y | Thru & RT | | 03 | | 04 | | SB On y | 06 | | 07 | | 08 | |
| Timing | C = 25.0 | G = 35.0 | | G = | | G = | | G = 60.0 | C = | | C = | | G = | |
| | Y = 5 | Y = 5 | | Y = | | Y = | | Y = 5 | Y = | | Y = | | Y = | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 135.0 | | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| Adj. flow rate | | 947 | 153 | 526 | 647 | | | | | 805 | 795 | 490 | | |
| Lane group cap | | 920 | 420 | 636 | 1797 | | | | | 787 | 766 | 679 | | |
| w/c ratio | | 1.03 | 0.36 | 0.93 | 0.36 | | | | | 1.02 | 1.04 | 0.72 | | |
| Green ratio | | 0.26 | 0.26 | 0.19 | 0.48 | | | | | 0.44 | 0.44 | 0.44 | | |
| Unif. delay d1 | | 50.0 | 40.9 | 52.9 | 22.0 | | | | | 37.5 | 37.5 | 30.7 | | |
| Delay factor k | | 0.50 | 0.11 | 0.37 | 0.11 | | | | | 0.50 | 0.50 | 0.29 | | |
| Increment. delay d2 | | 37.4 | 0.5 | 8.9 | 0.1 | | | | | 38.0 | 43.1 | 3.6 | | |
| PF factor | | 0.767 | 0.767 | 0.848 | 0.381 | | | | | 0.467 | 0.467 | 0.467 | | |
| Control delay | | 75.8 | 31.9 | 53.8 | 8.5 | | | | | 55.5 | 50.6 | 18.1 | | |
| Lane group LOS | | E | C | D | A | | | | | E | E | B | | |
| Approch. delay | | 69.7 | | | 29.9 | | | | | | 48.7 | | | |
| Approach LOS | | E | | | C | | | | | | D | | | |
| Intersec. delay | | 49.6 | | | Intersection LOS | | | | | | D | | | |

Handwritten notes: "T P" and "3.0"

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 3-B WITH LA MEDIA PM PEAK HOUR

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|----|-------|-------|-------|-------|----|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | T | R | L | T | | | | | L | LTR | R |
| init. queue/ lane | | 0.0 | 0.0 | 0.0 | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Flow rate/ lane | | 947 | 153 | 526 | 947 | | | | | 805 | 796 | 490 |
| Satflow per lane | | 1862 | 1521 | 1775 | 1960 | | | | | 1776 | 1724 | 1528 |
| Capacity/ lane | | 920 | 420 | 536 | 1797 | | | | | 787 | 766 | 679 |
| Flow ratio | | 0.27 | 0.09 | 0.15 | 0.17 | | | | | 0.45 | 0.46 | 0.32 |
| w/c ratio | | 1.93 | 0.36 | 0.83 | 0.36 | | | | | 1.92 | 1.04 | 0.72 |
| PF factor | | 1.000 | 1.000 | 1.000 | 1.000 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | | 5 | 5 | 5 | 5 | | | | | 5 | 5 | 5 |
| Platoon ratio | | 1.57 | 1.57 | 1.57 | 1.57 | | | | | 1.67 | 1.67 | 1.67 |
| PF factor | | 1.00 | 0.82 | 0.96 | 0.44 | | | | | 1.00 | 1.00 | 0.68 |
| Q ₁ | | 16.6 | 3.3 | 9.4 | 3.5 | | | | | 30.2 | 29.9 | 10.7 |
| Q ₂ | | 0.6 | 0.5 | 0.5 | 0.8 | | | | | 0.6 | 0.7 | 0.7 |
| Q ₃ | | 6.9 | 2.3 | 1.7 | 0.5 | | | | | 10.6 | 10.7 | 1.7 |
| Q avg | | 25.5 | 4.2 | 11.1 | 4.0 | | | | | 40.1 | 40.6 | 11.9 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|--|------|-----|------|-----|--|--|--|--|------|------|------|
| f ₉₅ | | 1.6 | 2.0 | 1.8 | 2.0 | | | | | 1.6 | 1.6 | 1.8 |
| BOQ, Q ₉₅ | | 42.0 | 8.2 | 20.3 | 7.9 | | | | | 52.8 | 63.4 | 21.6 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|--|------|------|------|------|--|--|--|--|------|------|------|
| Q spacing | | 24.9 | 24.9 | 24.9 | 24.9 | | | | | 24.9 | 24.9 | 24.9 |
| Q storage | | 0 | 0 | 0 | 0 | | | | | 0 | 0 | 0 |
| Avg. R _u | | | | | | | | | | | | |
| 95% R _u | | | | | | | | | | | | |

I-P
W
MT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-------|-------|------------------|------------------------|---------------------------|-----|-----|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | PALM AV./I-805 SB RAMPS | | | | | |
| Agency or Co. | SAN DIEGO | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/07/12 | | | | | Jurisdiction | SAN DIEGO/WITH MITIGATION | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 /ALT.3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 2 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 |
| Lane group | | T | R | L | T | | | | | L | TR | R |
| Volume (vph) | | 900 | 145 | 500 | 615 | | | | | 1365 | 1 | 770 |
| % Heavy veh | | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 2 |
| PHF | | 0.95 | 0.95 | 0.95 | 0.95 | | | | | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | | A | A | A | A | | | | | A | A | A |
| Startup lost time | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | | 2.0 | 2.0 | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Arrival type | | 5 | 5 | 5 | 5 | | | | | 5 | 5 | 5 |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | | | | 10 | | | 10 | 5 | 0 |
| Lane Width | | 12.0 | 12.0 | 12.0 | 12.0 | | | | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | 0 | 0 | | | | | 0 | 0 | 0 |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 |
| Phasing | WB Only | Thru & RT | 03 | | 04 | | SB Only | 06 | | 07 | | 08 |
| Timing | G = 20.0 | G = 40.0 | G = | G = | G = 60.0 | G = | G = | G = | G = | G = | G = | G = |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = | Y = | Y = | Y = | Y = | Y = | Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 135.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | 947 | 153 | 526 | 647 | | | | | 1437 | 406 | 406 |
| Lane group cap. | | 1051 | 481 | 509 | 1797 | | | | | 1528 | 680 | 679 |
| v/c ratio | | 0.90 | 0.32 | 1.03 | 0.36 | | | | | 0.94 | 0.60 | 0.60 |
| Green ratio | | 0.30 | 0.30 | 0.15 | 0.48 | | | | | 0.44 | 0.44 | 0.44 |
| Unif. delay d1 | | 45.6 | 36.9 | 57.5 | 22.0 | | | | | 35.8 | 28.4 | 28.4 |
| Delay factor k | | 0.42 | 0.11 | 0.50 | 0.11 | | | | | 0.45 | 0.19 | 0.19 |
| Increm. delay d2 | | 10.6 | 0.4 | 48.8 | 0.1 | | | | | 11.7 | 1.4 | 1.5 |
| PF factor | | 0.719 | 0.719 | 0.884 | 0.381 | | | | | 0.467 | 0.467 | 0.467 |
| Control delay | | 43.4 | 26.9 | 99.6 | 8.5 | | | | | 28.4 | 14.7 | 14.7 |
| Lane group LOS | | D | C | F | A | | | | | C | B | B |
| Apprch. delay | | 41.1 | | | 49.3 | | | | | | 23.5 | |
| Approach LOS | | D | | | D | | | | | | C | |
| Intersec. delay | | 34.5 | | | Intersection LOS | | | | | | C | |

I-P
W
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT. 3-B WITH LA MEDIA PM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----------|----------|----------|----------|----|----|----|----|----------|-----------|----------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | <i>T</i> | <i>R</i> | <i>L</i> | <i>T</i> | | | | | <i>L</i> | <i>TR</i> | <i>R</i> |
| Init. queue/lane | | 0.0 | 0.0 | 0.0 | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | | 947 | 153 | 500 | 647 | | | | | 1437 | 406 | 406 |
| Satflow per lane | | 1862 | 1624 | 1770 | 1960 | | | | | 1770 | 1529 | 1528 |
| Capacity/lane | | 1043 | 478 | 531 | 1812 | | | | | 1516 | 675 | 674 |
| Flow ratio | | 0.27 | 0.09 | 0.15 | 0.17 | | | | | 0.42 | 0.27 | 0.27 |
| v/c ratio | | 0.91 | 0.32 | 0.94 | 0.36 | | | | | 0.95 | 0.60 | 0.60 |
| l factor | | 1.000 | 1.000 | 1.000 | 1.000 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | | 5 | 5 | 5 | 5 | | | | | 5 | 5 | 5 |
| Platoon ratio | | 1.67 | 1.67 | 1.67 | 1.67 | | | | | 1.67 | 1.67 | 1.67 |
| PF factor | | 0.95 | 0.78 | 0.99 | 0.43 | | | | | 0.91 | 0.62 | 0.62 |
| Q1 | | 17.2 | 3.5 | 9.5 | 3.4 | | | | | 24.3 | 7.3 | 7.3 |
| ka | | 0.6 | 0.6 | 0.4 | 0.9 | | | | | 0.8 | 0.7 | 0.7 |
| Q2 | | 3.8 | 0.3 | 2.7 | 0.5 | | | | | 6.2 | 1.0 | 1.0 |
| Q avg. | | 21.1 | 3.8 | 12.3 | 3.9 | | | | | 30.5 | 8.3 | 8.3 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|------|-----|------|-----|--|--|--|--|------|------|------|
| fb% | | 1.7 | 2.0 | 1.8 | 2.0 | | | | | 1.6 | 1.9 | 1.9 |
| BOQ, Q% | | 35.5 | 7.5 | 22.1 | 7.8 | | | | | 49.2 | 15.6 | 15.6 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|------|------|------|--|--|--|--|------|------|------|
| Q spacing | | 24.9 | 24.9 | 24.9 | 24.9 | | | | | 24.9 | 24.9 | 24.9 |
| Q storage | | 0 | 0 | 0 | 0 | | | | | 0 | 0 | 0 |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq% | | | | | | | | | | | | |

2 A
N
M17

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|---------------------------------|------------------|--|--|--|
| Analyst | USA1 | Intersection | PALM AV./A-805 NB RAMP | | | | |
| Agency or Co. | USA1 | Area Type | All other areas | | | | |
| Date Performed | 03/11/11 | Jurisdiction | SAN DIEGO | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030/ALT 3BW LMA/NO MIT | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|----------|------|------------------------|------|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| Lane group | L | T | | | T | R | | LTR | R | | | |
| Volume (vph) | 655 | 1310 | | | 575 | 1250 | 60 | 1 | 385 | | | |
| % Heavy Veh | 2 | 2 | | | 2 | 2 | 2 | 2 | 2 | | | |
| PHF | 0.99 | 0.95 | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Actuated (PIA) | A | A | | | A | A | A | A | A | | | |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Ext. af. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 200 | 10 | | 0 | 10 | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | 12.0 | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 5.0 | 3.0 | | | |
| Phasing | 03 Only | Thru & RT | 03 | 04 | NB Only | 06 | 07 | 08 | | | | |
| Timing | G = 25.0 | G = 50.0 | G = | G = | G = 31.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 5 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 120.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-------|------|-------|-------|-----|--|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 662 | 1379 | | | 605 | 1105 | | 185 | 284 | | |
| Lane group cap. | 716 | 2450 | | | 1555 | 645 | | 427 | 409 | | | |
| v/c ratio | 0.92 | 0.56 | | | 0.39 | 1.71 | | 0.43 | 0.69 | | | |
| Green ratio | 0.21 | 0.66 | | | 0.42 | 0.42 | | 0.26 | 0.26 | | | |
| Unf. delay c1 | 49.6 | 11.1 | | | 24.4 | 35.0 | | 37.2 | 45.7 | | | |
| Delay factor k | 0.44 | 0.18 | | | 0.11 | 0.50 | | 0.11 | 0.26 | | | |
| Incom. delay c2 | 17.8 | 0.3 | | | 0.2 | 377.5 | | 0.7 | 5.0 | | | |
| PF factor | 0.825 | 0.146 | | | 0.524 | 0.763 | | 0.758 | 0.768 | | | |
| Control delay | 55.2 | 1.9 | | | 12.9 | 354.2 | | 29.2 | 35.9 | | | |
| Lane group LOS | E | A | | | B | F | | C | D | | | |
| Approch. delay | 19.5 | | | 232.5 | | | 33.3 | | | | | |
| Approach LOS | E | | | F | | | C | | | | | |
| Intersec. delay | 107.7 | | | Intersection LOS | | | | | | F | | |

2-A
N
MT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: A/T, 3B WITH 1A MEDIA AM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|----|-------|-------|----|-------|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | T | R | | TR | R | | | |
| Init queue/lane | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | |
| Flow rate/lane | 662 | 1379 | | | 605 | 1195 | | 185 | 284 | | | |
| Satflow per lane | 1770 | 1963 | | | 1980 | 1549 | | 1651 | 1523 | | | |
| Capacity/lane | 716 | 2458 | | | 1555 | 645 | | 427 | 409 | | | |
| Flow ratio | 0.19 | 0.37 | | | 0.16 | 0.71 | | 0.11 | 0.18 | | | |
| Vol ratio | 0.92 | 0.56 | | | 0.39 | 1.71 | | 0.43 | 0.89 | | | |
| factor | 1.000 | 1.000 | | | 1.000 | 1.000 | | 1.000 | 1.000 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Platoon ratio | 1.67 | 1.44 | | | 1.67 | 1.33 | | 1.67 | 1.67 | | | |
| PF factor | 0.96 | 0.20 | | | 0.60 | 1.00 | | 0.84 | 0.90 | | | |
| Q1 | 10.9 | 2.6 | | | 4.4 | 36.8 | | 4.3 | 7.7 | | | |
| Q5 | 0.5 | 1.0 | | | 0.7 | 0.6 | | 0.5 | 0.5 | | | |
| Q2 | 3.0 | 1.2 | | | 0.5 | 59.6 | | 0.4 | 1.0 | | | |
| Q avg. | 12.0 | 2.8 | | | 4.9 | 95.8 | | 4.7 | 8.7 | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|-----|--|--|-----|-----|--|-----|------|--|--|--|
| Q95 | 1.8 | 2.0 | | | 2.5 | 1.5 | | 2.0 | 1.9 | | | |
| BOQ, Qx | 24.6 | 7.5 | | | 9.6 | 144 | | 9.2 | 16.3 | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|--|------|------|--|------|------|--|--|--|
| Q spacing | 24.9 | 24.9 | | | 24.9 | 24.9 | | 24.9 | 24.9 | | | |
| Q storage | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

2-A
W
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-------|-------|-----|------------------|-----------------------|------------------------------|-------|-------|----|----|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | PALM AV./I-805 NB RAMPS | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/08/12 | | | | | Jurisdiction | SAN DIEGO/WITH MITIGATION | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALT. 3BW LM/WITH M | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 3 | 1 | 0 | 3 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| Lane group | | T | R | | T | R | L | LTR | R | | | |
| Volume (vph) | | 1310 | 655 | | 575 | 1250 | 60 | 1 | 385 | | | |
| % Heavy veh | | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | | | |
| PHF | | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Actuated (P/A) | | A | A | | A | A | A | A | A | | | |
| Startup lost time | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Ext. eff. green | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Arrival type | | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | | |
| Unit Extension | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | |
| Ped/Bike/RTOR Volume | 0 | 0 | 0 | 10 | 5 | 200 | 10 | | 0 | 10 | | |
| Lane Width | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | | |
| Unit Extension | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | |
| Phasing | Thru & RT | 02 | 03 | 04 | NB Only | 06 | 07 | 08 | | | | |
| Timing | G = 50.0 | G = | G = | G = | G = 31.0 | G = | G = | G = | | | | |
| | Y = 5 | Y = | Y = | Y = | Y = 5 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 91.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | 1379 | 689 | | 605 | 1105 | 44 | 141 | 284 | | | |
| Lane group cap. | | 2935 | 916 | | 2935 | 1490 | 603 | 549 | 539 | | | |
| v/c ratio | | 0.47 | 0.75 | | 0.21 | 0.74 | 0.07 | 0.26 | 0.53 | | | |
| Green ratio | | 0.55 | 0.55 | | 0.55 | 0.55 | 0.34 | 0.34 | 0.34 | | | |
| Unif. delay d1 | | 12.5 | 15.7 | | 10.4 | 15.6 | 20.3 | 21.7 | 24.1 | | | |
| Delay factor k | | 0.11 | 0.31 | | 0.11 | 0.30 | 0.11 | 0.11 | 0.13 | | | |
| Increm. delay d2 | | 0.1 | 3.5 | | 0.0 | 2.0 | 0.1 | 0.2 | 1.0 | | | |
| PF factor | | 0.187 | 0.187 | | 0.187 | 0.187 | 0.656 | 0.656 | 0.656 | | | |
| Control delay | | 2.4 | 6.5 | | 2.0 | 4.9 | 13.3 | 14.5 | 16.8 | | | |
| Lane group LOS | | A | A | | A | A | B | B | B | | | |
| Apprch. delay | | 3.8 | | | 3.9 | | | 15.8 | | | | |
| Approach LOS | | A | | | A | | | B | | | | |
| Intersec. delay | | 5.2 | | | Intersection LOS | | | | | | | A |

2-A
W
MIT

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|--|----|-------|-------|----|-------|-------|-------|-------|-------|----|----|----|
| General Information | | | | | | | | | | | | |
| Project Description <i>ALT. 3B WITH LA MEDIA AM PEAK HOUR/WITH MIT</i> | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | T | R | | T | R | L | LTR | R | | | |
| Init. queue/lane | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Flow rate/lane | | 1379 | 689 | | 605 | 1105 | 44 | 141 | 284 | | | |
| Satflow per lane | | 1960 | 1667 | | 1960 | 1532 | 1770 | 1611 | 1583 | | | |
| Capacity/lane | | 2935 | 916 | | 2935 | 1490 | 603 | 549 | 539 | | | |
| Flow ratio | | 0.26 | 0.41 | | 0.11 | 0.41 | 0.02 | 0.09 | 0.18 | | | |
| v/c ratio | | 0.47 | 0.75 | | 0.21 | 0.74 | 0.07 | 0.26 | 0.53 | | | |
| l factor | | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| Arrival type | | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | | |
| Platoon ratio | | 1.67 | 1.67 | | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | | | |
| PF factor | | 0.24 | 0.35 | | 0.20 | 0.35 | 0.67 | 0.70 | 0.77 | | | |
| Q1 | | 1.9 | 4.7 | | 0.6 | 4.1 | 0.5 | 1.8 | 4.4 | | | |
| kB | | 0.7 | 0.7 | | 0.7 | 0.6 | 0.5 | 0.5 | 0.5 | | | |
| Q2 | | 0.6 | 1.9 | | 0.2 | 1.7 | 0.0 | 0.2 | 0.5 | | | |
| Q avg. | | 2.5 | 6.6 | | 0.8 | 5.8 | 0.5 | 2.0 | 5.0 | | | |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| fB% | | 2.0 | 1.9 | | 2.1 | 1.9 | 2.1 | 2.0 | 2.0 | | | |
| BOQ, Q% | | 5.1 | 12.6 | | 1.6 | 11.3 | 1.1 | 4.0 | 9.7 | | | |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | | 24.9 | 24.9 | | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | | | |
| Q storage | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | | |
| Avg. Rq | | | | | | | | | | | | |
| 95% RQ% | | | | | | | | | | | | |

2 P
N
MUT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|-----------------------------|--|--|
| Analyst | USAI | | | Intersection | PALM AV A-805 NB RAMPS | | |
| Agency or Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 03/11/11 | | | Jurisdiction | SAN DIEGO | | |
| Time Period | PM PEAK HOUR | | | Analysis Year | YEAR 2030/ALT. 3B WITH LMNO | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|----------|------------------------|------|------|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| Lane Group | L | T | | | T | R | | LTR | R | | | |
| Volume (vph) | 540 | 1725 | | | 1000 | 1345 | 115 | 1 | 620 | | | |
| % Heavy veh | 2 | 2 | | | 2 | 2 | 2 | 2 | 2 | | | |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Actuated (P/A) | A | A | | | A | A | A | A | A | | | |
| Startup (s) time | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Ped/Bike/R TOR Volume | | | | 10 | 5 | 200 | 10 | | 0 | 10 | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | 12.0 | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Phasing | EB Only | Thru & RT | 03 | 04 | NB Only | 06 | 07 | 08 | | | | |
| Timing | G = 25.0 | G = 50.0 | G = | G = | G = 31.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 5 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 120.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-------|------|-------|-------|-----|--|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 568 | 1816 | | | 1053 | 1305 | | 448 | 327 | | |
| Lane group cap. | 716 | 2458 | | | 1555 | 645 | | 423 | 409 | | | |
| v/c ratio | 0.79 | 0.74 | | | 0.68 | 1.87 | | 1.06 | 0.80 | | | |
| Green ratio | 0.21 | 0.66 | | | 0.42 | 0.42 | | 0.26 | 0.26 | | | |
| Unif. delay d1 | 45.0 | 13.6 | | | 28.4 | 35.0 | | 44.5 | 41.6 | | | |
| Delay factor k | 0.34 | 0.30 | | | 0.25 | 0.50 | | 0.50 | 0.34 | | | |
| Increm. delay d2 | 6.1 | 1.2 | | | 1.2 | 396.5 | | 60.3 | 13.8 | | | |
| PF factor | 0.825 | 0.146 | | | 0.524 | 0.942 | | 0.168 | 0.768 | | | |
| Control delay | 43.3 | 2.2 | | | 19.1 | 428.1 | | 94.4 | 42.7 | | | |
| Lane group LOS | D | A | | | B | F | | I | D | | | |
| Approach delay | 12.8 | | | 234.9 | | | 72.6 | | | | | |
| Approach LOS | D | | | F | | | E | | | | | |
| Intersec. delay | 113.9 | | | Intersection LOS | | | | | | F | | |

2-P
N
MAY

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: *ALT. 3B with LA MEDIA PM PEAK HOUR/NO MIT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|----|----|-------|-------|----|-------|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | T | R | | LTR | R | | | |
| Init. queue/lane | 0.0 | 5.0 | | | 0.0 | 5.0 | | 0.5 | 0.0 | | | |
| Flow rate/ lane | 568 | 1816 | | | 1053 | 1205 | | 448 | 227 | | | |
| Sat flow per lane | 1770 | 1960 | | | 1960 | 1543 | | 1637 | 1583 | | | |
| Capacity/ lane | 716 | 2458 | | | 1555 | 945 | | 423 | 409 | | | |
| Flow ratio | 0.16 | 0.49 | | | 0.28 | 0.78 | | 0.27 | 0.21 | | | |
| w/c ratio | 0.79 | 0.74 | | | 0.68 | 1.87 | | 1.06 | 0.80 | | | |
| I factor | 1.000 | 1.000 | | | 1.000 | 1.500 | | 1.000 | 1.000 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Platoon ratio | 1.67 | 1.44 | | | 1.67 | 1.22 | | 1.67 | 1.67 | | | |
| PF factor | 0.95 | 0.25 | | | 0.71 | 1.00 | | 1.00 | 0.93 | | | |
| Q1 | 8.8 | 5.3 | | | 10.6 | 40.2 | | 14.9 | 9.5 | | | |
| k5 | 0.5 | 1.0 | | | 0.7 | 0.6 | | 0.5 | 0.5 | | | |
| Q2 | 1.5 | 2.5 | | | 1.5 | 71.3 | | 7.0 | 1.5 | | | |
| C avg. | 10.3 | 7.9 | | | 12.1 | 111.5 | | 22.0 | 11.1 | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|--|--|------|-----|--|------|------|--|--|--|
| ft/c | 1.8 | 1.9 | | | 1.8 | 1.5 | | 1.7 | 1.5 | | | |
| BOQ C/c | 18.9 | 14.9 | | | 21.9 | 157 | | 36.8 | 20.3 | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|--|------|------|--|------|------|--|--|--|
| Q spacing | 24.9 | 24.9 | | | 24.9 | 24.9 | | 24.9 | 24.9 | | | |
| Q storage | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Avg. R/c | | | | | | | | | | | | |
| 95% R/c | | | | | | | | | | | | |

2-P
W
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-------|-------|-----|------------------|-----------------------|-------------------------------|-------|-------|----|----|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | PALM AV./I-805 NB RAMPS | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/08/12 | | | | | Jurisdiction | SAN DIEGO/WITH MITIGATION | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ ALT. 3B-WITH LA ME | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 3 | 1 | 0 | 3 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| Lane group | | T | R | | T | R | L | LTR | R | | | |
| Volume (vph) | | 1725 | 540 | | 1000 | 1345 | 115 | 1 | 620 | | | |
| % Heavy veh | | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | | | |
| PHF | | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Actuated (P/A) | | A | A | | A | A | A | A | A | | | |
| Startup lost time | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Ext. eff. green | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | |
| Arrival type | | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | | |
| Unit Extension | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | |
| Ped/Bike/RTOR Volume | 0 | 0 | 0 | 10 | 5 | 200 | 10 | | 0 | 10 | | |
| Lane Width | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | | |
| Unit Extension | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | |
| Phasing | Thru & RT | 02 | 03 | 04 | NB Only | 06 | 07 | 08 | | | | |
| Timing | G = 50.0 | G = | G = | G = | G = 31.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 5 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 90.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | 1816 | 568 | | 1053 | 1205 | 61 | 387 | 327 | | | |
| Lane group cap. | | 2967 | 926 | | 2967 | 1507 | 610 | 556 | 545 | | | |
| v/c ratio | | 0.61 | 0.61 | | 0.35 | 0.80 | 0.10 | 0.70 | 0.60 | | | |
| Green ratio | | 0.56 | 0.56 | | 0.56 | 0.56 | 0.34 | 0.34 | 0.34 | | | |
| Unif. delay d1 | | 13.5 | 13.5 | | 11.1 | 16.0 | 20.0 | 25.4 | 24.4 | | | |
| Delay factor k | | 0.20 | 0.20 | | 0.11 | 0.34 | 0.11 | 0.26 | 0.19 | | | |
| Increm. delay d2 | | 0.4 | 1.2 | | 0.1 | 3.2 | 0.1 | 3.8 | 1.8 | | | |
| PF factor | | 0.167 | 0.167 | | 0.167 | 0.167 | 0.650 | 0.650 | 0.650 | | | |
| Control delay | | 2.6 | 3.5 | | 1.9 | 5.8 | 13.1 | 20.3 | 17.7 | | | |
| Lane group LOS | | A | A | | A | A | B | C | B | | | |
| Approch. delay | | 2.8 | | | 4.0 | | | 18.6 | | | | |
| Approach LOS | | A | | | A | | | B | | | | |
| Intersec. delay | | 5.6 | | | Intersection LOS | | | | | | | A |

2-P
W.
MIT.

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT. 3B WITH LA MEDIA PM PEAK HOUR/WITH MIT.

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|-------|-------|----|-------|-------|-------|-------|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | T | R | | T | R | L | LTR | R | | | |
| Init. queue/lane | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Flow rate/lane | | 1816 | 568 | | 1053 | 1205 | 61 | 387 | 327 | | | |
| Satflow per lane | | 1960 | 1667 | | 1960 | 1532 | 1770 | 1614 | 1583 | | | |
| Capacity/lane | | 2967 | 926 | | 2967 | 1507 | 610 | 556 | 545 | | | |
| Flow ratio | | 0.34 | 0.34 | | 0.20 | 0.44 | 0.03 | 0.24 | 0.21 | | | |
| v/c ratio | | 0.61 | 0.61 | | 0.35 | 0.80 | 0.10 | 0.70 | 0.60 | | | |
| I factor | | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| Arrival type | | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | | |
| Platoon ratio | | 1.67 | 1.67 | | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | | | |
| PF factor | | 0.25 | 0.25 | | 0.20 | 0.36 | 0.67 | 0.82 | 0.79 | | | |
| Q1 | | 2.8 | 2.4 | | 1.1 | 4.8 | 0.7 | 6.9 | 5.3 | | | |
| k ₃ | | 0.7 | 0.7 | | 0.7 | 0.6 | 0.5 | 0.5 | 0.5 | | | |
| Q ₂ | | 1.1 | 1.0 | | 0.4 | 2.3 | 0.1 | 1.1 | 0.7 | | | |
| Q avg. | | 4.0 | 3.5 | | 1.5 | 7.1 | 0.7 | 7.9 | 6.0 | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|-------------------|--|-----|-----|--|-----|------|-----|------|------|--|--|--|
| f ₉₅ % | | 2.0 | 2.0 | | 2.1 | 1.9 | 2.1 | 1.9 | 1.9 | | | |
| BOQ, Q% | | 7.9 | 6.9 | | 3.0 | 13.5 | 1.5 | 14.9 | 11.6 | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|----------------------|--|------|------|--|------|------|------|------|------|--|--|--|
| Q spacing | | 24.9 | 24.9 | | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | | | |
| Q storage | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | | |
| Avg. R ₀ | | | | | | | | | | | | |
| 95% R ₀ % | | | | | | | | | | | | |

3A
2
MI

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|----------|--|--|--|--|------------------|-------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA1 | | | | | Intersection | PALM AVE / DENVER ROAD | | | | | |
| Agency or Co | USA1 | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/11/11 | | | | | Jurisdiction | SAN DIEGO | | | | | |
| Time Period | AM PEAK | | | | | Analysis Year | YEAR 2030/ALT-3B-WTH IM | | | | | |

| Volume and Timing Input | | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|------|------|-------------------------|------|-----------|-----------|------|------|--|
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 3 | 1 | 0 | 2 | 2 | 1 | |
| Lane group | L | T | R | L | T | R | L | TR | | L | T | R | |
| Volume (vph) | 600 | 495 | 450 | 200 | 750 | 60 | 600 | 150 | 110 | 50 | 200 | 500 | |
| % Heavy veh | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| PIF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.90 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup call time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Ext eff green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 50 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl Left | Thru & RT | 03 | | | 04 | | | Thru & RT | Excl Left | 07 | 08 | |
| Timing | G = 20.0 | G = 35.0 | G = | | | G = | | | G = 15.0 | G = 21.0 | G = | | |
| | Y = 5 | Y = 5 | Y = | | | Y = | | | Y = 4 | Y = | Y = | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length CL = 120.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-------|------------------|-------|-------|-------|-------|-----|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | 632 | 521 | 474 | 211 | 800 | 67 | 632 | 221 | | 53 | 211 |
| Lane group cap. | 831 | 1558 | 721 | 931 | 1558 | 450 | 842 | 247 | | 601 | 498 | 572 |
| w/o ratio | 0.76 | 0.33 | 0.66 | 0.25 | 0.51 | 0.15 | 0.75 | 0.89 | | 0.09 | 0.42 | 0.92 |
| Green ratio | 0.24 | 0.29 | 0.47 | 0.24 | 0.29 | 0.29 | 0.17 | 0.13 | | 0.17 | 0.13 | 0.38 |
| Unit delay c1 | 42.3 | 33.4 | 24.6 | 36.8 | 35.4 | 31.5 | 47.0 | 51.2 | | 41.5 | 47.8 | 35.9 |
| Delay factor k | 0.21 | 0.11 | 0.23 | 0.11 | 0.12 | 0.11 | 0.30 | 0.42 | | 0.11 | 0.11 | 0.44 |
| Incrom. delay d2 | 4.1 | 5.1 | 7.7 | 5.2 | 0.3 | 0.2 | 3.6 | 31.2 | | 3.1 | 0.6 | 20.2 |
| PF factor | 0.788 | 0.725 | 0.417 | 0.788 | 0.725 | 0.725 | 0.859 | 0.857 | | 0.859 | 0.697 | 0.600 |
| Control delay | 37.4 | 24.3 | 12.5 | 29.1 | 28.0 | 23.0 | 44.1 | 77.1 | | 35.7 | 43.4 | 41.7 |
| Lane group LOS | D | C | B | C | C | C | D | E | | D | D | D |
| Approch. delay | 26.0 | | | 26.4 | | | 52.7 | | | 41.7 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| Intersec. delay | 34.2 | | | Intersection LOS | | | | | | C | | |

2
2
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: *ALT. 3B WITH LA MEDIA AM PEAK HOUR*

Average Back of Queue

| | EB | | | WB | | | NS | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | TR | | L | T | R |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 632 | 621 | 474 | 211 | 800 | 67 | 532 | 221 | | 63 | 211 | 529 |
| Satflow per lane | 1770 | 1960 | 1545 | 1770 | 1960 | 1543 | 1769 | 1854 | | 1770 | 1960 | 1525 |
| Capacity/lane | 831 | 1558 | 721 | 831 | 1568 | 450 | 843 | 247 | | 501 | 498 | 572 |
| Flow ratio | 0.18 | 0.10 | 0.31 | 0.06 | 0.15 | 0.04 | 0.13 | 0.12 | | 0.02 | 0.06 | 0.34 |
| w/c ratio | 3.76 | 0.33 | 0.66 | 0.25 | 0.51 | 0.15 | 0.75 | 0.89 | | 0.09 | 0.42 | 0.92 |
| I factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.500 | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 |
| Arrival type | S | S | S | S | S | S | S | S | | S | S | S |
| P. ratio | 1.67 | 1.67 | 1.87 | 1.67 | 1.67 | 1.67 | 1.67 | 1.57 | | 1.67 | 1.67 | 1.67 |
| PF factor | 0.93 | 0.78 | 0.59 | 0.82 | 0.92 | 0.75 | 0.95 | 0.98 | | 0.87 | 0.93 | 0.92 |
| Q ₁ | 9.3 | 3.9 | 7.2 | 2.4 | 6.7 | 1.2 | 7.0 | 7.2 | | 0.7 | 3.1 | 15.5 |
| kk | 0.5 | 0.6 | 0.7 | 0.5 | 0.6 | 0.5 | 0.4 | 0.4 | | 0.4 | 0.4 | 0.6 |
| Q ₂ | 1.4 | 0.3 | 1.2 | 0.2 | 0.5 | 0.1 | 1.1 | 1.9 | | 0.0 | 0.3 | 4.0 |
| Q avg. | 10.7 | 4.2 | 8.4 | 2.6 | 7.3 | 1.3 | 8.1 | 9.1 | | 0.7 | 3.4 | 19.4 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------------------|------|-----|------|-----|------|-----|------|------|--|-----|-----|------|
| f ₉₅ | 1.9 | 2.0 | 1.9 | 2.0 | 1.9 | 2.1 | 1.9 | 1.9 | | 2.1 | 2.0 | 1.7 |
| BOQ Q ₉₅ | 18.7 | 8.3 | 15.9 | 5.2 | 13.9 | 2.7 | 15.3 | 16.9 | | 1.4 | 6.8 | 33.1 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| Q subring | | | | | | | | | | | | |
| Q storage | | | | | | | | | | | | |
| Avg. RQ | | | | | | | | | | | | |
| 95% RQ ₉₅ | | | | | | | | | | | | |

B.P.
N
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|---------------|---------|------------------|--------------------------|--|--|
| Analyst | USAJ | Agency or Co. | USAJ | Intersection | PALM AVE. DENVER ROAD | | |
| Date Performed | 03/11/11 | Time Period | PM PEAK | Area Type | All other areas | | |
| | | | | Jurisdiction | SAN DIEGO | | |
| | | | | Analysis Year | YEAR 2035/ALT-3B-WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------|------|------------------------|----------|-----------|------------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of lanes | 2 | 3 | 1 | 2 | 3 | 1 | 3 | 1 | 0 | 2 | 2 | 1 | |
| Lane group | L | T | R | L | T | R | L | T | | L | T | R | |
| Volume (vph) | 600 | 595 | 900 | 150 | 455 | 50 | 750 | 150 | 250 | 50 | 190 | 400 | |
| % Heavy veh | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.90 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/R/TOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 75 | 10 | | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | |
| Parking/Grass/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Thru & RT | Excl. Left | 07 | | 08 |
| Timing | G = 25.0 | G = 37.0 | G = | G = | | | G = 25.0 | G = 29.0 | G = | G = | | | |
| | Y = 5 | Y = 5 | Y = | Y = | | | Y = 5 | Y = 4 | Y = | Y = | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 135.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-----|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 632 | 626 | 947 | 158 | 479 | 56 | 789 | 342 | | 63 | 200 |
| Lane group cap | 636 | 1464 | 755 | 636 | 1464 | 422 | 1035 | 328 | | 738 | 681 | 586 |
| v/c ratio | 0.95 | 0.43 | 1.25 | 0.25 | 0.33 | 0.13 | 0.76 | 1.04 | | 0.07 | 0.29 | 0.77 |
| Green ratio | 0.19 | 0.27 | 0.43 | 0.15 | 0.27 | 0.27 | 0.21 | 0.19 | | 0.21 | 0.19 | 0.27 |
| Unif. delay d' | 54.9 | 40.3 | 34.5 | 47.0 | 39.1 | 36.9 | 45.8 | 55.0 | | 42.3 | 47.4 | 36.5 |
| Delay factor k | 0.50 | 0.11 | 0.50 | 0.11 | 0.11 | 0.11 | 0.31 | 0.50 | | 0.11 | 0.11 | 0.28 |
| Increment. delay d2 | 34.0 | 0.2 | 125.2 | 0.2 | 0.1 | 0.1 | 3.4 | 61.2 | | 0.6 | 0.2 | 4.3 |
| PF factor | 0.848 | 0.748 | 0.475 | 0.848 | 0.748 | 0.748 | 0.818 | 0.548 | | 0.818 | 0.848 | 0.608 |
| Control delay | 60.6 | 30.4 | 141.6 | 40.1 | 29.4 | 27.8 | 44.1 | 107.9 | | 34.6 | 40.4 | 26.4 |
| Lane group LOS | F | C | F | D | C | C | D | F | | C | D | C |
| Approach delay | 92.5 | | | 31.7 | | | 63.4 | | | 31.2 | | |
| Approach LOS | F | | | C | | | E | | | C | | |
| Intersec. delay | 67.8 | | | Intersection LOS | | | | | | L | | |

3/8
H
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 39 WITH LA MEDIA PM PEAK HOUR

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | TR | | L | T | R |
| Intr. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 632 | 626 | 947 | 158 | 479 | 56 | 789 | 342 | | 53 | 200 | 421 |
| Sat flow per lane | 1770 | 1960 | 1544 | 1770 | 1960 | 1541 | 1769 | 1770 | | 1770 | 1960 | 1583 |
| Capacity/lane | 636 | 1464 | 755 | 636 | 1464 | 422 | 1035 | 326 | | 738 | 691 | 586 |
| Flow ratio | 0.18 | 0.12 | 0.61 | 0.05 | 0.09 | 0.04 | 0.16 | 0.19 | | 0.02 | 0.05 | 0.27 |
| Vol ratio | 0.99 | 0.43 | 1.25 | 0.25 | 0.33 | 0.13 | 0.76 | 1.04 | | 0.07 | 0.29 | 0.72 |
| I factor | 1.000 | 1.009 | 1.000 | 1.005 | 1.005 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | 5 |
| Flatoon ratio | 1.67 | 1.67 | 1.55 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | | 1.67 | 1.67 | 1.67 |
| PF factor | 1.00 | 0.82 | 1.00 | 0.88 | 0.80 | 0.77 | 0.94 | 1.03 | | 0.83 | 0.88 | 0.80 |
| Q1 | 12.1 | 6.8 | 36.5 | 2.3 | 4.2 | 1.2 | 9.6 | 12.8 | | 0.7 | 3.0 | 10.9 |
| kb | 0.5 | 0.6 | 0.7 | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 | | 0.5 | 0.5 | 0.6 |
| Q2 | 4.2 | 0.4 | 27.2 | 0.1 | 0.3 | 0.1 | 1.4 | 5.4 | | 0.0 | 0.2 | 1.5 |
| Q avg. | 16.3 | 6.2 | 62.7 | 2.4 | 4.5 | 1.3 | 11.0 | 18.2 | | 0.7 | 3.2 | 12.4 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|------|-----|-----|-----|------|------|--|-----|-----|------|
| Vol | 1.7 | 1.9 | 1.5 | 2.0 | 2.0 | 2.1 | 1.8 | 1.7 | | 2.1 | 2.0 | 1.8 |
| BOQ, Q% | 28.4 | 12.0 | 95.3 | 4.9 | 8.8 | 2.7 | 20.0 | 31.2 | | 1.5 | 6.4 | 22.3 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|--|--|--|--|--|--|--|--|--|
| Q spacing | | | | | | | | | | | | |
| Q storage | | | | | | | | | | | | |
| Avg Rp | | | | | | | | | | | | |
| 95% Row | | | | | | | | | | | | |

A
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|------------------------|--|--|------------------|--------------------------------|--|--|
| Analyst | USA! | | | Intersection | GTAY MESA RD/OCEAN VIEW HWY LS | | |
| Agency or Co. | USA! | | | Area Type | All other areas | | |
| Date Performed | 07/06/11 | | | Jurisdiction | SAN DIEGO/NO MIT | | |
| Time Period | YEAR 2030 AM PEAK HOUR | | | Analysis Year | YEAR 2030/ALT 30 WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|----------|-----------|------|------------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Nbr. of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 0 | 2 | 3 | 0 |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | |
| Volume (vph) | 100 | 975 | 600 | 750 | 530 | 465 | 240 | 210 | 1755 | 850 | 520 | 100 |
| % Heavy veh | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. off. green | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 100 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | S | N | N | S | N | N | S | N | N | D | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.0 | 2.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | WB Only | Thru & RT | C4 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 15.0 | G = 26.0 | G = 25.0 | G = | G = 35.0 | G = 25.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = 5 | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 9.25 | | | | | | | Cycle Length C = 150.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|------|-------|-------|-----|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj. flow rate | 105 | 1526 | 526 | 600 | 558 | 469 | 253 | 2088 | | 895 | 652 | |
| Lane group cap. | 344 | 526 | 654 | 1531 | 2030 | 991 | 802 | 757 | | 852 | 898 | | |
| Vol ratio | 0.31 | 1.11 | 0.79 | 0.78 | 0.27 | 0.49 | 0.52 | 2.73 | | 1.12 | 0.73 | | |
| Green ratio | 0.10 | 0.17 | 0.43 | 0.30 | 0.38 | 0.64 | 5.23 | 0.17 | | 0.23 | 0.17 | | |
| Unit delay d1 | 52.7 | 62.0 | 35.7 | 47.9 | 32.2 | 14.2 | 47.5 | 62.0 | | 57.5 | 56.6 | | |
| Delay factor k | 0.11 | 0.50 | 0.34 | 0.33 | 0.11 | 0.11 | 0.11 | 0.50 | | 0.50 | 0.25 | | |
| Increment delay d2 | 0.5 | 63.8 | 6.5 | 3.8 | 0.1 | 0.4 | 0.2 | 763.1 | | 69.6 | 3.0 | | |
| PF factor | 0.926 | 0.850 | 0.490 | 0.714 | 0.591 | 0.139 | 0.797 | 0.660 | | 0.797 | 0.660 | | |
| Control delay | 58.5 | 117.1 | 24.5 | 38.0 | 19.1 | 2.4 | 38.2 | 836.4 | | 114.4 | 53.4 | | |
| Lane group LOS | E | F | C | D | B | A | D | F | | F | D | | |
| Approach delay | 84.0 | | | 22.9 | | | 749.4 | | | 86.7 | | | |
| Approach LOS | F | | | C | | | F | | | F | | | |
| Intersec. delay | 279.2 | | | Intersection LOS | | | | | | | | | F |

4-A
2
117

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT 3B WITH LA MEDIA AM/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | |
| Int. queue/lane | 0.0 | 0.0 | 5.0 | 0.0 | 0.0 | 0.0 | 5.0 | 0.0 | | 0.0 | 5.0 | |
| Flow rate/lane | 105 | 1025 | 575 | 800 | 558 | 465 | 253 | 2088 | | 895 | 952 | |
| Satflow per lane | 1770 | 1960 | 1532 | 1768 | 1960 | 1549 | 1770 | 1602 | | 1770 | 1907 | |
| Capacity/lane | 344 | 925 | 664 | 1031 | 2030 | 991 | 807 | 757 | | 802 | 858 | |
| Flow ratio | 0.03 | 0.15 | 0.34 | 0.23 | 0.10 | 0.32 | 0.07 | 0.47 | | 0.26 | 0.13 | |
| Vol ratio | 0.31 | 1.11 | 0.79 | 0.78 | 0.27 | 0.49 | 0.32 | 2.73 | | 1.12 | 0.73 | |
| Pl factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.46 | 1.67 | 1.67 | | 1.67 | 1.67 | |
| PF factor | 0.95 | 1.00 | 0.75 | 0.69 | 0.64 | 0.16 | 0.64 | 1.00 | | 1.00 | 0.95 | |
| Q ₁ | 2.0 | 15.7 | 14.2 | 14.0 | 3.8 | 1.9 | 3.8 | 31.5 | | 19.2 | 9.0 | |
| Q ₂ | 0.3 | 0.5 | 0.7 | 0.6 | 0.8 | 0.9 | 0.6 | 0.4 | | 0.6 | 0.5 | |
| Q ₃ | 0.1 | 7.6 | 2.4 | 2.0 | 0.3 | 0.9 | 0.3 | 60.9 | | 9.4 | 1.2 | |
| Q avg | 2.1 | 23.3 | 15.7 | 15.9 | 4.1 | 2.8 | 4.0 | 92.6 | | 28.5 | 15.1 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|-----|------|------|------|-----|-----|-----|-----|--|------|------|--|
| Int. | 2.0 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 1.5 | | 1.6 | 1.8 | |
| BOQ, Q ₉₅ | 4.3 | 38.8 | 29.0 | 27.8 | 8.0 | 5.7 | 8.0 | 139 | | 45.3 | 18.6 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|--|------|------|--|
| Q spacing | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | | 24.9 | 24.9 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Avg R ₁ | | | | | | | | | | | | |
| 95% R _{0.95} | | | | | | | | | | | | |

4-A
W
MIT

| SHORT REPORT | | | | | | | | | | | | | |
|---|------------------------|----------|-----------|------------------|------------|------------------------|-------------------------------|-------|-------|-------|-------|------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA! | | | | | Intersection | OTAY MESA RD/OCEAN VIEW HILLS | | | | | | |
| Agency or Co | USA! | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 5/7/05/11 | | | | | Jurisdiction | SAN DIEGO/WITH MIT | | | | | | |
| Time Period | YEAR 2030 AM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALT. 3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 2 | 3 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 3 | 0 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | TR | | |
| Volume (vph) | 100 | 975 | 600 | 780 | 530 | 455 | 240 | 210 | 1755 | 850 | 520 | 100 | |
| % Heavy veh | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 7 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 3.0 | 2.0 | 2.0 | 5.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 100 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.5 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl. Left | WB Only | Thru & RT | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 15.0 | G = 25.0 | G = 25.0 | G = | G = 35.0 | G = 26.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = 5 | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 105 | 1026 | 526 | 600 | 558 | 469 | 253 | 221 | 1847 | 895 | 652 | | |
| Lane group cap | 344 | 961 | 675 | 1008 | 2030 | 991 | 852 | 926 | 746 | 852 | 898 | | |
| w/c ratio | 0.31 | 1.07 | 0.78 | 0.79 | 0.27 | 0.49 | 0.32 | 0.24 | 2.48 | 1.12 | 0.73 | | |
| Green ratio | 0.10 | 0.19 | 0.44 | 0.29 | 0.38 | 0.64 | 0.23 | 0.17 | 0.50 | 0.23 | 0.17 | | |
| Un f. delay d1 | 62.7 | 61.5 | 35.9 | 48.8 | 32.2 | 14.2 | 47.6 | 53.5 | 57.5 | 57.5 | 58.6 | | |
| Delay factor k | 0.11 | 0.65 | 0.23 | 0.34 | 0.11 | 0.17 | 0.11 | 0.11 | 0.50 | 0.50 | 0.29 | | |
| Incrum. delay e2 | 0.5 | 45.0 | 5.8 | 4.4 | 0.1 | 0.4 | 0.2 | 0.1 | 668.2 | 66.6 | 3.0 | | |
| FF factor | 0.926 | 0.854 | 0.476 | 0.723 | 0.591 | 0.139 | 0.797 | 0.860 | 1.050 | 0.797 | 0.960 | | |
| Control delay | 68.5 | 101.4 | 22.9 | 36.8 | 19.1 | 2.4 | 36.2 | 46.1 | 705.7 | 114.4 | 53.4 | | |
| Lane group LOS | E | F | C | D | B | A | D | D | F | F | D | | |
| Approch. delay | 73.7 | | | 23.8 | | | 570.1 | | | 88.7 | | | |
| Approch LOS | F | | | C | | | F | | | F | | | |
| Intersec. delay | 120.5 | | | Intersection LOS | | | | | | | | | F |

4-
A
MST

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT 33 WITH LA MEDIA AM PEAK HOUR WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | L | TH | RT | L | TH | RT |
| Lane group | I | T | R | L | T | R | I | T | R | L | TR | |
| In queue (cars) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate (lane) | 105 | 1026 | 526 | 800 | 558 | 489 | 253 | 221 | 1947 | 995 | 652 | |
| Satflow per lane | 1770 | 1960 | 1534 | 1799 | 1360 | 1549 | 1770 | 1960 | 1491 | 1770 | 1902 | |
| Capacity (lane) | 344 | 961 | 675 | 1008 | 2030 | 591 | 602 | 928 | 746 | 802 | 598 | |
| Flow ratio | 0.03 | 0.19 | 0.34 | 0.32 | 0.10 | 0.32 | 0.07 | 0.54 | 1.24 | 0.28 | 0.13 | |
| v/c ratio | 0.31 | 1.07 | 0.78 | 0.79 | 0.27 | 0.46 | 0.32 | 0.24 | 2.48 | 1.12 | 0.73 | |
| PF factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | S | S | S | S | S | S | S | S | S | S | S | |
| Platoon ratio | 1.67 | 1.57 | 1.57 | 1.67 | 1.67 | 1.48 | 1.57 | 1.67 | 1.00 | 1.67 | 1.57 | |
| PF factor | 0.95 | 1.00 | 0.72 | 0.91 | 0.64 | 0.18 | 0.84 | 0.89 | 1.00 | 1.00 | 0.95 | |
| Q ₁ | 2.0 | 15.7 | 13.6 | 14.3 | 3.8 | 1.9 | 3.5 | 2.5 | 77.0 | 19.2 | 9.0 | |
| Q ₅ | 0.3 | 0.5 | 0.7 | 0.6 | 0.9 | 0.9 | 0.6 | 0.5 | 0.8 | 0.6 | 0.5 | |
| Q ₇ | 0.1 | 0.6 | 2.3 | 2.1 | 0.3 | 0.9 | 0.3 | 0.2 | 138.9 | 9.4 | 1.2 | |
| Q avg. | 2.1 | 22.2 | 16.0 | 15.4 | 4.1 | 2.8 | 4.0 | 2.7 | 215.9 | 29.5 | 10.1 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|-----|------|------|------|-----|-----|-----|-----|-----|------|------|--|
| sec | 2.0 | 1.7 | 1.7 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 1.5 | 1.6 | 1.6 | |
| ROQ, Q ₉₅ | 4.3 | 37.3 | 27.9 | 26.5 | 9.0 | 5.7 | 8.0 | 5.5 | 324 | 45.3 | 18.6 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|--|
| C spacing | 24.5 | 24.9 | 24.0 | 24.9 | 24.0 | 24.9 | 24.5 | 24.9 | 24.9 | 24.9 | 24.9 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

A-P
N
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|------------------------|---------------|-------------------------------|------------------|--|--|--|
| Analyst | USA! | Intersection | OLAY MESA RD/OCEAN VIEW HILLS | | | | |
| Agency or Co | USA! | Area Type | All other areas | | | | |
| Date Performed | 07/06/11 | Jurisdiction | SAN DIEGO/NO MIT | | | | |
| Time Period | YEAR 2030 PM PEAK HOUR | Analysis Year | YEAR 2030/MLT 5B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|----------|-----------|------|-----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 0 | 2 | 3 | 0 |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | |
| Volume (vph) | 100 | 535 | 240 | 1415 | 975 | 830 | 600 | 520 | 760 | 465 | 210 | 130 |
| % Heavy veh | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup cs: time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 100 | 10 | 5 | 5 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl Left | WB Only | Thru & RT | CB | Excl Left | Thru & RT | CB | CB | CB | CB | CB | CB |
| Timing | G = 15.0 | G = 26.0 | G = 25.0 | C = | C = 35.0 | G = 26.0 | G = | G = | G = | G = | G = | G = |
| | Y = 4 | Y = 5 | Y = 5 | Y = | Y = 4 | Y = 5 | Y = | Y = | Y = | Y = | Y = | Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|-------|-------|-------|------------------|-------|------|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Arr. flow rate | 105 | 558 | 147 | 1489 | 1026 | 895 | 632 | 1347 | | 489 | 325 |
| Lane group cap | 344 | 975 | 654 | 1031 | 2030 | 991 | 802 | 812 | | 802 | 871 | |
| v/c ratio | 0.31 | 0.50 | 0.22 | 1.44 | 0.51 | 0.90 | 0.79 | 1.65 | | 0.61 | 0.37 | |
| Green ratio | 0.10 | 0.17 | 0.42 | 0.30 | 0.38 | 0.64 | 0.23 | 0.17 | | 0.23 | 0.17 | |
| Unit. delay d1 | 62.7 | 57.2 | 25.9 | 52.5 | 35.7 | 23.5 | 54.0 | 52.0 | | 51.4 | 54.8 | |
| Delay factor k | 0.11 | 0.19 | 0.11 | 0.50 | 0.11 | 0.42 | 0.33 | 0.50 | | 0.20 | 0.11 | |
| Incr. n. delay d2 | 0.5 | 1.1 | 0.2 | 205.4 | 0.2 | 11.4 | 5.9 | 302.0 | | 1.4 | 0.3 | |
| PIF factor | 0.925 | 0.860 | 0.490 | 0.714 | 0.591 | 0.139 | 0.797 | 0.860 | | 0.797 | 0.860 | |
| Control delay | 58.5 | 50.3 | 13.2 | 242.9 | 21.3 | 14.5 | 48.3 | 355.3 | | 42.2 | 47.4 | |
| Lane group LOS | E | D | D | F | C | B | D | F | | D | D | |
| Approch. delay | 44.7 | | | 116.3 | | | 257.3 | | | 44.4 | | |
| Approch LOS | D | | | F | | | F | | | D | | |
| Intersec. delay | 139.5 | | | | | | Intersection LOS | | | F | | |

A-P
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT 3B WITH LA MEDIA PM PEAK /NO MIT

Average Back of Queue

| | ER | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|----|
| | LT | TH | RI | LT | TH | RI | LT | TH | RI | LT | TH | RI |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 105 | 558 | 147 | 1489 | 1026 | 835 | 632 | 1347 | | 489 | 326 | |
| Satflow per lane | 1770 | 1960 | 1532 | 1769 | 1960 | 1549 | 1770 | 1718 | | 1770 | 1845 | |
| Capacity/lane | 344 | 926 | 664 | 1031 | 2530 | 991 | 802 | 812 | | 802 | 871 | |
| Flow ratio | 0.03 | 0.10 | 0.10 | 0.43 | 0.19 | 0.58 | 0.18 | 0.29 | | 0.14 | 0.06 | |
| wc ratio | 0.31 | 0.50 | 0.22 | 1.44 | 0.51 | 0.90 | 0.79 | 1.66 | | 0.61 | 0.37 | |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.57 | 1.67 | 1.67 | 1.67 | 1.48 | 1.67 | 1.67 | | 1.67 | 1.57 | |
| PF factor | 0.95 | 0.93 | 0.53 | 1.00 | 0.70 | 0.41 | 0.94 | 1.00 | | 0.90 | 0.90 | |
| Q1 | 2.0 | 1.3 | 2.0 | 31.9 | 8.4 | 13.1 | 11.9 | 20.6 | | 8.4 | 4.0 | |
| ki | 0.3 | 0.5 | 0.7 | 0.6 | 0.6 | 0.9 | 0.6 | 0.5 | | 0.6 | 0.5 | |
| Q2 | 0.1 | 0.7 | 0.2 | 31.5 | 0.6 | 5.8 | 1.8 | 25.6 | | 0.8 | 0.3 | |
| Q avg | 2.1 | 0.0 | 2.2 | 63.4 | 9.2 | 19.0 | 13.7 | 48.2 | | 9.2 | 4.2 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|------|-----|------|------|------|------|------|--|------|-----|--|
| l5% | 2.0 | 1.9 | 2.0 | 1.5 | 1.9 | 1.7 | 1.8 | 1.5 | | 1.9 | 2.0 | |
| BOQ, Q% | 4.3 | 15.1 | 4.5 | 95.2 | 17.2 | 32.4 | 24.4 | 71.4 | | 17.1 | 8.4 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|--|------|------|--|
| Q spacing | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | | 24.9 | 24.9 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Avg. Rc | | | | | | | | | | | | |
| 95% Rc% | | | | | | | | | | | | |

4-P
W
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|------------------------|----------|-----------|------------------|-------|------------------------|-------------------------------|-----------|-------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA/ | | | | | Intersection | CTAY MESA RD/OXFAN VIEW HILLS | | | | | |
| Agency or Co | USA/ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 5/10/11 | | | | | Jurisdiction | SAN DIEGO/WITH MIT | | | | | |
| Time Period | YEAR 2030 PM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALT. 3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 0 |
| Lane group | L | T | R | L | T | R | L | TR | R | L | TR | |
| Volume (vph) | 100 | 530 | 245 | 1415 | 375 | 850 | 600 | 520 | 760 | 465 | 210 | 100 |
| % Heavy veh | 2 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 5 | 2 | 2 | 2 |
| PIF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Start up lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext eff gear | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 100 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | WB Only | Thru & RT | 04 | | | Excl. Left | Thru & RT | 07 | | | 08 |
| Timing | G = 15.0 | G = 28.0 | G = 25.0 | G = | | | G = 35.0 | G = 26.0 | G = | | | G = |
| | Y = 4 | Y = 5 | Y = 5 | Y = | | | Y = 4 | Y = 5 | Y = | | | Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 105 | 558 | 147 | 1469 | 1025 | 895 | 632 | 547 | 600 | 485 | 326 | |
| Lane group cap. | 344 | 925 | 664 | 1031 | 2039 | 591 | 802 | 926 | 755 | 602 | 671 | |
| Vol ratio | 0.31 | 0.60 | 0.22 | 1.44 | 0.51 | 0.90 | 0.75 | 0.59 | 1.06 | 0.51 | 0.37 | |
| Green ratio | 0.19 | 0.17 | 0.43 | 0.30 | 0.38 | 0.64 | 0.23 | 0.17 | 0.51 | 0.23 | 0.17 | |
| Unit delay d1 | 62.7 | 57.2 | 26.6 | 52.5 | 35.7 | 23.0 | 54.0 | 57.1 | 37.0 | 51.4 | 54.8 | |
| Delay factor k | 0.11 | 0.19 | 0.11 | 0.50 | 0.11 | 0.42 | 0.33 | 0.18 | 0.50 | 0.20 | 0.11 | |
| Incem. delay d2 | 0.5 | 1.1 | 0.2 | 205.4 | 0.7 | 11.4 | 5.3 | 1.0 | 49.7 | 1.4 | 0.3 | |
| PF factor | 0.926 | 0.860 | 0.490 | 0.714 | 0.591 | 0.139 | 0.797 | 0.860 | 0.315 | 0.797 | 0.860 | |
| Control delay | 56.5 | 50.3 | 13.2 | 242.9 | 21.3 | 14.6 | 48.3 | 50.1 | 61.4 | 42.3 | 47.4 | |
| Lane group LOS | E | D | B | F | C | B | D | D | E | D | C | |
| Approach delay | 44.7 | | | 116.3 | | | 54.1 | | | 44.4 | | |
| Approach LOS | D | | | F | | | D | | | D | | |
| Intersec delay | 52.1 | | | Intersection LOS | | | | | | F | | |

A-P
w
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT 35 WITH LA MEDIA PM PEAK /MTH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| | LT | TII | RT | LT | TII | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | TR | R | L | TR | |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | 105 | 558 | 147 | 1489 | 1026 | 295 | 522 | 547 | 800 | 489 | 326 | |
| Satflow per lane | 1770 | 1965 | 1532 | 1769 | 1960 | 1549 | 1770 | 1960 | 1491 | 1770 | 1945 | |
| Capacity/lane | 344 | 926 | 664 | 1031 | 2030 | 931 | 802 | 926 | 755 | 802 | 671 | |
| Flow ratio | 0.52 | 0.10 | 0.15 | 0.42 | 0.19 | 0.58 | 0.18 | 0.10 | 0.54 | 0.14 | 0.08 | |
| Vol. ratio | 0.31 | 0.60 | 0.22 | 1.44 | 0.51 | 0.90 | 0.79 | 0.39 | 1.06 | 0.61 | 0.37 | |
| PF factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arriva type | S | S | S | S | S | S | S | S | S | S | S | |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.48 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | |
| PF factor | 0.95 | 0.93 | 0.53 | 1.00 | 0.70 | 0.41 | 0.94 | 0.93 | 1.00 | 0.90 | 0.90 | |
| Q ₁ | 2.5 | 7.3 | 2.0 | 31.9 | 8.4 | 13.1 | 11.9 | 7.1 | 33.3 | 8.4 | 4.0 | |
| Q ₅ | 0.3 | 0.5 | 0.7 | 0.5 | 0.8 | 0.9 | 0.5 | 0.5 | 0.8 | 0.6 | 0.5 | |
| Q ₁₀ | 0.1 | 0.7 | 0.2 | 31.5 | 0.8 | 5.8 | 1.8 | 0.7 | 12.1 | 0.8 | 0.3 | |
| Q _{avg.} | 2.1 | 8.0 | 2.2 | 63.4 | 9.2 | 19.5 | 13.7 | 7.8 | 45.5 | 9.7 | 4.2 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|-----|------|-----|------|------|------|------|------|------|------|-----|--|
| Init. | 2.5 | 1.9 | 2.0 | 1.5 | 1.9 | 1.7 | 1.8 | 1.9 | 1.5 | 1.9 | 2.0 | |
| BOQ, Q ₉₅ | 4.3 | 15.1 | 4.5 | 96.2 | 17.2 | 32.4 | 24.4 | 14.8 | 70.4 | 17.1 | 8.4 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|--|
| Q spacing | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Avg. R _q | | | | | | | | | | | | |
| 95% R _q | | | | | | | | | | | | |

SAN
N
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-----|------------------|----------|------------------------|---------------------------|------|----|------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAi | | | | | Intersection | SH-905 WB/CALIENTE | | | | | |
| Agency or Co. | USAi | | | | | Area Type | All other areas | | | | | |
| Date Performed | 01/07/11 | | | | | Jurisdiction | SAN DIEGO/NO MIT | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2010/ALT 3E/WIT/1 LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 0 | 0 | 0 | 0 |
| Lane group | | | | | LT | R | L | T | | | TR | |
| Volume (vph) | | | | 160 | 5 | 220 | 760 | 1985 | | | 930 | 350 |
| % Heavy Veh | | | | 5 | 5 | 5 | 5 | 5 | | | 5 | 5 |
| PIV | | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Adjusted P/A | | | | A | A | A | A | A | | | A | A |
| Start-up lost time | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | |
| Effective green | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | |
| Arrival type | | | | | 5 | 5 | 5 | 5 | | | 5 | |
| Unit Extension | | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | | | | 10 | 5 | 350 |
| Lane Width | | | | | 12.0 | 12.0 | 12.0 | 12.0 | | | 12.0 | |
| Paving/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | | 0 | 0 | 0 | 0 | | | 0 | |
| Unit Extension | | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | NE Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = | G = | G = | G = 57.0 | G = 50.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | | | 194 | 232 | 632 | 2089 | | | | 1511 | |
| Lane group cap. | | | | 246 | 900 | 700 | 1853 | | | | 1718 | |
| Wt rel to | | | | 0.79 | 0.26 | 1.19 | 1.13 | | | | 0.94 | |
| Green ratio | | | | 0.14 | 0.58 | 0.41 | 0.36 | | | | 0.35 | |
| Unif. delay d1 | | | | 58.0 | 14.6 | 41.5 | 45.0 | | | | 43.5 | |
| Delay factor k | | | | 0.34 | 0.11 | 0.50 | 0.50 | | | | 0.45 | |
| Increment. delay d2 | | | | 15.7 | 0.2 | 98.8 | 54.9 | | | | 10.4 | |
| PF factor | | | | 0.889 | 0.119 | 0.542 | 0.630 | | | | 0.630 | |
| Control delay | | | | 67.2 | 1.9 | 121.3 | 93.2 | | | | 37.8 | |
| Lane group LOS | | | | E | A | F | F | | | | D | |
| Approach delay | | | | 31.6 | | | 101.2 | | | 37.8 | | |
| Approach LOS | | | | C | | | F | | | D | | |
| Intersec. delay | 74.6 | | | Intersection LOS | | | | | | E | | |

S.A
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALI. 39 WITH LAMEDIA AM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|----|----|----|-------|-------|-------|-------|----|----|----|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | LT | TH | RT | L | T | | | TR | |
| Init. queue/lane | | | | 0.0 | 5.0 | 9.0 | 0.0 | | | | 0.0 | |
| Flow rate/lane | | | | 194 | 232 | 832 | 2089 | | | | 1611 | |
| Sat flow per lane | | | | 1725 | 1538 | 1719 | 1904 | | | | 1765 | |
| Capacity/lane | | | | 246 | 890 | 700 | 1853 | | | | 1718 | |
| Flow ratio | | | | 0.11 | 0.15 | 0.48 | 0.40 | | | | 0.33 | |
| v/c ratio | | | | 0.79 | 0.26 | 1.19 | 1.13 | | | | 0.54 | |
| I factor | | | | 1.000 | 1.000 | 1.500 | 1.500 | | | | 1.000 | |
| Arrival type | | | | 5 | 5 | 5 | 5 | | | | 5 | |
| Platoon ratio | | | | 1.67 | 1.64 | 1.67 | 1.67 | | | | 1.67 | |
| FF factor | | | | 0.97 | 0.13 | 1.00 | 1.00 | | | | 0.95 | |
| Q1 | | | | 7.1 | 0.6 | 32.4 | 29.8 | | | | 21.1 | |
| Q5 | | | | 0.4 | 0.8 | 0.7 | 0.7 | | | | 0.7 | |
| Q25 | | | | 1.2 | 0.3 | 20.2 | 15.2 | | | | 5.1 | |
| Q avg | | | | 8.3 | 0.9 | 52.6 | 45.0 | | | | 26.1 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|--|--|--|------|-----|------|------|--|--|--|------|--|
| fbv | | | | 1.9 | 2.1 | 1.5 | 1.5 | | | | 1.6 | |
| BOD, Q ₉₅ | | | | 15.6 | 1.9 | 80.6 | 69.7 | | | | 42.9 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|----------------------|--|--|--|------|------|------|------|--|--|--|------|--|
| Q spacing | | | | 24.9 | 24.9 | 24.9 | 24.9 | | | | 24.9 | |
| Q storage | | | | 0 | 0 | 0 | 0 | | | | 0 | |
| Avg. R ₁₂ | | | | | | | | | | | | |
| 95% R _{0.5} | | | | | | | | | | | | |

5. A
W
MIT

| SHORT REPORT | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|---------------------------|--|--|--|--|
| General Information | | | | | | Site Information | | | | | |
| Analyst | USA! | | | | | Intersection | SR-905 WB/CALIENTE | | | | |
| Agency or Co | USA! | | | | | Area Type | All other areas | | | | |
| Date Performed | 5/10/11 | | | | | Jurisdiction | SAN DIEGO/WITH MIT | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALJ. 3B/WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|------|----------|------------------------|------|------|----|------|------|-----|
| | FB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 3 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 2 | 1 |
| Lane group | | | | LT | R | L | T | | | T | R | |
| Volume (vph) | | | | 180 | 5 | 220 | 790 | 1980 | | 630 | 950 | |
| % Heavy veh | | | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| PHI | | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | |
| Accel. (ft/A) | | | | A | A | A | A | A | | A | A | |
| Startup lost time | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. off green | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Unit Extension | | | | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | | | | 10 | 5 | 350 |
| Lane Width | | | | 12.0 | 12.0 | 12.0 | 12.0 | | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Unit Extension | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 05 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = | G = | G = | G = 50.0 | G = 57.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|--|--|------------------|-------|-------|-------|------|--|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | | | 194 | 232 | 632 | 2080 | | | 979 | 622 |
| Lane group cap | | | | 246 | 913 | 1192 | 2113 | | | 2113 | 613 | |
| w/c ratio | | | | 0.79 | 0.29 | 0.70 | 0.69 | | | 0.46 | 1.03 | |
| Green ratio | | | | 0.14 | 0.53 | 0.36 | 1.41 | | | 0.41 | 0.41 | |
| Unif. delay d' | | | | 58.0 | 16.3 | 38.5 | 41.2 | | | 30.3 | 41.5 | |
| Delay factor k | | | | 0.34 | 0.11 | 0.28 | 0.49 | | | 0.11 | 0.50 | |
| Incr. delay d2 | | | | 15.7 | 0.2 | 1.8 | 16.9 | | | 0.2 | 44.5 | |
| PF factor | | | | 0.889 | 0.253 | 0.630 | 0.542 | | | 0.542 | 0.542 | |
| Control delay | | | | 67.2 | 4.8 | 26.1 | 39.2 | | | 16.5 | 67.0 | |
| Lane group LOS | | | | E | A | C | D | | | B | E | |
| Approach delay | | | | 33.2 | | | 35.5 | | | 36.4 | | |
| Approach LOS | | | | C | | | D | | | D | | |
| Intersec. delay | 35.5 | | | Intersection LOS | | | | | | D | | |

S-A
w
M.F

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT. 3B WITH LAMEDIA AM PEAK HOUR/WITH MIT.

Average Back of Queue

| | FB | | | WB | | | NB | | | SB | | |
|-------------------|----|----|----|----|-------|-------|-------|-------|----|----|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | | L | R | L | T | | | T | R |
| Int queue/ lane | | | | | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Flow rate/ lane | | | | | 194 | 232 | 832 | 2089 | | | 979 | 632 |
| Sat flow per lane | | | | | 1725 | 1538 | 1719 | 1904 | | | 1904 | 1505 |
| Capacity/ lane | | | | | 246 | 813 | 1192 | 2113 | | | 2113 | 613 |
| Flow ratio | | | | | 0.11 | 0.15 | 0.25 | 0.40 | | | 0.19 | 0.42 |
| v/c ratio | | | | | 0.79 | 0.29 | 0.70 | 0.99 | | | 0.45 | 1.03 |
| I factor | | | | | 1.000 | 1.000 | 1.000 | 1.050 | | | 1.000 | 1.000 |
| Arrival type | | | | | 5 | 5 | 5 | 5 | | | 5 | 5 |
| Platoon ratio | | | | | 1.67 | 1.67 | 1.57 | 1.67 | | | 1.67 | 1.57 |
| PF factor | | | | | 0.97 | 0.29 | 0.81 | 0.98 | | | 0.64 | 1.00 |
| Q1 | | | | | 7.1 | 1.4 | 11.5 | 29.1 | | | 6.5 | 24.6 |
| RG | | | | | 0.4 | 0.8 | 0.7 | 0.8 | | | 0.8 | 0.7 |
| Q2 | | | | | 1.2 | 0.3 | 1.5 | 8.1 | | | 0.7 | 8.6 |
| Q avg | | | | | 8.3 | 1.8 | 13.0 | 37.1 | | | 7.2 | 33.1 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|--|--|--|------|-----|------|------|--|--|------|------|
| 95% | | | | | 1.9 | 2.0 | 1.8 | 1.6 | | | 1.8 | 1.6 |
| BOQ, Q% | | | | | 15.6 | 3.5 | 23.3 | 58.5 | | | 13.7 | 52.9 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|--|------|------|------|------|--|--|------|------|
| Q spacing | | | | | 24.9 | 24.9 | 24.9 | 24.9 | | | 24.9 | 24.9 |
| Q storage | | | | | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rqs | | | | | | | | | | | | |

5-P
N
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-----|------------------|----------|-------------------------|--------------------------|------|----|------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | SK-905 WB/CALIENTE | | | | | |
| Agency or Co. | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 07/07/11 | | | | | Jurisdiction | SAN DIEGO/NO MIT | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALT 30/MITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 3 | 0 |
| Lane group | | | | | L | R | L | T | | | TR | |
| Volume (vph) | | | | 180 | 5 | 220 | 700 | 1660 | | | 1030 | 835 |
| % Heavy veh | | | | 5 | 5 | 5 | 5 | 5 | | | 5 | 5 |
| PHI | | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Accrued (P/A) | | | | A | A | A | A | A | | | A | A |
| Startup lost time | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | |
| Ext. eff. green | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | |
| Arrival type | | | | | 5 | 5 | 5 | 5 | | | 5 | |
| Unit Extension | | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | | | | 10 | 5 | 350 |
| Lane Width | | | | | 12.0 | 12.0 | 12.0 | 12.0 | | | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | | 0 | 0 | 0 | 0 | | | 0 | |
| Unit Extension | | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | |
| Phasing | WB On'y | 02 | 03 | 04 | NB On'y | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = | G = | G = | G = 57.0 | G = 50.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (Hrs) : 0.25 | | | | | | Cycle Length, C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | | | 154 | 232 | 737 | 1747 | | | | 1595 | |
| Lane group cap | | | | 246 | 890 | 700 | 1863 | | | | 1742 | |
| w/c ratio | | | | 0.79 | 0.26 | 1.05 | 0.94 | | | | 0.92 | |
| Green ratio | | | | 0.14 | 0.58 | 0.41 | 0.36 | | | | 0.36 | |
| Link delay d1 | | | | 58.0 | 14.6 | 41.5 | 43.6 | | | | 43.0 | |
| Delay factor k | | | | 0.34 | 0.11 | 0.50 | 0.46 | | | | 0.43 | |
| Incr.m. delay d2 | | | | 15.7 | 0.2 | 48.8 | 10.4 | | | | 8.0 | |
| P-Factor | | | | 0.899 | 0.119 | 0.542 | 0.630 | | | | 0.630 | |
| Control delay | | | | 67.2 | 1.5 | 11.3 | 37.8 | | | | 35.1 | |
| Lane group LOS | | | | F | A | E | C | | | | D | |
| Approach delay | | | | 31.6 | | | 47.8 | | | 35.1 | | |
| Approach LOS | | | | C | | | D | | | D | | |
| Intersec. delay | 41.8 | | | Intersection LOS | | | | | | D | | |

S-P
M-G

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT. 3B WITH LAMEDIA PM PEAK HOURING MIT

Average Back of Queue

| | EE | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|----|-------|-------|-------|-------|----|----|-------|----|
| | LT | IF | RT | LI | TI | RI | LT | TI | RI | LT | IF | RT |
| Lane group | | | | | LT | R | L | T | | | TR | |
| Int. queue/lane | | | | | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | |
| Flow rate/lane | | | | | 194 | 232 | 737 | 1747 | | | 1595 | |
| Satflow per lane | | | | | 1725 | 1538 | 1719 | 1904 | | | 1790 | |
| Capacity/lane | | | | | 246 | 896 | 700 | 1853 | | | 1742 | |
| Flow ratio | | | | | 0.11 | 0.15 | 0.43 | 0.34 | | | 0.33 | |
| v/c ratio | | | | | 0.78 | 0.26 | 1.05 | 0.54 | | | 0.92 | |
| I factor | | | | | 1.005 | 1.000 | 1.003 | 1.050 | | | 1.050 | |
| Arrival type | | | | | 5 | 5 | 5 | 5 | | | 5 | |
| Platoon ratio | | | | | 1.67 | 1.64 | 1.67 | 1.67 | | | 1.57 | |
| PF factor | | | | | 0.97 | 0.13 | 1.30 | 0.95 | | | 0.93 | |
| Q1 | | | | | 7.1 | 0.6 | 28.7 | 23.0 | | | 20.2 | |
| kH | | | | | 0.4 | 0.6 | 0.7 | 0.7 | | | 0.7 | |
| Q2 | | | | | 1.2 | 5.3 | 19.8 | 5.5 | | | 4.5 | |
| Q avg | | | | | 8.3 | 0.9 | 39.5 | 28.5 | | | 24.7 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|--|--|--|------|-----|------|------|--|--|------|--|
| 95% | | | | | 1.9 | 2.1 | 1.5 | 1.5 | | | 1.7 | |
| BOQ, Q% | | | | | 15.6 | 1.8 | 81.9 | 46.3 | | | 40.8 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|--|------|------|------|------|--|--|------|--|
| Q spacing | | | | | 24.9 | 24.9 | 24.9 | 24.9 | | | 24.9 | |
| Q storage | | | | | 0 | 0 | 0 | 0 | | | 0 | |
| Avg. Roq | | | | | | | | | | | | |
| 95% Roq | | | | | | | | | | | | |

5-2
w
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|-----------------------------|------------------|--|--|--|
| Analyst | USAI | Intersection | SR-95 WB/CALIENTE | | | | |
| Agency or Co | USAI | Area Type | All other areas | | | | |
| Date Performed | 07/07/11 | Jurisdiction | SAN DIEGO/WITH MIT. | | | | |
| Time Period | PM PEAK HOUR | Analysis Year | YEAR 2030/A.I.T. 3B/WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-------------------|------------|------------|------------|-------------------|------------------------|------------|------------|----|----|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 0 | 3 | 1 |
| Lane Group | | | | | LT | R | L | T | | | T | R |
| Volume (vph) | | | | 180 | 5 | 220 | 700 | 1650 | | | 1030 | 635 |
| % Heavy Veh | | | | 5 | 5 | 5 | 5 | 5 | | | 5 | 5 |
| PHF | | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | | | | A | A | A | A | A | | | A | A |
| Startup Lost Time | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. eff. green | | | | | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | | | | | 5 | 5 | 5 | 5 | | | 5 | 5 |
| Ln 1 Extension | | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | | | | 10 | 5 | 350 |
| Lane Width | | | | | 12.0 | 12.0 | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Unit Extension | | | | | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Phasing | WB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 Y = 4 | G = Y = | G = Y = | G = Y = | G = 37.0 Y = 4 | G = 50.0 Y = 5 | G = Y = | G = Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | |
|---|----------------|--|--|------------------|-------|-------|-------|-----|--|-------|-------|
| | EB | | | WB | | | NB | | | SB | |
| | Adj. flow rate | | | | 194 | 232 | 137 | 147 | | | 1064 |
| Lane group cap. | | | | 245 | 890 | 1359 | 1853 | | | 1853 | 536 |
| v/c ratio | | | | 0.79 | 0.26 | 0.54 | 0.94 | | | 0.59 | 0.95 |
| Green ratio | | | | 0.14 | 0.58 | 0.41 | 0.36 | | | 0.36 | 0.39 |
| Unif. delay d1 | | | | 58.5 | 14.6 | 31.5 | 43.5 | | | 36.6 | 43.9 |
| Delay factor k | | | | 0.34 | 0.11 | 0.14 | 0.46 | | | 0.19 | 0.46 |
| Incremental delay d2 | | | | 15.7 | 0.7 | 0.4 | 15.4 | | | 0.6 | 27.3 |
| PF factor | | | | 0.886 | 0.119 | 0.542 | 0.630 | | | 0.630 | 0.636 |
| Control delay | | | | 67.2 | 1.9 | 17.6 | 37.2 | | | 23.5 | 55.1 |
| Lane group LOS | | | | E | A | B | D | | | C | E |
| Approach delay | | | | 31.6 | | | 31.8 | | | 33.6 | |
| Approach LOS | | | | C | | | C | | | C | |
| Intersec. delay | 32.5 | | | Intersection LOS | | | | | | D | |

5-9
w
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Descriptor: ALT. 36 WITH LAMEDIA PM PEAK HOUR WITH MIT.

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|--------------------|----|----|----|-------|-------|-------|-------|----|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | LT | R | L | T | | | | T | R |
| Init. queue/lane | | | | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | |
| Flow rate/lane | | | | 194 | 232 | 737 | 1747 | | | 1084 | 511 | |
| Self-flow per lane | | | | 1725 | 1538 | 1719 | 1904 | | | 1904 | 1502 | |
| Capacity/lane | | | | 246 | 390 | 1359 | 1853 | | | 1653 | 536 | |
| Flow ratio | | | | 0.11 | 0.15 | 0.22 | 0.34 | | | 0.21 | 0.34 | |
| Wc ratio | | | | 0.78 | 0.26 | 0.54 | 0.94 | | | 0.58 | 0.95 | |
| PF factor | | | | 1.000 | 1.000 | 1.000 | 1.000 | | | 1.000 | 1.000 | |
| Arrival type | | | | 5 | 5 | 5 | 5 | | | 5 | 5 | |
| Platoon ratio | | | | 1.67 | 1.64 | 1.67 | 1.67 | | | 1.67 | 1.67 | |
| PF factor | | | | 0.97 | 0.13 | 0.57 | 0.95 | | | 0.76 | 0.96 | |
| Q ₁ | | | | 7.1 | 0.6 | 7.5 | 23.0 | | | 9.6 | 18.6 | |
| Q ₂ | | | | 0.4 | 0.8 | 0.7 | 0.7 | | | 0.7 | 0.6 | |
| Q ₃ | | | | 1.2 | 0.3 | 0.8 | 5.5 | | | 1.0 | 4.9 | |
| Q avg. | | | | 3.3 | 0.9 | 6.3 | 28.5 | | | 10.6 | 23.5 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|--|--|--|------|-----|------|------|--|--|------|------|--|
| len | | | | 1.9 | 2.1 | 1.9 | 1.6 | | | 1.9 | 1.7 | |
| BOQ Q% | | | | 15.6 | 1.9 | 15.8 | 46.3 | | | 19.3 | 39.1 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|------|------|------|--|--|------|------|--|
| Q spacing | | | | 24.9 | 24.9 | 24.9 | 24.9 | | | 24.9 | 24.9 | |
| Q storage | | | | 0 | 0 | 0 | 0 | | | 0 | 0 | |
| Avg Roq | | | | | | | | | | | | |
| 95% Roq | | | | | | | | | | | | |

G-A
N
MT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|-------------------|--|--|------------------|----------------------------|--|--|
| Analyst | USAJ | | | Intersection | SR-905 EB/CALIENTE AVE. | | |
| Agency or Co. | USAJ | | | Area Type | All other areas | | |
| Date Performed | 07/07/11 | | | Jurisdiction | NO MITIGATION | | |
| Time Period | YEAR 2035 AM PEAK | | | Analysis Year | YEAR 2030 /ALT. 3R WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|------|------|-----|----------|------------------------|-----|------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of lanes | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 3 | 0 |
| Lane group | L | TR | | | | | | TR | | L | T | |
| Volume (vph) | 1200 | 5 | 500 | | | | | 1575 | 180 | 220 | 890 | |
| % Heavy veh | 10 | 10 | 10 | | | | | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | | | | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Accelated (P/A) | A | A | A | | | | | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | | | | | 2.0 | | 2.0 | 2.0 | |
| Ext. eff green | 2.0 | 2.0 | | | | | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 3 | 3 | | | | | | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 100 | 10 | | | | 10 | 5 | 0 | | |
| Lane Width | 12.0 | 12.0 | | | | | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/h | | | | | | | | | | | | |
| Bus stops/h | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Phasing | EB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 51.0 | G = | G = | G = | G = 20.0 | G = 46.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-----|---------------|--|--|-------|------|-------|-------|-----|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | 947 | 932 | | | | | 1847 | | 237 | 937 | |
| Lane group cap | 644 | 592 | | | | | 1719 | | 257 | 2667 | | |
| w/c ratio | 1.47 | 1.57 | | | | | 1.57 | | 0.92 | 0.35 | | |
| Green ratio | 0.39 | 0.39 | | | | | 0.35 | | 0.15 | 0.54 | | |
| Unit delay d1 | 39.5 | 35.5 | | | | | 42.0 | | 54.2 | 17.1 | | |
| Delay factor k | 0.50 | 0.50 | | | | | 0.50 | | 0.44 | 0.11 | | |
| Incom. delay d2 | 220.1 | 265.5 | | | | | 44.8 | | 35.1 | 5.1 | | |
| PF factor | 1.005 | 1.000 | | | | | 0.635 | | 0.670 | 0.972 | | |
| Control delay | 259.6 | 305.0 | | | | | 71.5 | | 83.7 | 3.9 | | |
| Lane group LOS | F | F | | | | | E | | I | A | | |
| Approch. delay | 282.5 | | | | | | 71.5 | | | 19.7 | | |
| Approach LOS | F | | | | | | E | | | B | | |
| Intersec. delay | 140.2 | | | Intersec. LOS | | | | | | F | | |

6-A
N
AIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT 3B WITH LA MEDIA AM PEAK HOUR/NO MITIGATION

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|----|----|----|----|----|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | LTR | | | | | | TR | | L | T | |
| init cue/veh/line | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/line | 947 | 932 | | | | | | 1847 | | 232 | 937 | |
| Sat flow per lane | 1641 | 1509 | | | | | | 1783 | | 1641 | 1818 | |
| Capacity/line | 944 | 892 | | | | | | 1719 | | 252 | 2667 | |
| Flow ratio | 0.58 | 0.62 | | | | | | 0.38 | | 0.14 | 0.19 | |
| v/c ratio | 1.47 | 1.57 | | | | | | 1.57 | | 0.92 | 0.35 | |
| I factor | 1.000 | 1.000 | | | | | | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 3 | 3 | | | | | | 5 | | 5 | 5 | |
| Platoon ratio | 1.00 | 1.00 | | | | | | 1.67 | | 1.67 | 1.97 | |
| PF factor | 1.00 | 1.00 | | | | | | 1.00 | | 0.99 | 0.76 | |
| Q ₁ | 31.2 | 32.7 | | | | | | 24.5 | | 8.2 | 1.3 | |
| ks | 0.7 | 0.6 | | | | | | 0.7 | | 0.4 | 0.9 | |
| Q ₂ | 39.8 | 44.2 | | | | | | 10.9 | | 2.3 | 3.5 | |
| Q avg. | 74.0 | 77.8 | | | | | | 35.4 | | 10.4 | 2.3 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------------------|-----|-----|--|--|--|--|--|------|--|------|-----|--|
| F ₉₅ | 1.5 | 1.5 | | | | | | 1.6 | | 1.8 | 2.0 | |
| BOQ Q ₉₅ | 112 | 117 | | | | | | 56.1 | | 19.2 | 4.7 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|--------------------|------|------|--|--|--|--|--|------|--|------|------|--|
| Q spacing | 24.9 | 24.9 | | | | | | 24.5 | | 24.9 | 24.9 | |
| Q storage | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Avg R ₀ | | | | | | | | | | | | |
| 95% R ₀ | | | | | | | | | | | | |

E.A
W
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|-------------------|--|--|------------------|---------------------------|--|--|
| Analyst | USAJ | | | Intersection | SR-905 EB/CALIENTE AVE. | | |
| Agency or Co. | USAJ | | | Area Type | All other areas | | |
| Date Performed | 07/6/11 | | | Jurisdiction | WITH MITIGATION | | |
| Time Period | YEAR 2030 AM PEAK | | | Analysis Year | YEAR 2030 /ALT 3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|----------|------|------|-----|----------|-----------|------|------|------|------|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 3 | 0 |
| Lane group | L | LT | R | | | | | T | R | L | T | |
| Volume (vph) | 1200 | 5 | 680 | | | | 1575 | 180 | 220 | 895 | | |
| % Heavy ve | 10 | 10 | 10 | | | | 10 | 10 | 10 | 10 | | |
| PHF | 0.95 | 0.95 | 0.95 | | | | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Actuated (P/A) | A | A | A | | | | A | A | A | A | | |
| Startup lost time | 2.0 | 2.0 | 2.0 | | | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | | | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | 3 | 3 | 3 | | | | 5 | 5 | 5 | 5 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 100 | 10 | | | 10 | 5 | 0 | | | |
| Lane Width | 12.0 | 12.0 | 12.0 | | | | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.5 | | | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | EB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 57.0 | G = | G = | G = | G = 19.0 | G = 41.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |

Duration of Analysis (Hrs) = 0.25 Cycle Length C = 130.0

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|--|--|-------|-------|-------|-------|-----|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 632 | 536 | 611 | | | | 1659 | 189 | 232 | 937 | |
| Lane group cap. | 720 | 722 | 631 | | | | 7607 | 462 | 466 | 2438 | | |
| v/c ratio | 0.88 | 0.82 | 0.97 | | | | 1.08 | 0.42 | 0.50 | 0.38 | | |
| Green ratio | 0.44 | 0.44 | 0.44 | | | | 0.32 | 0.32 | 0.15 | 0.49 | | |
| Unit delay d1 | 33.3 | 23.4 | 35.6 | | | | 44.5 | 35.1 | 51.1 | 20.7 | | |
| Delay factor k | 0.40 | 0.41 | 0.48 | | | | 0.50 | 0.11 | 0.11 | 0.11 | | |
| Incrmnt. delay d2 | 11.9 | 12.2 | 28.0 | | | | 41.1 | 0.6 | 0.8 | 5.1 | | |
| PF factor | 1.000 | 1.000 | 1.000 | | | | 0.593 | 0.693 | 0.886 | 0.354 | | |
| Control delay | 45.3 | 45.9 | 53.6 | | | | 71.9 | 24.9 | 40.1 | 7.1 | | |
| Lane group LOS | D | D | E | | | | E | C | D | A | | |
| Approach delay | 51.3 | | | | | | 67.1 | | | 15.1 | | |
| Approach LOS | D | | | | | | E | | | B | | |
| Intersc. delay | 46.6 | | | Intersection LOS | | | | | | D | | |

G-A
W
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description A1 T-55 WITH LA MEDIA AM PEAK HOUR WITH MITIGATION

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|----|----|----|----|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | | | | | T | R | L | T | |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | 632 | 636 | 611 | | | | | 1658 | 189 | 232 | 527 | |
| Satflow per lane | 1641 | 1646 | 1438 | | | | | 1818 | 1432 | 1641 | 1816 | |
| Capacity/lane | 720 | 722 | 631 | | | | | 1562 | 452 | 465 | 2438 | |
| Flow ratio | 0.39 | 0.39 | 0.42 | | | | | 0.33 | 0.13 | 0.07 | 0.19 | |
| v/c ratio | 0.68 | 0.88 | 0.97 | | | | | 1.06 | 0.42 | 0.50 | 0.38 | |
| I factor | 1.000 | 1.000 | 1.000 | | | | | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | 3 | 3 | 3 | | | | | 5 | 5 | 5 | 5 | |
| Platoon ratio | 1.00 | 1.00 | 1.00 | | | | | 1.67 | 1.67 | 1.67 | 1.67 | |
| PF factor | 1.00 | 1.00 | 1.00 | | | | | 1.00 | 0.77 | 0.93 | 0.42 | |
| Q1 | 20.8 | 21.0 | 21.5 | | | | | 22.0 | 4.1 | 3.7 | 3.2 | |
| ks | 0.7 | 0.7 | 0.7 | | | | | 0.6 | 0.5 | 0.4 | 0.6 | |
| Q7 | 3.8 | 3.9 | 5.5 | | | | | 9.4 | 0.4 | 0.4 | 0.5 | |
| Q avg | 24.6 | 24.9 | 27.4 | | | | | 31.3 | 4.5 | 4.1 | 3.7 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|------|------|------|--|--|--|--|------|-----|-----|-----|--|
| fs% | 1.7 | 1.7 | 1.6 | | | | | 1.6 | 2.0 | 2.0 | 2.0 | |
| BOQ, Q ₉₅ | 40.7 | 41.0 | 44.8 | | | | | 50.3 | 8.9 | 6.0 | 7.4 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|------|------|------|--|--|--|--|------|------|------|------|--|
| Q spacing | 24.9 | 24.9 | 24.9 | | | | | 24.9 | 24.9 | 24.9 | 24.9 | |
| Q storage | 0 | 0 | 0 | | | | | 0 | 0 | 0 | 0 | |
| Avg. R _c | | | | | | | | | | | | |
| 95% R _c | | | | | | | | | | | | |

E-P
N
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|-------------------|-------|------|------------------|----------|------------------------|-----------------------------|-------|------|-------|-------|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | SR-965 EB/CALIENTE | | | | | |
| Agency or Co. | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 07/07/11 | | | | | Jurisdiction | NO MITIGATION | | | | | |
| Time Period | YEAR 2030 PM PEAK | | | | | Analysis Year | YEAR 2030 /3B WITH LA MEDIA | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 3 | 0 |
| Lane group | L | LTR | | | | | | TR | | L | T | |
| Volume (vph) | 965 | 5 | 885 | | | | | 1490 | 180 | 225 | 990 | |
| % Heavy veh | 10 | 10 | 10 | | | | | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | | | | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Accel'd (P/A) | A | A | A | | | | | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | | | | | 2.0 | | 2.0 | 2.0 | |
| Ext. of green | 2.0 | 2.0 | | | | | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 3 | 3 | | | | | | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 15 | 5 | 160 | 10 | | | | 15 | 5 | 0 | | |
| Lane Width | 12.0 | 12.0 | | | | | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | | | N | N | 0 | N | N | 0 |
| Parking/h | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Unit Extension | 5.0 | 3.0 | | | | | | 3.0 | | 3.0 | 3.0 | |
| Phasing | EB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 53.0 | G = | G = | G = | G = 28.0 | G = 46.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 5.25 | | | | | | Cycle Length C = 143.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 1011 | 825 | | | | | | 1663 | | 232 | 1042 | |
| Lane group cap. | 621 | 544 | | | | | | 1592 | | 328 | 2760 | |
| w/o ratio | 1.63 | 1.52 | | | | | | 1.54 | | 0.71 | 0.38 | |
| Green ratio | 0.58 | 0.36 | | | | | | 0.53 | | 0.20 | 0.56 | |
| Unif. delay d' | 43.5 | 43.5 | | | | | | 47.0 | | 52.7 | 17.4 | |
| Delay factor k | 0.50 | 0.50 | | | | | | 0.50 | | 0.27 | 0.11 | |
| Increment delay d2 | 289.9 | 242.6 | | | | | | 35.2 | | 6.9 | 0.1 | |
| P/F factor | 1.000 | 1.000 | | | | | | 0.674 | | 0.533 | 0.191 | |
| Control delay | 323.4 | 286.1 | | | | | | 66.8 | | 50.3 | 2.9 | |
| Lane group LOS | F | F | | | | | | E | | D | A | |
| Approach delay | 312.1 | | | | | | 66.8 | | | 17.5 | | |
| Approach LOS | F | | | | | | E | | | B | | |
| Intersec. delay | 146.5 | | | Intersection LOS | | | | | | F | | |

6-17

N
AQ

BACK-OF-QUEUE WORKSHEET

General Information

Project Description 3B-W/LM PM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|--------------------|-------|-------|----|----|----|----|----|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | LTR | | | | | | TR | | L | T | |
| mt. queue/lane | 0.0 | 0.0 | | | | | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 1011 | 826 | | | | | | 1663 | | 232 | 1042 | |
| Self flow per lane | 1641 | 1437 | | | | | | 1779 | | 1641 | 1518 | |
| Capacity/lane | 621 | 544 | | | | | | 1092 | | 326 | 2760 | |
| Flow ratio | 0.62 | 0.57 | | | | | | 0.34 | | 0.14 | 0.21 | |
| wc ratio | 1.63 | 1.52 | | | | | | 1.04 | | 0.71 | 0.38 | |
| I factor | 1.000 | 1.000 | | | | | | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 3 | 3 | | | | | | 5 | | 5 | 5 | |
| Platoon ratio | 1.00 | 1.00 | | | | | | 1.67 | | 1.67 | 1.67 | |
| PF factor | 1.00 | 1.00 | | | | | | 1.00 | | 0.94 | 0.20 | |
| Q1 | 39.3 | 32.1 | | | | | | 23.7 | | 7.9 | 1.6 | |
| Q5 | 0.7 | 0.6 | | | | | | 0.7 | | 0.5 | 0.9 | |
| Q7 | 50.4 | 37.0 | | | | | | 8.9 | | 1.0 | 0.5 | |
| C avg. | 69.6 | 69.1 | | | | | | 32.6 | | 8.9 | 2.2 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|-----|--|--|--|--|--|------|--|------|-----|--|
| fe: | 1.5 | 1.5 | | | | | | 1.5 | | 1.9 | 2.0 | |
| BCQ Q5: | 135 | 105 | | | | | | 52.1 | | 16.6 | 4.4 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|--|--|--|--|------|--|------|------|--|
| Q spacing | 24.9 | 24.9 | | | | | | 24.9 | | 24.9 | 24.9 | |
| Q storage | 0 | 0 | | | | | | 0 | | 0 | 0 | |
| Avg. Rq: | | | | | | | | | | | | |
| 90% Rqs | | | | | | | | | | | | |

6-8
0
MAY

| SHORT REPORT | | | | | | | | | | | | |
|---|-------------------|-------|-------|------------------|----------|------------------------|----------------------------|-------|-------|-------|----|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | SR 905 EB/CALIENTE | | | | | |
| Agency or Co. | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 07/07/11 | | | | | Jurisdiction | WITH MITIGATION | | | | | |
| Time Period | YEAR 2030 PM PEAK | | | | | Analysis Year | YEAR 2030/36 WITH LA MEDIA | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 3 | 0 |
| Lane group | L | LT | R | | | | | T | R | L | T | |
| Volume (vph) | 560 | 5 | 680 | | | | 1400 | 180 | 220 | 990 | | |
| % Heavy veh | 10 | 10 | 10 | | | | 10 | 10 | 10 | 10 | | |
| PIIF | 0.95 | 0.95 | 0.95 | | | | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Adjusted (P/A) | A | A | A | | | | A | A | A | A | | |
| Startup lost time | 2.0 | 2.0 | 2.0 | | | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | | | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | 3 | 3 | 3 | | | | 5 | 5 | 5 | 5 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Per/Biker/RTOR Volume | 10 | 5 | 100 | 10 | | | 10 | 5 | 0 | | | |
| Lane Width | 12.0 | 12.0 | 12.0 | | | | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | | | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | | | | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | | | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | EB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 62.0 | G = | G = | G = | G = 23.0 | G = 40.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 556 | 460 | 821 | | | | 1474 | 189 | 232 | 1042 | | |
| Lane group cap | 727 | 729 | 637 | | | | 1415 | 409 | 559 | 2441 | | |
| v/c ratio | 0.76 | 0.63 | 1.29 | | | | 1.04 | 0.46 | 0.41 | 0.43 | | |
| Green ratio | 0.44 | 0.44 | 0.44 | | | | 0.29 | 0.29 | 0.18 | 0.40 | | |
| Unif. delay d1 | 32.0 | 30.2 | 39.0 | | | | 50.0 | 41.1 | 50.9 | 22.8 | | |
| Delay factor k | 0.32 | 0.21 | 0.55 | | | | 0.50 | 0.11 | 0.11 | 0.11 | | |
| Incrim. delay d2 | 4.9 | 1.5 | 141.6 | | | | 35.5 | 0.8 | 0.5 | 0.1 | | |
| PF factor | 1.000 | 1.000 | 1.000 | | | | 0.732 | 0.733 | 0.855 | 0.352 | | |
| Control delay | 31.7 | 31.9 | 160.6 | | | | 72.2 | 31.0 | 44.0 | 8.1 | | |
| Lane group LOS | D | C | F | | | | F | G | D | A | | |
| Approach delay | 100.1 | | | | | | 67.5 | | | 14.7 | | |
| Approach LOS | F | | | | | | F | | | B | | |
| Intersec. delay | 66.0 | | | Intersection LOS | | | | | | E | | |

6-P
w
mf

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: 3E-W/LM PM PEAK HOUR WITH MITIGATION

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|----|----|----|-------|-------|-------|-------|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | L | R | | | | T | R | L | T | | |
| In-l. queue/lane | 6.0 | 0.0 | 0.5 | | | | 5.0 | 0.5 | 0.5 | 0.5 | | |
| Flow rate/lane | 555 | 460 | 221 | | | | 1474 | 159 | 232 | 1042 | | |
| Satflow per lane | 1841 | 1546 | 1438 | | | | 1818 | 1430 | 1541 | 1618 | | |
| Capacity/lane | 727 | 729 | 637 | | | | 1415 | 469 | 569 | 2441 | | |
| Flow ratio | 0.34 | 0.28 | 0.57 | | | | 0.30 | 0.13 | 0.57 | 0.21 | | |
| W/C ratio | 0.76 | 0.63 | 1.29 | | | | 1.04 | 0.46 | 0.41 | 0.43 | | |
| I factor | 1.500 | 1.050 | 1.500 | | | | 1.050 | 1.000 | 1.000 | 1.000 | | |
| Arrival type | 3 | 3 | 3 | | | | 5 | 5 | 5 | 5 | | |
| Platoon ratio | 1.00 | 1.00 | 1.00 | | | | 1.67 | 1.67 | 1.67 | 1.67 | | |
| PF factor | 1.50 | 1.50 | 1.00 | | | | 1.00 | 0.82 | 0.90 | 0.43 | | |
| Q ₁ | 18.2 | 13.8 | 31.9 | | | | 21.0 | 4.9 | 3.7 | 4.1 | | |
| Q ₂ | 6.7 | 0.7 | 0.7 | | | | 0.6 | 0.5 | 0.4 | 5.8 | | |
| Q ₃ | 2.2 | 1.2 | 25.7 | | | | 7.9 | 0.4 | 0.3 | 5.6 | | |
| Q avg. | 25.4 | 15.1 | 57.7 | | | | 29.0 | 5.4 | 4.0 | 4.7 | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|------|------|------|--|--|--|------|------|-----|-----|--|--|
| Q ₉₅ | 1.7 | 1.8 | 1.5 | | | | 1.6 | 1.9 | 2.0 | 2.0 | | |
| BOQ, Q ₉₅ | 34.6 | 26.5 | 87.9 | | | | 46.9 | 15.5 | 7.9 | 9.2 | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|------|------|------|--|--|--|------|------|------|------|--|--|
| Q spacing | 24.9 | 24.9 | 24.9 | | | | 24.9 | 24.9 | 24.9 | 24.9 | | |
| Q storage | 5 | 0 | 5 | | | | 0 | 0 | 5 | 5 | | |
| Avg. R _q | | | | | | | | | | | | |
| 95% R _q | | | | | | | | | | | | |

7-A
N
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|-----------|------------------|-----------------------------|-------|------|-------|-------|------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA! | | | | | Intersection | AIRWAY RD. @ CALIENTE BLVD | | | | | | |
| Agency or Co | USA! | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/05/11 | | | | | Jurisdiction | SAN DIEGO MCD | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALT. - SB WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 3 | 0 | 2 | 3 | 0 | |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | | |
| Volume (vch) | 175 | 320 | 190 | 740 | 170 | 450 | 375 | 1130 | 1165 | 900 | 510 | 160 | |
| % Heavy veh | 5 | 5 | 5 | 10 | 5 | 10 | 5 | 10 | 10 | 10 | 10 | 5 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Start-up lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | S | S | | E | E | S | S | S | | S | S | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Thru & RT | Excl. Left | 07 | 08 | | | | | |
| Timing | G = 20.0 | G = 30.0 | G = | G = | G = 41.0 | G = 30.0 | G = | G = | | | | | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = 1 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TR | RT | LT | T | R | LT | TR | RT | LT | TR | RT | |
| Adj. flow rate | 184 | 537 | | 779 | 179 | 474 | 395 | 2415 | | 947 | 795 | | |
| Lane group cap. | 477 | 725 | | 455 | 777 | 612 | 715 | 1323 | | 583 | 1405 | | |
| v/c ratio | 0.39 | 0.71 | | 1.71 | 0.23 | 0.77 | 0.55 | 1.83 | | 1.39 | 0.50 | | |
| Green ratio | 0.14 | 0.21 | | 0.14 | 0.21 | 0.43 | 0.21 | 0.29 | | 0.21 | 0.29 | | |
| Unif. delay c1 | 54.4 | 51.4 | | 50.0 | 45.5 | 34.2 | 49.0 | 49.5 | | 55.0 | 41.0 | | |
| Delay factor k | 0.11 | 0.30 | | 0.50 | 0.11 | 0.32 | 0.15 | 0.50 | | 0.50 | 0.11 | | |
| Incrmn. delay c2 | 0.5 | 4.1 | | 329.7 | 0.2 | 6.2 | 0.9 | 374.4 | | 182.9 | 6.3 | | |
| PF factor | 0.889 | 0.818 | | 0.889 | 0.818 | 0.500 | 0.818 | 0.724 | | 0.818 | 0.724 | | |
| Control delay | 48.9 | 46.1 | | 383.0 | 37.3 | 23.3 | 41.0 | 410.2 | | 227.9 | 30.0 | | |
| Lane group LOS | D | D | | F | D | C | D | F | | F | C | | |
| Approch. delay | 46.8 | | | 229.7 | | | 358.3 | | | 143.5 | | | |
| Approch LOS | D | | | F | | | F | | | F | | | |
| Intersec. delay | 240.9 | | | Intersection LOS | | | | | | | | | I |

7-A
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Descriptor ALT-39 WITH LAMEDIA AM PEAK HOUR

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|-------|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | |
| In1 queue/lane | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 184 | 537 | | 779 | 179 | 474 | 296 | 2415 | | 347 | 705 | |
| Satflow per lane | 1719 | 1777 | | 1541 | 1904 | 1427 | 1719 | 1657 | | 1641 | 1761 | |
| Capacity/lane | 477 | 725 | | 455 | 777 | 612 | 715 | 1322 | | 663 | 1405 | |
| Flow ratio | 0.05 | 0.16 | | 0.24 | 0.05 | 0.33 | 0.12 | 0.53 | | 0.30 | 0.15 | |
| v/c ratio | 0.39 | 0.74 | | 1.71 | 0.23 | 0.77 | 0.55 | 1.83 | | 1.39 | 0.50 | |
| I factor | 1.000 | 1.500 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | | 1.67 | 1.67 | |
| PF factor | 0.92 | 0.94 | | 1.00 | 0.95 | 0.75 | 0.90 | 1.00 | | 1.00 | 0.82 | |
| Q ₁ | 3.1 | 9.6 | | 15.6 | 2.6 | 11.9 | 6.3 | 34.5 | | 18.9 | 6.8 | |
| kr | 0.4 | 0.5 | | 0.4 | 0.5 | 0.7 | 0.5 | 0.6 | | 0.5 | 0.6 | |
| Q ₂ | 0.2 | 1.3 | | 21.7 | 0.2 | 2.1 | 0.5 | 51.4 | | 18.6 | 0.6 | |
| C avg. | 3.3 | 10.9 | | 37.3 | 2.7 | 13.8 | 6.9 | 65.8 | | 37.5 | 7.4 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------------------|-----|------|--|------|-----|------|------|-----|--|------|------|--|
| l ₉₅ | 2.0 | 1.8 | | 1.6 | 2.0 | 1.8 | 1.9 | 1.5 | | 1.6 | 1.9 | |
| BCQ Q ₉₅ | 6.6 | 19.9 | | 58.6 | 5.5 | 24.6 | 13.2 | 123 | | 59.1 | 14.0 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|------|------|------|--|------|------|--|
| Q spacing | 24.9 | 24.9 | | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | | 24.9 | 24.9 | |
| Q storage | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

7-16

W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|---------------|--------------|------------------|----------------------------|--|--|
| Analyst | USA! | Agency or Co. | USA! | Intersection | AIRWAY RD @ CALIFINTE BLVD | | |
| Date Performed | 03/05/11 | Time Period | AM PEAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | SAN DIEGO WITH MITIGATION | | |
| | | | | Analysis Year | YEAR 2010/11 T-3B WITH I/M | | |

| Volume and Timing Input | | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|----------|----------|--------------------------|-------|-----------|------------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 0 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | TR | | |
| Volume (vph) | 175 | 320 | 190 | 740 | 170 | 450 | 375 | 1130 | 1165 | 900 | 510 | 100 | |
| % Heavy veh | 5 | 5 | 5 | 10 | 5 | 10 | 5 | 10 | 10 | 10 | 10 | 5 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 7.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Peri/3rd/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | G | N | N | G | N | N | G | N | N | G | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Thru & RT | Excl. Left | 07 | | 08 |
| Timing | G = 20.0 | G = 30.0 | G = | G = | G = 41.0 | G = 30.0 | G = | G = | G = | G = | G = | G = | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | Y = | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length (s) = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 181 | 337 | 200 | 779 | 179 | 474 | 395 | 1183 | 1225 | 547 | 705 |
| Lane group cap | 477 | 777 | 641 | 455 | 777 | 612 | 715 | 1451 | 624 | 683 | 1405 | |
| v/c ratio | 0.39 | 0.43 | 0.31 | 1.71 | 0.23 | 0.77 | 0.55 | 0.82 | 1.96 | 1.39 | 0.60 | |
| Green ratio | 0.14 | 0.21 | 0.43 | 0.14 | 0.21 | 0.43 | 0.21 | 0.29 | 0.44 | 0.21 | 0.29 | |
| Unit delay d1 | 54.4 | 47.6 | 26.4 | 60.0 | 45.5 | 34.2 | 49.0 | 48.1 | 39.5 | 55.0 | 41.0 | |
| Delay factor k | 0.11 | 0.11 | 0.11 | 0.50 | 0.11 | 0.32 | 0.15 | 0.39 | 0.50 | 0.50 | 0.11 | |
| Incarn. delay d2 | 0.5 | 0.4 | 0.3 | 329.7 | 0.7 | 6.7 | 0.9 | 3.9 | 439.9 | 192.9 | 0.3 | |
| PF factor | 0.889 | 0.818 | 0.500 | 0.889 | 0.818 | 0.500 | 0.818 | 0.724 | 0.915 | 0.818 | 0.724 | |
| Control delay | 48.9 | 30.4 | 13.5 | 363.0 | 37.3 | 23.3 | 41.0 | 37.7 | 476.1 | 227.9 | 30.0 | |
| Lane group LOS | D | D | F | F | D | C | D | D | F | F | C | |
| Approach delay | 34.5 | | | 220.7 | | | 229.2 | | | 143.5 | | |
| Approach LOS | C | | | F | | | F | | | F | | |
| Intersect delay | 184.8 | | | intersection LOS | | | | | | F | | |

1-A
W
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT.-3B WITH I AMEDIA AM PEAK HOUR WITH MITIGATION

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| | LI | TH | RT | LT | TH | RT | LI | TH | RT | LI | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Int. queue/ lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/ lane | 184 | 337 | 200 | 779 | 179 | 474 | 395 | 1189 | 1226 | 947 | 706 | |
| Satflow per lane | 1719 | 1904 | 1495 | 1641 | 1904 | 1427 | 1719 | 1819 | 1432 | 1641 | 1761 | |
| Capacity/ lane | 477 | 777 | 641 | 455 | 777 | 512 | 715 | 1451 | 624 | 583 | 1405 | |
| Flow ratio | 0.05 | 0.09 | 0.13 | 0.24 | 0.05 | 0.33 | 0.12 | 0.24 | 0.86 | 0.30 | 0.15 | |
| v/c ratio | 0.39 | 0.43 | 0.31 | 1.71 | 0.23 | 0.77 | 0.55 | 0.82 | 1.56 | 1.39 | 0.50 | |
| I factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.050 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Pardon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.11 | 1.67 | 1.67 | |
| PF factor | 0.92 | 0.89 | 0.56 | 1.00 | 0.85 | 0.75 | 0.90 | 0.92 | 1.00 | 1.00 | 0.82 | |
| Q1 | 3.1 | 5.2 | 2.9 | 15.6 | 2.6 | 11.8 | 5.3 | 14.5 | 47.7 | 16.9 | 6.8 | |
| ks | 0.4 | 0.5 | 0.7 | 0.4 | 0.5 | 0.7 | 0.5 | 0.5 | 0.7 | 0.5 | 0.6 | |
| Q2 | 0.2 | 0.4 | 0.3 | 21.7 | 5.2 | 2.1 | 0.6 | 2.3 | 75.6 | 18.5 | 0.6 | |
| Q avg. | 3.3 | 5.6 | 3.2 | 37.3 | 2.7 | 13.9 | 6.9 | 16.8 | 124.3 | 37.5 | 7.4 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|-----|------|-----|------|-----|------|------|------|-----|------|------|--|
| fs% | 2.0 | 1.9 | 2.0 | 1.6 | 2.0 | 1.8 | 1.9 | 1.7 | 1.5 | 1.5 | 1.9 | |
| BOQ Q% | 6.6 | 10.9 | 6.4 | 56.8 | 5.5 | 24.5 | 13.2 | 29.2 | 186 | 53.1 | 14.0 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|--|
| Q spacing | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Avg. Ru | | | | | | | | | | | | |
| 95% Ro% | | | | | | | | | | | | |

7-P
N
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|--------------|--------------|------------------|----------------------------|--|--|
| Analyst | USAJ | Agency or Co | USAJ | Intersection | AIRWAY RD. @ CALIENTE BLVD | | |
| Date Performed | 03/05/11 | Time Period | PM PLAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | SAN DIEGO/NO MITIGATION | | |
| | | | | Analysis Year | YEAR 2030/ALT. 3R WITH LM | | |

| | EB | | | WB | | | NB | | | SB | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | L | TR | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 0 | 2 | 2 | 1 | 2 | 3 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | |
| Volume (vph) | 160 | 170 | 375 | 1185 | 320 | 910 | 130 | 510 | 740 | 565 | 1130 | 175 |
| % Heavy veh | 5 | 5 | 5 | 10 | 5 | 10 | 5 | 10 | 10 | 10 | 10 | 5 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | S | S | | S | S | S | S | S | | S | S | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Pod/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Thru & RT | Excl. Left | 07 | 08 |
|-----------------------------------|-------------------|-------------------|------------|------------|-------------------|------------------------|------------|------------|
| Timing | G = 30.0 Y = 5 | G = 30.0 Y = 5 | G = Y = | G = Y = | G = 31.0 Y = 5 | G = 30.0 Y = 4 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|--|------------------|-------|-------|-------|-------|--|-------|-------|--|
| | EB | | | WB | | | NB | | | SB | | |
| Adj. flow rate | 168 | 574 | | 1226 | 337 | 958 | 200 | 1316 | | 565 | 1373 | |
| Lane group cap. | 715 | 682 | | 693 | 777 | 612 | 715 | 981 | | 683 | 1077 | |
| Vol. ratio | 0.23 | 0.84 | | 1.80 | 0.43 | 1.57 | 0.28 | 1.34 | | 0.87 | 1.27 | |
| Green ratio | 0.21 | 0.21 | | 0.21 | 0.21 | 0.43 | 0.21 | 0.22 | | 0.21 | 0.22 | |
| Unit delay d1 | 45.5 | 52.7 | | 55.0 | 47.6 | 40.0 | 46.0 | 54.5 | | 53.1 | 54.5 | |
| Delay factor k | 0.11 | 0.35 | | 0.50 | 0.11 | 0.50 | 0.11 | 0.50 | | 0.40 | 0.50 | |
| Increment delay c2 | 0.2 | 9.3 | | 363.5 | 0.4 | 262.3 | 0.2 | 160.6 | | 11.8 | 131.0 | |
| PF factor | 0.818 | 0.818 | | 0.818 | 0.818 | 0.689 | 0.818 | 0.818 | | 0.818 | 0.818 | |
| Control delay | 37.4 | 52.5 | | 408.5 | 38.4 | 289.9 | 37.6 | 204.7 | | 55.3 | 175.2 | |
| Lane group LOS | D | D | | F | D | F | D | F | | E | F | |
| Approach delay | 49.1 | | | 314.1 | | | 182.7 | | | 138.9 | | |
| Approach LOS | D | | | F | | | F | | | F | | |
| Intersect. delay | 204.3 | | | Intersection LOS | | | | | | F | | |

7-P
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-3B WITH LAMEDIA PM PEAK HOUR/NO MITIGATION

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|-------|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | |
| init queue/lane | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 158 | 574 | | 1225 | 337 | 958 | 290 | 1316 | | 595 | 1373 | |
| Satflow per lane | 1719 | 1672 | | 1641 | 1904 | 1427 | 1719 | 1627 | | 1641 | 1785 | |
| Capacity/lane | 715 | 582 | | 603 | 777 | 612 | 715 | 981 | | 653 | 1077 | |
| Flow ratio | 0.05 | 0.18 | | 0.38 | 0.09 | 0.57 | 0.06 | 0.30 | | 0.19 | 0.28 | |
| w/c ratio | 0.23 | 0.84 | | 1.80 | 0.43 | 1.57 | 0.29 | 1.34 | | 0.87 | 1.27 | |
| l factor | 1.000 | 1.050 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.67 | 1.42 | 1.67 | 1.67 | | 1.67 | 1.67 | |
| PF factor | 0.85 | 0.96 | | 1.05 | 0.88 | 1.30 | 0.85 | 1.00 | | 0.97 | 1.00 | |
| Q1 | 2.3 | 10.8 | | 24.5 | 5.2 | 37.3 | 2.8 | 18.8 | | 11.1 | 19.6 | |
| ks | 0.5 | 0.5 | | 0.5 | 0.5 | 0.7 | 0.5 | 0.5 | | 0.5 | 0.5 | |
| Q2 | 0.1 | 2.0 | | 36.1 | 0.4 | 45.0 | 0.2 | 17.1 | | 2.3 | 15.7 | |
| Q avg | 2.5 | 12.8 | | 60.6 | 5.6 | 82.3 | 3.0 | 35.9 | | 13.4 | 35.3 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|------|--|------|------|-----|-----|------|--|------|------|--|
| lE% | 2.0 | 1.8 | | 1.5 | 1.9 | 1.5 | 2.0 | 1.6 | | 1.8 | 1.6 | |
| BOQ, Q% | 5.0 | 22.9 | | 92.1 | 10.9 | 124 | 6.1 | 56.6 | | 23.9 | 55.9 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|------|------|------|--|------|------|--|
| Q spacing | 24.9 | 24.9 | | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | | 24.9 | 24.9 | |
| Q storage | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-----------|------------------------|----------------------------|-------|-------|-------|-------|------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA! | | | | | Intersection | AIRWAY RD. @ GALIENTE BLVD | | | | | | |
| Agency or Co. | USA! | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/05/11 | | | | | Jurisdiction | SAN DIEGO/MTA | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2010/ALJ-38 WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 0 | |
| Lane Group | L | T | R | L | T | R | L | T | R | L | TR | | |
| Volume (vph) | 150 | 170 | 375 | 1165 | 320 | 310 | 190 | 510 | 740 | 565 | 1130 | 175 | |
| % Heavy Veh | 5 | 5 | 5 | 10 | 5 | 10 | 5 | 10 | 10 | 15 | 10 | 5 | |
| P-HF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Adjusted (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext eff green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| Jctk Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/BTOK Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Thru & RT | Excl. Left | 07 | 08 | | | | | |
| Timing | G = 30.0 | G = 30.0 | G = | G = | G = 31.0 | G = 30.0 | G = | G = | | | | | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = 4 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 168 | 179 | 395 | 1226 | 337 | 350 | 200 | 537 | 779 | 585 | 1373 | | |
| Lane group cap | 715 | 777 | 541 | 683 | 777 | 617 | 715 | 1097 | 572 | 683 | 1077 | | |
| Volume ratio | 0.23 | 0.23 | 0.57 | 1.80 | 0.43 | 1.57 | 0.28 | 0.49 | 1.25 | 0.87 | 1.27 | | |
| Green ratio | 0.21 | 0.21 | 0.43 | 0.21 | 0.21 | 0.43 | 0.21 | 0.22 | 0.44 | 0.21 | 0.22 | | |
| Unit. delay c1 | 45.5 | 45.5 | 31.1 | 55.0 | 47.6 | 40.0 | 46.0 | 47.5 | 35.5 | 53.1 | 54.5 | | |
| Delay factor k | 0.11 | 0.11 | 0.20 | 0.50 | 0.11 | 0.50 | 0.11 | 0.11 | 0.50 | 0.40 | 0.50 | | |
| Increm. delay c2 | 0.2 | 0.2 | 1.8 | 383.6 | 0.4 | 262.3 | 0.2 | 0.3 | 126.5 | 11.8 | 131.0 | | |
| PF factor | 0.818 | 0.818 | 0.500 | 0.818 | 0.818 | 0.583 | 0.818 | 0.510 | 0.485 | 0.818 | 0.810 | | |
| Control delay | 37.4 | 37.3 | 17.3 | 108.6 | 30.4 | 289.0 | 37.8 | 38.9 | 145.6 | 55.3 | 175.2 | | |
| Lane group LOS | D | D | B | F | D | F | D | D | F | E | F | | |
| Approach delay | 26.7 | | | 314.1 | | | 92.6 | | | 138.9 | | | |
| Approach LOS | D | | | F | | | F | | | F | | | |
| Intersect. delay | 189.9 | | | Intersection LOS | | | | | | | | | F |

7-P
W
M/T

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT.-3B WITH LAMEDIA PM PEAK HOUR WITH MITIGATION

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | TR | |
| In-L queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | 168 | 179 | 395 | 1226 | 337 | 958 | 200 | 537 | 779 | 595 | 1373 | |
| Satflow per lane | 1719 | 1954 | 1495 | 1641 | 1904 | 1427 | 1719 | 1818 | 1429 | 1641 | 1785 | |
| Capacity/lane | 715 | 777 | 641 | 583 | 777 | 612 | 715 | 1097 | 622 | 683 | 1077 | |
| Flow ratio | 0.05 | 0.05 | 0.26 | 0.35 | 0.09 | 0.67 | 0.06 | 0.11 | 0.55 | 0.19 | 0.28 | |
| Vol ratio | 0.23 | 0.23 | 5.62 | 1.90 | 2.43 | 1.37 | 0.28 | 0.49 | 1.25 | 0.87 | 1.27 | |
| f factor | 1.005 | 1.050 | 1.000 | 1.005 | 1.000 | 1.050 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arriva type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.42 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | |
| PF factor | 0.85 | 0.85 | 0.86 | 1.00 | 0.88 | 1.00 | 0.85 | 0.88 | 1.00 | 0.97 | 1.00 | |
| Q1 | 7.3 | 2.6 | 7.8 | 34.5 | 5.2 | 37.3 | 2.8 | 5.5 | 30.3 | 11.1 | 19.6 | |
| KE | 0.5 | 0.5 | 5.7 | 0.5 | 0.5 | 0.7 | 0.5 | 0.5 | 0.7 | 5.5 | 0.5 | |
| Q2 | 0.1 | 0.2 | 1.1 | 36.1 | 0.4 | 45.0 | 0.2 | 0.5 | 22.5 | 2.3 | 15.7 | |
| Q avg. | 2.5 | 2.7 | 8.9 | 50.6 | 5.6 | 87.3 | 3.0 | 6.4 | 52.8 | 13.4 | 35.3 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|-----|------|------|------|-----|-----|------|------|------|------|--|
| In-L | 2.0 | 2.0 | 1.9 | 1.5 | 1.9 | 1.5 | 2.0 | 1.9 | 1.5 | 1.8 | 1.6 | |
| BOQ, Q1 | 5.0 | 5.5 | 16.6 | 92.1 | 15.9 | 124 | 6.1 | 12.3 | 80.9 | 23.9 | 55.9 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|--|
| Q spacing | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Avg. R1 | | | | | | | | | | | | |
| 95% R1 | | | | | | | | | | | | |

S-A
2
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|--------------------------|--|--|
| Analyst | USAJ | | | Intersection | CALIENTE AV / BEYER BLVD | | |
| Agency or Co | USAJ | | | Area Type | All other areas | | |
| Date Performed | 03/05/11 | | | Jurisdiction | SAN DIEGO/NO MITIGATION | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YEAR 2030/ALT-3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 2 | 0 | 1 | 1 | 1 | 2 | 2 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | |
| Volume (vph) | 1420 | 110 | 330 | 50 | 260 | 385 | 775 | 1180 | 50 | 165 | 500 | 930 |
| % Heavy veh | 10 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 3 | 3 | | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |

| Phasing | Excl. Left | Thru & RT | O3 | O4 | Excl. Left | Thru & RT | O7 | O8 |
|-----------------------------------|-------------------|-------------------|------------|------------------------|-------------------|-------------------|------------|------------|
| Timing | G = 37.0 Y = 5 | G = 15.0 Y = 5 | G = Y = | G = Y = | G = 30.0 Y = 4 | G = 48.0 Y = 5 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | Cycle Length C = 150.0 | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-----|------------------|-------|-------|-------|-------|------|-------|-------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | 1495 | 463 | | 53 | 274 | 363 | 816 | 1274 | | 174 | 1505 |
| Lane group cap | 785 | 319 | | 437 | 196 | 150 | 687 | 1211 | | 687 | 1475 | |
| W/s ratio | 1.90 | 1.45 | | 0.12 | 1.40 | 2.35 | 1.19 | 1.05 | | 0.25 | 1.02 | |
| Green ratio | 0.25 | 0.10 | | 0.25 | 0.10 | 0.10 | 0.25 | 0.33 | | 0.25 | 0.33 | |
| Unf. delay d1 | 56.5 | 67.5 | | 43.9 | 67.5 | 57.5 | 65.8 | 50.5 | | 56.6 | 50.5 | |
| Delay factor k | 0.50 | 0.50 | | 0.11 | 0.50 | 0.50 | 0.50 | 0.50 | | 0.11 | 0.50 | |
| norm delay d2 | 410.7 | 219.3 | | 6.1 | 207.0 | 629.2 | 38.7 | 40.7 | | 0.2 | 28.7 | |
| PF factor | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Control delay | 467.2 | 287.4 | | 44.8 | 274.5 | 695.7 | 158.7 | 91.2 | | 56.8 | 79.2 | |
| Lane group LOS | F | F | | D | F | F | F | F | | D | L | |
| Approach delay | 424.7 | | | 475.7 | | | 117.5 | | | 78.2 | | |
| Approach LOS | F | | | F | | | F | | | E | | |
| Intersec delay | 236.6 | | | Intersection LOS | | | | | | F | | |

8-A
w
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|-----------------------|------------------|--|--------|--|
| Analyst | USA! | Intersection | CALIENTE AV./BEYER | | | BI VD. | |
| Agency or Co. | USA! | Area Type | All other areas | | | | |
| Date Performed | 03/05/11 | Jurisdiction | SAN DIEGO WITH | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030/ALT-3B WITH | | | | |
| | | | LM | | | | |

| | FB | | | WB | | | NB | | | SB | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 0 | 2 | 2 | 2 |
| Lane group | L | T | R | L | T | R | L | TR | | L | T | R |
| Volume (vph) | 1420 | 116 | 330 | 50 | 280 | 395 | 775 | 1160 | 50 | 165 | 500 | 930 |
| % Heavy veh | 10 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Arrival type | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | 3 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 15 | 5 | 0 | 10 | 5 | 50 | 15 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |

| Phasing | Exc. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|-----------------------------------|-------------------|-------------------|------------|------------|-------------------|------------------------|------------|------------|
| Timing | G = 37.0 Y = 5 | G = 15.0 Y = 5 | G = Y = | G = Y = | G = 30.0 Y = 4 | G = 49.6 Y = 5 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|-------|-------|-------|------------------|-------|-------|-------|-------|--|-------|-------|-------|---|
| | FB | | | WB | | | NB | | | SB | | | |
| Avg. flow rate | 1495 | 116 | 347 | 53 | 274 | 353 | 816 | 1274 | | 174 | 526 | 979 | |
| Lane group cap. | 786 | 373 | 504 | 437 | 196 | 504 | 637 | 1211 | | 637 | 1219 | 1517 | |
| v/c ratio | 1.90 | 0.31 | 0.69 | 0.12 | 1.40 | 0.70 | 1.19 | 1.05 | | 0.25 | 0.42 | 0.65 | |
| Green ratio | 0.25 | 0.10 | 0.33 | 0.25 | 0.10 | 0.33 | 0.20 | 0.33 | | 0.20 | 0.33 | 0.51 | |
| Unit delay d' | 56.5 | 82.7 | 43.3 | 43.9 | 67.5 | 43.5 | 60.0 | 50.5 | | 50.8 | 39.6 | 19.1 | |
| Delay factor k | 0.50 | 0.11 | 0.26 | 0.11 | 0.50 | 0.27 | 0.50 | 0.50 | | 0.11 | 0.11 | 0.22 | |
| Increment. delay d2 | 410.7 | 5.5 | 3.9 | 0.1 | 207.0 | 4.3 | 93.7 | 46.7 | | 0.2 | 0.2 | 1.0 | |
| PF factor | 1.005 | 1.000 | 1.000 | 1.000 | 1.000 | 1.950 | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | |
| Control delay | 467.2 | 63.2 | 47.2 | 44.0 | 274.5 | 47.8 | 158.7 | 91.2 | | 50.8 | 39.8 | 20.0 | |
| Lane group LOS | F | E | D | D | F | D | F | F | | D | D | C | |
| Approch. delay | 368.8 | | | 138.8 | | | 117.5 | | | 29.1 | | | |
| Approach LOS | F | | | F | | | F | | | C | | | |
| Interspec. delay | 173.5 | | | Intersection LOS | | | | | | | | | F |

Handwritten:
 2-8
 2-11
 MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|--------------------------|--|--|
| Analyst | USA1 | | | Intersection | CALIENTE AV/MLYER BLVD | | |
| Agency or Co | USA1 | | | Area Type | All other areas | | |
| Date Performed | 03/05/11 | | | Jurisdiction | SAN DIEGO/MD | | |
| Time Period | PM PEAK HOUR | | | Analysis Year | YEAR 2030/ALT-3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| No. of Lanes | 2 | 2 | 0 | 1 | 1 | 1 | 2 | 2 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | |
| Volume (vph) | 230 | 260 | 775 | 50 | 110 | 165 | 330 | 500 | 50 | 385 | 1160 | 1420 |
| % Heavy veh | 10 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext eff green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 3 | 3 | | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 50 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grada/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/nr | | | | | | | | | | | | |
| Bus stops/nr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |

| Phasing | Exc. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 |
|-----------------------------------|-------------------|-------------------|------------|------------------------|-------------------|-------------------|------------|------------|
| Timing | G = 37.0 Y = 5 | G = 15.0 Y = 5 | G = Y = | G = Y = | G = 30.0 Y = 4 | G = 49.0 Y = 5 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | Cycle Length C = 150.0 | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-------|-------|-------|-----|-------|-------|------|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj. flow rate | 979 | 1090 | | 53 | 116 | 121 | 347 | 579 | | 405 | 2716 | |
| Lane group cap | 796 | 319 | | 437 | 196 | 504 | 687 | 1200 | | 687 | 1514 | | |
| w/c ratio | 1.25 | 3.42 | | 0.12 | 0.59 | 0.24 | 0.51 | 0.48 | | 0.59 | 1.79 | | |
| Green ratio | 0.25 | 0.10 | | 0.25 | 0.10 | 0.33 | 0.20 | 0.33 | | 0.20 | 0.53 | | |
| Unif. delay d1 | 56.5 | 67.5 | | 42.9 | 64.5 | 38.2 | 53.4 | 40.4 | | 54.4 | 50.5 | | |
| Delay factor k | 0.50 | 0.50 | | 0.11 | 0.15 | 0.11 | 0.11 | 0.11 | | 0.18 | 0.50 | | |
| Incem delay d2 | 121.1 | 1096 | | 0.1 | 4.7 | 0.2 | 0.6 | 0.3 | | 1.3 | 353.9 | | |
| PF factor | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | | |
| Control delay | 117.5 | 1163 | | 44.0 | 59.3 | 26.5 | 54.0 | 40.7 | | 55.8 | 410.4 | | |
| Lane group LOS | F | F | | D | E | D | D | D | | E | F | | |
| Approch delay | 396.8 | | | 51.0 | | | 45.7 | | | 364.4 | | | |
| Approch. LOS | F | | | D | | | D | | | F | | | |
| Intersec. delay | 411.5 | | | Intersection LOS | | | | | | | | | F |

R-F
W
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|---------------------------|------------------|--|--|--|
| Analyst | USAJ | Intersection | CALIENTE AV/BEYER BLVD | | | | |
| Agency or Co. | USAJ | Area Type | All other areas | | | | |
| Date Performed | 03/05/11 | Jurisdiction | SAN DIEGO WITH MITIGATION | | | | |
| Time Period | PM PEAK HOUR | Analysis Year | YEAR 2030/ALT-3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|----------|----------|------------------------|------|------------|-----------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 0 | 2 | 2 | 2 | |
| Lane group | L | T | R | L | T | R | L | TR | | L | T | R | |
| Volume (vph) | 930 | 260 | 775 | 50 | 110 | 155 | 330 | 500 | 50 | 395 | 1180 | 1420 | |
| % Heavy veh | 10 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Arrival type | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | 3 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 50 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Paving | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 |
| Timing | G = 37.0 | G = 15.0 | G = | G = | G = 30.0 | G = 49.0 | G = | G = | | | | | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-----|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 979 | 274 | 816 | 53 | 116 | 171 | 347 | 579 | | 405 | 1221 |
| Lane group cap | 786 | 373 | 504 | 437 | 196 | 504 | 687 | 1200 | | 667 | 1219 | 1517 |
| svc ratio | 1.25 | 0.73 | 1.67 | 0.12 | 0.59 | 0.24 | 0.51 | 0.48 | | 0.59 | 1.05 | 0.99 |
| Green ratio | 0.75 | 0.10 | 0.37 | 0.25 | 0.10 | 0.33 | 0.20 | 0.33 | | 0.20 | 0.33 | 0.61 |
| Unif. delay d1 | 55.5 | 65.5 | 50.0 | 43.9 | 64.6 | 36.2 | 53.4 | 40.4 | | 54.4 | 50.5 | 28.9 |
| Delay factor k | 0.50 | 0.29 | 0.50 | 0.17 | 0.18 | 0.11 | 0.11 | 0.11 | | 0.18 | 0.50 | 0.49 |
| incrm. delay d2 | 121.1 | 7.4 | 287.6 | 0.1 | 4.7 | 0.2 | 5.6 | 0.3 | | 1.2 | 26.2 | 18.6 |
| PF factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 |
| Control delay | 177.6 | 72.9 | 337.6 | 44.0 | 69.3 | 36.5 | 54.0 | 40.7 | | 55.8 | 76.7 | 48.5 |
| Lane group LOS | F | L | F | D | E | D | D | D | | E | E | D |
| Approch. delay | 225.0 | | | 51.0 | | | 45.7 | | | 50.5 | | |
| Approach LOS | F | | | D | | | D | | | E | | |
| Intersec. delay | 111.6 | | | Intersection LOS | | | | | | F | | |

9-A
N
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|---------------------------|--|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | OTAY MESA | | | | | | |
| Agency or Co. | USAI | | | | | RD./HERITAGE RD. | | | | | | |
| Date Performed | 03/05/11 | | | | | Area Type | | | | | | |
| Time Period | AM PEAK HOUR | | | | | All other areas | | | | | | |
| | | | | | | Jurisdiction | | | | | | |
| | | | | | | SAN DIEGO/NO | | | | | | |
| | | | | | | MITIGATION | | | | | | |
| | | | | | | Analysis Year | | | | | | |
| | | | | | | YEAR 2030 ALT.-3B WITH LM | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 0 | 2 | 3 | 0 |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | |
| Volume (vph) | 795 | 1899 | 335 | 335 | 865 | 1060 | 345 | 806 | 561 | 1695 | 545 | 760 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adjusted (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Start-up lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. off green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |

| Phasing | Excl. Lofl | Thru & RT | 03 | | 04 | | Lxc. Left | Thru & RT | 07 | | 08 | |
|-----------------------------------|-------------------|-------------------|------------|------------|-------------------|-------------------|------------------------|------------|------------|------------|------------|------------|
| Timing | G = 20.0 Y = 4 | G = 30.0 Y = 5 | G = Y = | G = Y = | G = 48.0 Y = 4 | G = 34.0 Y = 5 | G = Y = | G = Y = | G = Y = | G = Y = | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|---------------|-------|-------|------------------|-------|-------|-------|-------|------|-------|-------|------|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj flow rate | 826 | 1989 | 353 | 353 | 911 | 1116 | 363 | 1437 | | 1784 | 1374 | |
| Lane group cap. | 425 | 991 | 789 | 425 | 991 | 789 | 1020 | 1040 | | 1020 | 1007 | | |
| W/c ratio | 1.94 | 2.01 | 0.45 | 0.82 | 0.92 | 1.41 | 0.35 | 1.38 | | 1.75 | 1.36 | | |
| Green ratio | 0.13 | 0.20 | 0.55 | 0.13 | 0.20 | 0.55 | 0.32 | 0.22 | | 0.22 | 0.23 | | |
| Unif delay d1 | 65.0 | 69.0 | 19.9 | 53.2 | 55.8 | 33.5 | 39.1 | 58.9 | | 51.0 | 52.0 | | |
| Delay factor k | 0.50 | 0.50 | 0.11 | 0.37 | 0.44 | 0.50 | 0.11 | 0.59 | | 0.50 | 0.50 | | |
| Increment delay d2 | 433.1 | 456.8 | 0.4 | 13.9 | 13.7 | 154.0 | 0.2 | 177.8 | | 341.1 | 170.4 | | |
| PF factor | 0.897 | 0.833 | 0.174 | 0.807 | 0.833 | 0.735 | 0.586 | 0.805 | | 0.686 | 0.805 | | |
| Control delay | 491.5 | 506.8 | 3.9 | 63.9 | 62.3 | 218.6 | 27.1 | 224.5 | | 376.1 | 217.1 | | |
| Lane group LOS | F | F | A | E | E | F | C | F | | F | F | | |
| Approch delay | 446.7 | | | 136.7 | | | 184.7 | | | 306.9 | | | |
| Approach LOS | F | | | F | | | F | | | F | | | |
| Intersec. delay | 269.6 | | | Intersection LOS | | | | | | | | | F |

Q-A
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT-30 WITH LA MEDIA AM PEAK HOUR NO MITIGATION

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | |
| Inlt. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 826 | 1929 | 353 | 353 | 911 | 1116 | 365 | 1427 | | 1784 | 1374 | |
| Satflow per lane | 1641 | 1818 | 1426 | 1641 | 1818 | 1426 | 1641 | 1684 | | 1641 | 1630 | |
| Capacity/lane | 425 | 391 | 789 | 425 | 891 | 789 | 1020 | 1040 | | 1020 | 1007 | |
| Flow ratio | 0.26 | 0.40 | 0.26 | 0.11 | 0.18 | 0.78 | 0.11 | 0.31 | | 0.56 | 0.31 | |
| v/c ratio | 1.94 | 2.01 | 0.45 | 0.83 | 0.92 | 1.41 | 0.35 | 1.38 | | 1.75 | 1.36 | |
| I factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.21 | 1.67 | 1.67 | | 1.67 | 1.67 | |
| PF factor | 1.00 | 1.00 | 0.22 | 0.98 | 0.98 | 1.00 | 0.75 | 1.00 | | 1.50 | 1.00 | |
| Q1 | 17.7 | 30.4 | 1.8 | 7.2 | 13.4 | 46.5 | 4.5 | 22.0 | | 38.3 | 21.0 | |
| ke | 0.4 | 0.5 | 0.8 | 0.4 | 0.5 | 0.8 | 0.6 | 0.5 | | 0.6 | 0.5 | |
| Q2 | 26.6 | 46.9 | 0.7 | 1.4 | 3.1 | 43.5 | 0.3 | 29.0 | | 50.6 | 18.6 | |
| Q avg | 44.3 | 77.3 | 2.6 | 8.6 | 16.5 | 80.0 | 4.9 | 41.9 | | 88.8 | 39.5 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|------|-----|-----|------|------|-----|-----|------|--|-----|------|--|
| Rev. | 1.5 | 1.5 | 2.0 | 1.9 | 1.7 | 1.5 | 2.0 | 1.8 | | 1.5 | 1.5 | |
| BOQ, Q ₉₅ | 68.8 | 117 | 5.2 | 16.1 | 28.7 | 135 | 3.4 | 65.4 | | 134 | 62.1 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|------|------|------|------|------|------|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Avg. R _c | | | | | | | | | | | | |
| 95% R _c | | | | | | | | | | | | |

Q-A
L
MIT

| SHORT REPORT | | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-------|------------------------|---------------------------|-------|------------|-----------|-------|-------|----|--|
| General Information | | | | | | Site Information | | | | | | | | |
| Analyst | USAJ | | | | | Intersection | OTAY MESA RD/HERITAGE RD | | | | | | | |
| Agency or Co. | USAJ | | | | | Area Type | All other areas | | | | | | | |
| Date Performed | 03/05/11 | | | | | Jurisdiction | SAN DIEGO WITH MITIGATION | | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-39 WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | | | |
| | L | T | R | L | T | R | L | T | R | L | T | R | | |
| Num. of Lanes | 2 | 3 | 1 | 2 | 3 | 2 | 2 | 3 | 1 | 2 | 3 | 1 | | |
| Lane Group | L | T | R | L | T | R | L | T | R | L | T | R | | |
| Volume (vph) | 765 | 1890 | 335 | 335 | 855 | 1060 | 345 | 600 | 555 | 1695 | 545 | 750 | | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | S | S | S | S | S | S | S | S | S | S | S | S | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | | |
| Parking/hr | | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 | |
| Timing | G = 20.0 | G = 30.0 | G = | G = | | | G = 46.0 | | | G = 34.0 | G = | G = | | |
| | Y = 4 | Y = 5 | Y = | Y = | | | Y = 4 | | | Y = 5 | Y = | Y = | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | | | |
| | L | T | R | L | T | R | L | T | R | L | T | R | | |
| Adj. flow rate | 626 | 1989 | 353 | 353 | 911 | 1116 | 363 | 842 | 595 | 1784 | 574 | 800 | | |
| Lane group cap | 425 | 991 | 769 | 425 | 991 | 1397 | 1020 | 1123 | 561 | 1020 | 1123 | 561 | | |
| v/c ratio | 1.94 | 2.01 | 0.46 | 0.83 | 0.92 | 0.80 | 0.36 | 0.75 | 1.05 | 1.75 | 0.51 | 1.43 | | |
| Green ratio | 0.13 | 0.20 | 0.55 | 0.13 | 0.20 | 0.55 | 0.32 | 0.23 | 0.39 | 0.32 | 0.23 | 0.39 | | |
| Unif. delay d1 | 65.0 | 60.0 | 19.9 | 63.3 | 58.8 | 28.8 | 39.1 | 54.0 | 45.5 | 51.0 | 50.7 | 45.6 | | |
| Delay factor k | 0.50 | 0.50 | 0.11 | 0.37 | 0.44 | 0.34 | 0.11 | 0.30 | 0.50 | 0.50 | 0.12 | 0.50 | | |
| increment. delay d2 | 433.1 | 456.8 | 0.4 | 13.0 | 13.2 | 3.4 | 0.2 | 2.9 | 55.1 | 341.1 | 0.4 | 201.9 | | |
| PF factor | 0.897 | 0.833 | 0.174 | 0.897 | 0.833 | 0.174 | 0.596 | 0.805 | 0.568 | 0.688 | 0.805 | 0.568 | | |
| Control delay | 491.5 | 506.8 | 3.9 | 69.9 | 82.3 | 8.1 | 27.1 | 45.3 | 60.9 | 376.1 | 41.2 | 227.7 | | |
| Lane group LOS | F | F | A | E | E | A | C | D | F | F | D | F | | |
| Approach delay | 446.7 | | | 38.0 | | | 53.9 | | | 277.7 | | | | |
| Approach LOS | F | | | D | | | D | | | F | | | | |
| Intersec. delay | 238.0 | | | Intersection LOS | | | | | | | | | F | |

Q-A
W
MT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: *ALT.-3B WITH LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

| | LB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| mtl queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 828 | 1989 | 353 | 353 | 511 | 1115 | 363 | 842 | 595 | 1794 | 574 | 800 |
| Sat flow per lane | 1641 | 1818 | 1426 | 1641 | 1818 | 1426 | 1641 | 1818 | 1427 | 1641 | 1818 | 1427 |
| Capacity/lane | 425 | 991 | 789 | 425 | 991 | 1397 | 1020 | 1123 | 561 | 1020 | 1123 | 561 |
| Flow ratio | 0.26 | 0.40 | 0.25 | 0.11 | 0.18 | 0.44 | 0.11 | 0.17 | 0.42 | 0.56 | 0.12 | 0.56 |
| v/c ratio | 1.54 | 2.01 | 0.45 | 0.83 | 0.92 | 0.60 | 0.36 | 0.75 | 1.06 | 1.75 | 0.51 | 1.43 |
| f factor | 1.000 | 1.000 | 1.005 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.005 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| PF factor | 1.00 | 1.00 | 0.22 | 0.98 | 0.98 | 0.37 | 0.75 | 0.93 | 1.00 | 1.00 | 0.89 | 1.00 |
| Q1 | 17.7 | 30.4 | 1.9 | 7.2 | 13.4 | 7.7 | 4.5 | 11.2 | 24.8 | 38.3 | 6.7 | 33.3 |
| Q8 | 0.4 | 0.5 | 0.8 | 0.4 | 0.5 | 0.8 | 0.6 | 0.6 | 0.7 | 0.6 | 0.6 | 0.7 |
| Q2 | 26.6 | 46.9 | 0.7 | 1.4 | 3.1 | 2.8 | 0.3 | 1.5 | 9.5 | 50.6 | 6.6 | 31.9 |
| Q avg | 44.3 | 77.3 | 2.6 | 6.6 | 16.5 | 10.6 | 4.8 | 12.7 | 34.3 | 68.8 | 7.3 | 65.3 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|-----|-----|------|------|------|-----|------|------|-----|------|------|
| flex | 1.6 | 1.5 | 2.0 | 1.9 | 1.7 | 1.8 | 2.0 | 1.9 | 1.6 | 1.5 | 1.9 | 1.5 |
| BCQ, Q% | 68.8 | 117 | 52 | 16.1 | 28.7 | 19.4 | 9.4 | 22.7 | 54.4 | 134 | 13.9 | 99.0 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro% | | | | | | | | | | | | |

Q-P
N
PART

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|--------------------------|------------------|--|--|--|
| Analyst | USA! | Intersection | OTAY MESA RD/HERITAGE RD | | | | |
| Agency or Co | USA! | Area Type | All other areas | | | | |
| Date Performed | 03/05/11 | Jurisdiction | SAN DIEGO/NO MITIGATION | | | | |
| Time Period | PM PEAK HOUR | Analysis Year | YEAR 2030 ALT 3B WITH LM | | | | |

| | EB | | | WB | | | NB | | | SB | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 0 | 2 | 3 | 0 |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | |
| Volume (vph) | 760 | 985 | 345 | 645 | 1760 | 1420 | 335 | 545 | 270 | 600 | 600 | 785 |
| % Heavy veh | 10 | 15 | 10 | 15 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Acquired (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.5 | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | S | S | S | S | S | S | S | S | | S | S | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Wkth | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |

| Phasing | 03 | | | 04 | | | 07 | | | 08 | | |
|---------|------------|-----------|-----|------------|-----------|-----|------------|-----------|-----|------------|-----------|-----|
| | Excl. Left | Thru & RT | | Excl. Left | Thru & RT | | Excl. Left | Thru & RT | | Excl. Left | Thru & RT | |
| Timing | G = 20.0 | G = 30.0 | G = | G = | G = 40.0 | G = | G = 34.0 | G = | G = | G = | G = | G = |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = 5 | Y = | Y = | Y = | Y = | Y = |

Duration of Analysis (hrs) = 0.25 Cycle Length C = 150.0

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|------------------|-------|----|-------|-------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj flow rate | 800 | 1037 | 363 | 579 | 1253 | 1495 | 353 | 558 | | 642 | 1668 | |
| Lane group cap. | 425 | 991 | 789 | 425 | 991 | 789 | 1020 | 1055 | | 1020 | 1024 | |
| v/c ratio | 1.88 | 1.05 | 0.46 | 1.60 | 1.87 | 1.89 | 0.35 | 0.81 | | 0.83 | 1.53 | |
| Green ratio | 0.13 | 0.20 | 0.55 | 0.13 | 0.20 | 0.55 | 0.52 | 0.23 | | 0.32 | 0.23 | |
| Unif. delay d1 | 65.0 | 60.0 | 20.1 | 65.0 | 60.0 | 33.5 | 39.0 | 55.0 | | 47.1 | 58.0 | |
| Delay factor k | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.50 | 0.11 | 0.35 | | 0.36 | 0.50 | |
| Incremental delay d2 | 405.9 | 41.5 | 0.4 | 279.8 | 395.3 | 407.4 | 0.2 | 4.9 | | 5.7 | 287.5 | |
| PF factor | 0.897 | 0.833 | 0.174 | 0.897 | 0.833 | 1.060 | 0.686 | 0.805 | | 0.686 | 0.905 | |
| Control delay | 454.2 | 91.5 | 0.9 | 338.2 | 445.3 | 440.9 | 27.0 | 49.2 | | 39.0 | 334.2 | |
| Lane group LOS | F | F | A | F | F | F | C | D | | D | F | |
| Approach delay | 212.9 | | | 425.6 | | | 42.7 | | | 234.8 | | |
| Approach LOS | F | | | F | | | D | | | F | | |
| Intersec delay | 283.7 | | | | | | Intersection LOS | | | F | | |

CF
N
AIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-38 WITH LA MEDIA PM PEAK HOUR NO MITIGATION

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 500 | 1037 | 353 | 679 | 1253 | 1493 | 353 | 258 | | 842 | 1668 | |
| Satflow per lane | 1541 | 1819 | 1425 | 1841 | 1819 | 1425 | 1541 | 1711 | | 1841 | 1559 | |
| Capacity/lane | 425 | 991 | 789 | 425 | 991 | 789 | 1025 | 1058 | | 1020 | 1024 | |
| Flow ratio | 0.25 | 0.21 | 0.25 | 0.21 | 0.37 | 1.05 | 0.11 | 0.18 | | 0.26 | 0.37 | |
| v/c ratio | 1.98 | 1.05 | 0.46 | 1.60 | 1.87 | 1.89 | 0.35 | 0.21 | | 0.83 | 1.03 | |
| f factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.00 | 1.67 | 1.67 | | 1.67 | 1.67 | |
| PF factor | 1.00 | 1.00 | 0.23 | 1.00 | 1.00 | 1.00 | 0.75 | 0.95 | | 0.90 | 1.00 | |
| Q1 | 17.1 | 15.8 | 2.0 | 14.5 | 28.2 | 82.3 | 4.3 | 11.7 | | 15.0 | 25.5 | |
| k _s | 0.4 | 0.5 | 0.8 | 0.4 | 0.5 | 0.8 | 0.6 | 0.5 | | 0.6 | 0.5 | |
| Q ₂ | 24.9 | 6.1 | 5.7 | 17.3 | 40.7 | 89.9 | 0.3 | 1.9 | | 2.5 | 30.9 | |
| Q avg. | 42.0 | 21.9 | 2.7 | 31.9 | 69.0 | 152.2 | 4.6 | 13.6 | | 17.5 | 56.4 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|------|------|-----|------|-----|-----|-----|------|--|------|------|--|
| h ₉₅ | 1.6 | 1.7 | 2.0 | 1.6 | 1.5 | 1.5 | 2.0 | 1.8 | | 1.7 | 1.5 | |
| ROQ, Q ₉₅ | 65.5 | 36.8 | 5.5 | 51.1 | 104 | 228 | 9.1 | 24.3 | | 30.2 | 86.1 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|--------------------|------|------|------|------|------|------|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Avg R ₀ | | | | | | | | | | | | |
| 95% R ₀ | | | | | | | | | | | | |

9-18
W
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|----------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA1 | | | | | Intersection | CITY MESA RD/HERITAGE RD. | | | | | |
| Agency or Co | USA1 | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/05/11 | | | | | Jurisdiction | SAN DIEGO WITH MITIGATION | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT - 3S WITH LM | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 1 | 2 | 3 | 2 | 2 | 3 | 1 | 2 | 3 | 1 |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Volume (veh) | 760 | 995 | 345 | 645 | 1780 | 1420 | 335 | 545 | 270 | 800 | 800 | 785 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| P-F | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 5 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |

| Phasing | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 |
|---------|-----------|-----------|-----|-----|-----------|-----------|-----|-----|
| Timing | G = 26.0 | G = 30.0 | G = | G = | G = 48.0 | G = 34.0 | G = | G = |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = |

Duration of Analysis (hrs) = 0.25 Cycle Length (s) = 150.0

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Arr. flow rate | 800 | 1037 | 363 | 679 | 1853 | 1495 | 353 | 574 | 284 | 842 | 842 |
| Lane group cap | 425 | 991 | 789 | 425 | 991 | 1397 | 1020 | 1123 | 561 | 1020 | 1123 | 561 |
| svc ratio | 1.88 | 1.05 | 0.46 | 1.60 | 1.87 | 1.07 | 0.35 | 0.51 | 0.51 | 0.83 | 0.75 | 1.47 |
| Green ratio | 0.13 | 0.20 | 0.55 | 0.13 | 0.20 | 0.55 | 0.32 | 0.23 | 0.39 | 0.32 | 0.23 | 0.39 |
| Unif. delay d1 | 65.0 | 60.0 | 26.1 | 65.0 | 60.0 | 33.5 | 39.0 | 50.7 | 34.5 | 47.1 | 54.0 | 45.5 |
| Delay factor k | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | 0.50 | 0.11 | 0.12 | 0.11 | 0.36 | 0.29 | 0.50 |
| Increment. delay d2 | 405.9 | 41.5 | 0.4 | 278.8 | 395.3 | 45.3 | 0.2 | 0.4 | 0.8 | 5.7 | 2.9 | 222.1 |
| P-F factor | 0.897 | 0.933 | 0.174 | 0.897 | 0.933 | 0.250 | 0.686 | 0.805 | 0.568 | 0.686 | 0.805 | 0.584 |
| Control delay | 464.2 | 91.5 | 3.9 | 338.2 | 445.3 | 53.7 | 77.0 | 41.2 | 20.3 | 38.0 | 46.3 | 248.7 |
| Lane group LOS | F | F | A | F | F | D | C | D | C | D | D | F |
| Approach delay | 212.6 | | | 281.8 | | | 32.2 | | | 110.1 | | |
| Approach LOS | F | | | F | | | C | | | F | | |
| Intersec. delay | 192.8 | | | Intersection LOS | | | | | | F | | |

2-P
W
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: **ALT -36 WITH LA MEDIA PM PEAK HOUR WITH MITIGATION**

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Init queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 800 | 1027 | 353 | 679 | 1853 | 1495 | 353 | 574 | 284 | 842 | 842 | 826 |
| Satflow per lane | 1641 | 1818 | 1426 | 1641 | 1818 | 1426 | 1641 | 1818 | 1427 | 1641 | 1818 | 1427 |
| Capacity/lane | 425 | 591 | 789 | 425 | 591 | 1397 | 1020 | 1123 | 561 | 1020 | 1123 | 561 |
| Flow ratio | 0.25 | 0.21 | 0.25 | 0.21 | 0.37 | 0.59 | 0.11 | 0.12 | 0.20 | 0.26 | 0.17 | 0.56 |
| v/c ratio | 1.88 | 1.05 | 0.46 | 1.60 | 1.87 | 1.07 | 0.35 | 0.51 | 0.51 | 0.83 | 0.75 | 1.47 |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Platoon ratio | 1.67 | 1.57 | 1.67 | 1.57 | 1.67 | 1.61 | 1.67 | 1.67 | 1.67 | 1.67 | 1.57 | 1.64 |
| PF factor | 1.05 | 1.00 | 0.23 | 1.00 | 1.00 | 1.00 | 0.75 | 0.88 | 0.68 | 0.90 | 0.93 | 1.00 |
| Q1 | 17.1 | 15.8 | 2.0 | 14.5 | 28.3 | 35.2 | 4.3 | 6.7 | 5.1 | 15.0 | 11.2 | 34.4 |
| Q5 | 0.4 | 0.5 | 0.8 | 0.4 | 0.5 | 0.8 | 0.6 | 0.6 | 0.7 | 0.6 | 0.6 | 0.7 |
| Q10 | 24.9 | 5.1 | 0.7 | 17.3 | 40.7 | 13.3 | 0.3 | 0.6 | 0.7 | 2.5 | 1.5 | 35.1 |
| Q avg. | 42.0 | 21.9 | 2.7 | 31.9 | 69.0 | 48.5 | 4.6 | 7.3 | 6.8 | 17.5 | 12.7 | 69.5 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------|------|------|-----|------|-----|------|-----|------|------|------|------|-----|
| Q95 | 1.5 | 1.7 | 2.0 | 1.6 | 1.5 | 1.5 | 2.0 | 1.9 | 1.9 | 1.7 | 1.8 | 1.6 |
| BOQ, Q95 | 65.5 | 36.8 | 5.0 | 51.1 | 104 | 74.7 | 9.1 | 13.9 | 12.5 | 30.7 | 22.7 | 105 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

10-A
2
MT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-----|---------------|----------|------------------------|-------------------------------|------|-------|-------|------|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | HERITAGE RD./ SR-905 WB RAMPS | | | | | |
| Agency or Co | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/08/11 | | | | | Jurisdiction | 905V/BHER30A2BV/LM/NC | | | | | |
| Time Period | AM PEAK HOUR | | | | | MIT | | | | | | |
| | | | | | | Analysis Year | YEAR 2030 ALT. 3B WITH 1 M | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 2 | 3 | 0 |
| Lane group | | | | | L | R | | TR | | L | T | |
| Volume (veh) | | | | 240 | | 740 | | 1810 | 870 | 265 | 495 | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (PIA) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | | 2.0 | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | | | | | 2.0 | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | | | | 5 | 5 | | 5 | | 5 | 5 | |
| Unit Extension | | | | | 3.0 | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 300 | 10 | 5 | 0 | | | |
| Lane Width | | | | | 12.0 | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | | 0 | 0 | | 0 | | 0 | 0 | |
| Unit Extension | | | | | 3.0 | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Phasing | WB Only | G2 | G3 | G4 | SE Only | Thru & RT | G7 | G8 | | | | |
| Timing | G = 30.0 | G = | G = | G = | G = 20.0 | G = 60.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 123.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| Adj. flow rate | | | | 387 | 329 | | 2611 | | 279 | 521 | | |
| Lane group cap | | | | 407 | 634 | | 2273 | | 518 | 3387 | | |
| v/c ratio | | | | 0.95 | 0.52 | | 1.15 | | 0.54 | 0.15 | | |
| Green ratio | | | | 0.24 | 0.24 | | 0.49 | | 0.16 | 0.68 | | |
| Unf. delay c1 | | | | 46.8 | 40.3 | | 31.5 | | 47.3 | 6.9 | | |
| Delay factor c1 | | | | 0.46 | 0.12 | | 0.50 | | 0.14 | 0.11 | | |
| Incremental delay c2 | | | | 22.2 | 9.6 | | 72.6 | | 1.1 | 9.0 | | |
| PF factor | | | | 0.765 | 0.765 | | 0.365 | | 0.871 | 0.158 | | |
| Control delay | | | | 58.1 | 32.4 | | 84.1 | | 42.3 | 1.1 | | |
| Lane group LOS | | | | E | C | | F | | D | A | | |
| Approach delay | | | | 51.7 | | | 84.1 | | | 15.6 | | |
| Approach LOS | | | | D | | | F | | | B | | |
| Intersec. delay | 65.1 | | | intersec. LOS | | | | | | E | | |

A.2.2.1
10/13

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *A1 T-3B WITH I A MEDIA AM PEAK HOUR/NO MIT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|----|-------|-------|----|-------|----|-------|-------|----|
| | LI | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | | LR | R | | TR | | L | T | |
| Ini. queue/lane | | | | | 5.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | | | | 397 | 329 | | 261 | | 279 | 521 | |
| Satflow per lane | | | | | 1669 | 1469 | | 1710 | | 1641 | 1918 | |
| Capacity/lane | | | | | 407 | 634 | | 2273 | | 519 | 3363 | |
| Flow ratio | | | | | 0.23 | 0.13 | | 0.56 | | 0.09 | 0.11 | |
| v/c ratio | | | | | 0.95 | 0.52 | | 1.15 | | 0.54 | 0.15 | |
| I factor | | | | | 1.000 | 1.000 | | 1.000 | | 1.500 | 1.000 | |
| Arrival type | | | | | 5 | 5 | | 5 | | 5 | 5 | |
| Platoon ratio | | | | | 1.67 | 1.67 | | 1.67 | | 1.87 | 1.39 | |
| Pf factor | | | | | 0.98 | 0.87 | | 1.50 | | 0.93 | 0.17 | |
| Q1 | | | | | 12.8 | 4.7 | | 32.7 | | 4.2 | 0.4 | |
| ks | | | | | 0.5 | 0.4 | | 0.7 | | 0.4 | 0.5 | |
| Q2 | | | | | 3.8 | 0.5 | | 20.0 | | 0.4 | 0.2 | |
| Q avg. | | | | | 16.5 | 5.2 | | 52.7 | | 4.6 | 0.6 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|--|--|--|------|------|--|------|--|-----|-----|--|
| lev. | | | | | 1.7 | 1.9 | | 1.5 | | 2.0 | 2.1 | |
| BOQ, Q% | | | | | 28.8 | 10.2 | | 80.8 | | 9.0 | 1.2 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|--|------|------|--|------|--|------|------|--|
| Q spacing | | | | | 25.0 | 25.0 | | 25.0 | | 25.0 | 25.0 | |
| Q storage | | | | | 0 | 0 | | 0 | | 0 | 0 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

10-A
W
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|------------------------------|------------------|--|--|--|
| Analyst | USA1 | Intersection | HERITAGE RD./ SR-905 WB RAMP | | | | |
| Agency or Co. | USA1 | Area Type | All other areas | | | | |
| Date Performed | 03/05/11 | Jurisdiction | 905WB/HER30A3BWLMMW/TH | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030 ALT - SB WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|------|----------|-------------------------|-----|------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 5 | 0 | 5 | 0 | 0 | 2 | 0 | 3 | 2 | 2 | 3 | 5 |
| Lane group | | | | | LR | R | | T | R | L | T | |
| Volume (vph) | | | | 240 | | 740 | | 1610 | 870 | 285 | 495 | |
| % Heavy Veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. off green | | | | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | | | | | 5 | 5 | | 5 | 5 | 5 | 5 | |
| Unit Extension | | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 300 | 10 | 5 | 0 | | | |
| Lane Width | | | | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grader/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/h* | | | | | | | | | | | | |
| Bus stops/h* | | | | | 0 | 0 | | 0 | 0 | 0 | 0 | |
| Unit Extension | | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Or y | Thru & RT | 07 | 08 | | | | |
| Timing | G = 30.0 | G = | G = | G = | G = 20.0 | G = 60.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length: C = 123.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|--|--|------------------|-------|-----|-------|-------|-------|-------|-----|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | | | 387 | 329 | | 1995 | 916 | 279 | 521 | |
| Lane group cap. | | | | 407 | 634 | | 2415 | 1325 | 518 | 3383 | | |
| v/c ratio | | | | 0.95 | 0.52 | | 0.70 | 0.75 | 0.54 | 0.15 | | |
| Green ratio | | | | 0.24 | 0.24 | | 0.49 | 0.49 | 0.15 | 0.68 | | |
| Unif. delay d1 | | | | 45.8 | 40.3 | | 24.5 | 25.4 | 47.3 | 5.9 | | |
| Delay factor k | | | | 0.46 | 0.12 | | 0.27 | 0.30 | 0.14 | 0.11 | | |
| Incr. delay d2 | | | | 32.2 | 0.8 | | 0.9 | 2.6 | 1.1 | 0.0 | | |
| PF factor | | | | 0.785 | 0.785 | | 0.365 | 0.365 | 0.871 | 0.158 | | |
| Control delay | | | | 66.1 | 32.4 | | 9.9 | 11.5 | 42.3 | 1.1 | | |
| Lane group LOS | | | | E | C | | A | B | D | A | | |
| Approch. delay | | | | 51.7 | | | 10.6 | | | 15.5 | | |
| Approach LOS | | | | D | | | B | | | B | | |
| Intersec. delay | 18.7 | | | Intersection LOS | | | | | | B | | |

10-4
3/17

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-3B WITH LA MEDIA AM PEAK HOUR/WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|----|----|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | R | | T | R | | L | T | |
| Int. queue/lane | | | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | | | 387 | 329 | | 1695 | 916 | | 279 | 521 | |
| Sat flow per lane | | | | 1669 | 1468 | | 1819 | 1419 | | 1641 | 1819 | |
| Capacity/lane | | | | 407 | 534 | | 2415 | 1225 | | 518 | 3383 | |
| Flow ratio | | | | 0.23 | 0.15 | | 0.34 | 0.36 | | 0.09 | 0.11 | |
| w/c ratio | | | | 0.95 | 0.52 | | 0.70 | 0.75 | | 0.51 | 0.15 | |
| Factor | | | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | | | | F | F | | F | F | | F | F | |
| Platoon ratio | | | | 1.97 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.39 | |
| PF factor | | | | 0.96 | 0.87 | | 0.56 | 0.59 | | 0.93 | 0.17 | |
| Q ₁ | | | | 12.8 | 4.7 | | 9.3 | 8.4 | | 4.2 | 0.4 | |
| kn | | | | 0.5 | 0.4 | | 0.8 | 0.7 | | 0.4 | 0.9 | |
| Q ₂ | | | | 3.8 | 0.5 | | 1.7 | 1.8 | | 5.1 | 0.2 | |
| Q avg | | | | 16.5 | 5.2 | | 11.0 | 10.2 | | 4.6 | 0.6 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------------------|--|--|--|------|------|--|------|------|--|-----|-----|--|
| fe _s | | | | 1.7 | 1.9 | | 1.8 | 1.8 | | 2.0 | 2.1 | |
| BOQ, Q _s | | | | 28.8 | 10.2 | | 20.1 | 18.8 | | 9.0 | 1.2 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|--|--|--|------|------|--|------|------|--|------|------|--|
| Q spacing | | | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | | | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro _s | | | | | | | | | | | | |

10-P
N
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-----|------------------|----------|--|-------|------|-------|------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst: | USAI | | | | | HERITAGE RD./ SR 903 WB | | | | | | |
| Agency or Co: | USAI | | | | | RAMPS | | | | | | |
| Date Performed: | 03/05/11 | | | | | All other areas | | | | | | |
| Time Period: | PM PEAK HOUR | | | | | 903WBHER3GP35W/L/M/O | | | | | | |
| | | | | | | MIT. | | | | | | |
| | | | | | | Analysis Year: YEAR 2035 ALT -3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 0 | 5 | 2 | 5 | 3 | 0 | 2 | 3 | 0 |
| Lane group | | | | | L | R | | | TR | | L | T |
| Volume (veh) | | | | 180 | | 130 | | 715 | 1350 | 1165 | 1280 | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | | 2.0 | 2.5 | | 2.5 | | 2.0 | 2.0 | |
| Ext eff green | | | | | 2.0 | 2.5 | | 2.5 | | 2.0 | 2.0 | |
| Arrival type | | | | | 5 | 5 | | 5 | | 5 | 5 | |
| Unit Extension | | | | | 3.0 | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 350 | 10 | 5 | 0 | | | |
| Lane Width | | | | | 12.0 | 12.0 | | 12.5 | | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | | 0 | 0 | | 0 | | 0 | 0 | |
| Unit Extension | | | | | 3.0 | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = | G = | G = | G = 50.0 | G = 47.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | | | 189 | | 0 | | | 2174 | | 1226 | 1347 |
| Lane group cap. | | | | 265 | | 400 | | | 1591 | | 1226 | 3848 |
| w/c ratio | | | | 0.71 | | 0.00 | | | 1.37 | | 1.00 | 0.35 |
| Green ratio | | | | 0.15 | | 0.15 | | | 0.38 | | 0.38 | 0.76 |
| Unif. delay d1 | | | | 52.3 | | 46.5 | | | 41.5 | | 40.0 | 44 |
| Delay factor k | | | | 0.27 | | 0.11 | | | 0.50 | | 0.50 | 0.11 |
| Incrum. delay d2 | | | | 8.5 | | 0.0 | | | 169.0 | | 25.7 | 0.1 |
| PF factor | | | | 0.879 | | 1.000 | | | 0.622 | | 0.583 | 0.224 |
| Control delay | | | | 54.5 | | 46.5 | | | 194.8 | | 49.0 | 11 |
| Lane group LOS | | | | D | | U | | | F | | D | A |
| Approch. delay | | | | 54.5 | | | 194.8 | | | 23.9 | | |
| Approach LOS | | | | D | | | F | | | C | | |
| Intersec delay | 150.4 | | | Intersection LOS | | | | | | F | | |

10-17
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT-3B WITH LA MEDIA PM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|----|-------|-------|----|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | | LR | R | | TR | | L | T | |
| Inlt. queue/lane | | | | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | | | | 159 | 0 | | 2174 | | 1226 | 1347 | |
| Satflow per lane | | | | | 1732 | 1468 | | 1615 | | 1541 | 1818 | |
| Capacity/lane | | | | | 266 | 400 | | 1591 | | 1226 | 3848 | |
| Flow ratio | | | | | 0.11 | 0.00 | | 0.49 | | 0.38 | 0.27 | |
| W/C ratio | | | | | 0.71 | 0.00 | | 1.37 | | 1.00 | 0.35 | |
| I factor | | | | | 1.000 | 1.000 | | 1.000 | | 1.000 | 1.000 | |
| Arrival type | | | | | 5 | 5 | | 5 | | 5 | 5 | |
| Platoon ratio | | | | | 1.67 | 1.00 | | 1.67 | | 1.67 | 1.22 | |
| PF factor | | | | | 0.96 | 1.00 | | 1.00 | | 1.00 | 0.24 | |
| Q1 | | | | | 5.2 | 0.0 | | 26.9 | | 22.8 | 1.3 | |
| k1 | | | | | 0.4 | 0.4 | | 0.6 | | 0.7 | 1.1 | |
| Q2 | | | | | 0.9 | 0.0 | | 26.9 | | 7.2 | 0.6 | |
| Q avg | | | | | 7.1 | 0.0 | | 57.7 | | 30.0 | 1.9 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|--|--|--|------|-----|--|------|--|------|-----|--|
| fbs | | | | | 1.9 | 2.1 | | 1.5 | | 1.6 | 2.0 | |
| BOQ, Q% | | | | | 13.5 | 0.0 | | 88.0 | | 48.3 | 3.9 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|--|------|------|--|------|--|------|------|--|
| Q spacing | | | | | 25.0 | 25.0 | | 25.0 | | 25.0 | 25.0 | |
| Q storage | | | | | 0 | 0 | | 0 | | 0 | 0 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

10-P
6
11/7

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----|-----|------------------|----------|-------------------------|-----------------------------|-------|-------|-------|------|----|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA! | | | | | Intersection | HERITAGE RD./SR-905 WB RAMP | | | | | | |
| Agency or Co. | USA! | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/05/11 | | | | | Jurisdiction | 905WBHER39P3BWLMA11TH | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 3 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | 2 | 3 | 0 | |
| Lane group | | | | | LR | R | | L | R | L | Y | | |
| Volume (vph) | | | | 180 | | 130 | 715 | 1350 | 1165 | 1280 | | | |
| % Heavy veh | | | | 10 | | 10 | 10 | 10 | 10 | 10 | | | |
| PHF | | | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Actuated (PIA) | | | | A | | A | A | A | A | A | | | |
| Startup lost time | | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | | | | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| Unit Extension | | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 300 | 10 | 5 | 0 | | | | |
| Lane Width | | | | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | | | N | N | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | | | | | 0 | 0 | | 0 | 0 | 0 | 0 | | |
| Unit Extension | | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 20.0 | G = | G = | G = | G = 50.0 | G = 47.0 | G = | G = | | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle length, C = 130.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | | | | 180 | 0 | | 753 | 1421 | 1226 | 1347 | | | |
| Lane group cap. | | | | 266 | 400 | | 1791 | 1367 | 1226 | 3848 | | | |
| vc ratio | | | | 0.71 | 0.00 | | 0.42 | 1.02 | 1.50 | 0.35 | | | |
| Green ratio | | | | 0.15 | 0.15 | | 0.35 | 0.55 | 0.38 | 0.78 | | | |
| Unit delay d1 | | | | 52.3 | 46.5 | | 31.2 | 29.0 | 40.0 | 4.4 | | | |
| Delay factor k | | | | 0.27 | 0.11 | | 0.11 | 0.50 | 0.50 | 0.11 | | | |
| Increment delay d2 | | | | 8.5 | 0.0 | | 0.2 | 30.6 | 25.7 | 0.1 | | | |
| FF factor | | | | 0.679 | 1.000 | | 0.622 | 0.172 | 0.583 | 0.224 | | | |
| Control delay | | | | 54.5 | 46.5 | | 19.6 | 35.6 | 49.0 | 1.1 | | | |
| Lane group LOS | | | | D | D | | B | D | D | A | | | |
| Approach delay | | | | 54.5 | | | 30.1 | | | 23.9 | | | |
| Approach LOS | | | | D | | | C | | | C | | | |
| Intersec. delay | 27.8 | | | Intersection LOS | | | | | | | | | C |

10-f
w
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-38 WITH LA MEDIA PM PEAK HOUR WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|--------------------|----|----|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | LR | R | | T | R | | L | T | |
| In t. queue/lane | | | | 3.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | | | 169 | 0 | | 753 | 1421 | | 1226 | 1347 | |
| Sat. flow per lane | | | | 1732 | 1458 | | 1816 | 1415 | | 1641 | 1816 | |
| Capacity/lane | | | | 265 | 400 | | 1791 | 1367 | | 1226 | 3848 | |
| Flow ratio | | | | 0.11 | 0.00 | | 0.15 | 0.57 | | 0.38 | 0.27 | |
| W/c ratio | | | | 0.71 | 0.00 | | 0.42 | 1.02 | | 1.00 | 0.35 | |
| I factor | | | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | | | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Platoon ratio | | | | 1.07 | 1.00 | | 1.67 | 1.67 | | 1.67 | 1.22 | |
| PF factor | | | | 0.96 | 1.00 | | 0.71 | 1.00 | | 1.00 | 0.24 | |
| Q1 | | | | 6.7 | 0.0 | | 5.3 | 29.0 | | 22.5 | 1.3 | |
| K6 | | | | 0.4 | 0.4 | | 0.7 | 0.7 | | 0.7 | 1.1 | |
| Q2 | | | | 0.9 | 0.0 | | 0.5 | 9.9 | | 7.2 | 0.6 | |
| Q avg. | | | | 7.1 | 0.0 | | 5.8 | 38.9 | | 30.5 | 1.9 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|--|--|------|-----|--|------|------|--|------|-----|--|
| 95% | | | | 1.9 | 2.1 | | 1.8 | 1.5 | | 1.6 | 2.0 | |
| BOQ, Q% | | | | 13.5 | 0.0 | | 11.2 | 61.0 | | 48.3 | 3.9 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|------|--|------|------|--|------|------|--|
| Q spacing | | | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | | | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro% | | | | | | | | | | | | |

11-A
N
W

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|------------------------------|--|--|
| Analyst | USAI | | | Intersection | HERITAGE RD / SR-905 EB RAMP | | |
| Agency or Co | USAI | | | Area Type | All other areas | | |
| Data Performed | 03/05/11 | | | Jurisdiction | 905EBHER20A3BWLMMNO | | |
| Time Period | AM PLAK HOUR | | | Analysis Year | YEAR 2030 ALT -3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|------|----------|------------------------|-----|------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 3 | 0 | 2 | 3 | 0 |
| Lane group | | | | L | LP | | | TR | | L | T | |
| Volume (vph) | | | | 1125 | | 580 | | 1890 | 240 | 120 | 615 | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (PIA) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | 2.0 | 2.0 | | | 2.0 | | 2.0 | 2.0 | |
| Ext. eff green | | | | 2.0 | 2.0 | | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | | | 5 | 5 | | | 5 | | 5 | 5 | |
| Unit Extension | | | | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | 10 | 5 | 0 | | | |
| Lane Width | | | | 12.0 | 12.0 | | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | | | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | 0 | | | 0 | | 0 | 0 | |
| Unit Extension | | | | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | 1th & 1st | 07 | 08 | | | | |
| Timing | G = 67.0 | G = | G = | G = | G = 15.0 | G = 55.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | |
|---|---------------|--|--|------------------|-------|-----|-------|-------|------|-------|-------|
| | EB | | | WB | | | NB | | | SB | |
| | Adj flow rate | | | | 971 | 979 | | | 2148 | | 126 |
| Lane group cap | | | | 733 | 710 | | | 1779 | | 319 | 2443 |
| v/c ratio | | | | 1.32 | 1.31 | | | 1.21 | | 0.39 | 0.26 |
| Green ratio | | | | 0.45 | 0.45 | | | 0.37 | | 0.10 | 0.49 |
| Unif. delay d1 | | | | 41.5 | 41.5 | | | 47.5 | | 63.2 | 27.1 |
| Delay factor k | | | | 0.50 | 0.50 | | | 0.50 | | 0.11 | 0.11 |
| Increment delay d2 | | | | 155.5 | 148.8 | | | 38.9 | | 0.9 | 0.1 |
| PI factor | | | | 0.511 | 0.495 | | | 0.614 | | 0.326 | 0.351 |
| Control delay | | | | 176.7 | 169.4 | | | 128.1 | | 69.4 | 7.9 |
| Lane group LOS | | | | F | F | | | F | | E | A |
| Approch. delay | | | | 173.1 | | | 128.1 | | | 16.2 | |
| Approach LOS | | | | F | | | F | | | E | |
| Intersec. delay | 127.9 | | | intersection LOS | | | | | | F | |

11A

N
M7

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-3D WITH LA ML DIA AM PEAK HOUR NO M1

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|-------|-------|----|----|-------|----|-------|-------|----|
| | LT | TH | RI | LT | TH | RI | LT | TH | RI | LT | TH | RI |
| Lane group | | | | L | LR | | | TR | | L | T | |
| Int. queue/lane | | | | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | | | 971 | 929 | | | 2148 | | 126 | 647 | |
| Satflow per lane | | | | 1641 | 1090 | | | 1781 | | 1641 | 1818 | |
| Capacity/lane | | | | 733 | 710 | | | 1779 | | 319 | 2443 | |
| Flow ratio | | | | 0.59 | 0.58 | | | 0.44 | | 0.04 | 0.13 | |
| W/O ratio | | | | 1.32 | 1.31 | | | 1.21 | | 0.39 | 0.25 | |
| PF factor | | | | 1.000 | 1.000 | | | 1.000 | | 1.000 | 1.000 | |
| Arrival type | | | | 5 | 5 | | | 5 | | 5 | 5 | |
| Platoon ratio | | | | 1.61 | 1.63 | | | 1.67 | | 1.67 | 1.67 | |
| PF factor | | | | 1.05 | 1.00 | | | 1.00 | | 0.95 | 0.39 | |
| Q ₁ | | | | 40.5 | 36.7 | | | 32.8 | | 2.4 | 2.2 | |
| Q ₂ | | | | 0.8 | 0.8 | | | 0.7 | | 0.3 | 0.9 | |
| Q ₃ | | | | 32.6 | 30.3 | | | 20.4 | | 0.2 | 0.3 | |
| Q avg | | | | 73.1 | 69.0 | | | 53.2 | | 2.6 | 2.5 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|--|--|--|-----|-----|--|--|------|--|-----|-----|--|
| fb% | | | | 1.5 | 1.5 | | | 1.5 | | 2.0 | 2.0 | |
| BOQ, Q ₉₅ | | | | 110 | 104 | | | 81.5 | | 5.2 | 5.2 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|------|--|--|------|--|------|------|--|
| Q spacing | | | | 25.0 | 25.0 | | | 25.0 | | 25.0 | 25.0 | |
| Q storage | | | | 0 | 0 | | | 0 | | 0 | 0 | |
| Avg. RQ | | | | | | | | | | | | |
| 95% RQ | | | | | | | | | | | | |

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|------------------------------|------------------|--|--|--|
| Analyst | USAJ | Intersection | HERITAGE RD./ SR-905 EB RAMP | | | | |
| Agency or Co. | USAJ | Area Type | All other areas | | | | |
| Date Performed | 03/05/11 | Jurisdiction | S05EBHER30A3SWLMWITH | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030 ALT. 3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|------|----------|------------------------|-----|------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 1 | 2 | 3 | 0 |
| Lane group | | | | L | | R | | L | R | L | L | |
| Volume (vph) | | | | 1175 | | 380 | | 1990 | 246 | 120 | 615 | |
| % Heavy veh | | | | 10 | | 15 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Start-up los: time | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff green | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | | | | 5 | | 5 | | 5 | 5 | 5 | 5 | |
| Unif Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RIDOR Volume | 10 | | | 10 | | 0 | 10 | 5 | 0 | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grader/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | 0 | 0 | 0 | |
| Unif Extension | | | | 5.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SR Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 67.0 | G = | G = | G = | G = 15.0 | G = 55.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|--|--|------------------|------|-------|------|-------|-------|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | | | | 1194 | | 716 | | 1995 | 253 | 126 | 647 |
| Lane group cap. | | | | 1424 | | 642 | | 1816 | 1217 | 313 | 2443 | |
| Vol ratio | | | | 0.83 | | 0.85 | | 1.54 | 0.21 | 0.39 | 0.26 | |
| Green ratio | | | | 0.45 | | 0.57 | | 0.37 | 0.85 | 0.10 | 0.49 | |
| Unif delay d1 | | | | 36.5 | | 26.6 | | 47.5 | 2.1 | 53.2 | 22.1 | |
| Delay factor k | | | | 0.37 | | 0.38 | | 0.50 | 0.11 | 0.11 | 0.11 | |
| Incomm. delay d2 | | | | 4.3 | | 8.3 | | 33.5 | 5.1 | 0.8 | 5.1 | |
| PF factor | | | | 0.462 | | 0.117 | | 0.614 | 0.326 | 0.926 | 0.351 | |
| Control delay | | | | 21.2 | | 11.4 | | 62.6 | 6.8 | 59.4 | 7.9 | |
| Lane group LOS | | | | C | | B | | E | A | E | A | |
| Approch. delay | | | | 17.5 | | | 55.4 | | | 19.2 | | |
| Approach LOS | | | | B | | | E | | | B | | |
| Intersec. delay | 34.2 | | | Intersection LOS | | | | | | C | | |

HA
W
MT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 3B WITH LA MEDIA AM PEAK HOUR WITH MT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|-------|-------|-------|----|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | | R | | T | R | L | T | |
| Unit queue/lane | | | | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | | | | 1194 | | 716 | | 1895 | 253 | 126 | 647 | |
| Satflow per lane | | | | 1641 | | 1458 | | 1818 | 1437 | 1641 | 1818 | |
| Capacity/lane | | | | 1424 | | 842 | | 1816 | 1217 | 319 | 2443 | |
| Flow ratio | | | | 0.37 | | 0.49 | | 0.38 | 0.18 | 0.04 | 0.13 | |
| svc ratio | | | | 0.83 | | 0.85 | | 1.04 | 0.21 | 0.39 | 0.28 | |
| Factor | | | | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | 1.050 | 1.090 | |
| Arrival type | | | | 5 | | 5 | | 5 | 5 | 5 | 5 | |
| Platoon ratio | | | | 1.67 | | 1.66 | | 1.87 | 1.12 | 1.67 | 1.67 | |
| PF factor | | | | 0.75 | | 0.31 | | 1.00 | 0.33 | 0.95 | 0.39 | |
| Q1 | | | | 17.0 | | 7.8 | | 29.0 | 0.7 | 7.4 | 2.7 | |
| Q0 | | | | 0.8 | | 0.8 | | 0.7 | 1.1 | 0.3 | 0.9 | |
| Q2 | | | | 3.2 | | 3.5 | | 10.0 | 0.3 | 0.2 | 0.3 | |
| Q avg. | | | | 20.7 | | 11.6 | | 39.0 | 0.9 | 2.6 | 2.6 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|--|--|--|------|--|------|--|------|-----|-----|-----|--|
| ft/s | | | | 1.7 | | 1.8 | | 1.6 | 2.1 | 2.0 | 2.0 | |
| BOQ Q% | | | | 34.2 | | 21.1 | | 51.1 | 1.9 | 5.2 | 5.7 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|--|------|--|------|------|------|------|--|
| Q spacing | | | | 25.0 | | 25.0 | | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | | | | 0 | | 0 | | 0 | 0 | 0 | 5 | |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

11-P
NO
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|------------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA! | | | | | Intersection | HERITAGE RD / SR-905 EB RAMP | | | | | |
| Agency or Co | USA! | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/05/11 | | | | | Jurisdiction | 905EBHER30P38WLMWNO | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-------------------|------------|------------|------------|-------------------|------------------------|------------|------------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 2 | 3 | 0 |
| Lane group | | | | L | LR | | | TR | | L | T | |
| Volume (vph) | | | | 900 | | 500 | | 1565 | 500 | 300 | 1180 | |
| % Heavy Veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PFF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | 2.0 | 2.0 | | | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | | | | 2.0 | 2.0 | | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | | | S | S | | | S | | S | S | |
| Unit Extension | | | | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | 10 | 5 | 5 | | | |
| Lane Width | | | | 12.0 | 12.0 | | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | 0 | | | 0 | | 0 | 0 | |
| Unit Extension | | | | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 67.0 Y = 4 | G = Y = | G = Y = | G = Y = | G = 15.0 Y = 4 | G = 65.0 Y = 5 | G = Y = | G = Y = | | | | |
| Duration of Analysis (Hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|----------------|--|-------|------------------|-----|--|-------|------|-------|-------|------|--|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj. flow rate | | | 777 | 696 | | | 2173 | | 316 | 1221 | | |
| Lane group cap. | | | 733 | 712 | | | 1740 | | 319 | 2443 | | | |
| v/c ratio | | | 1.06 | 0.93 | | | 1.25 | | 0.99 | 0.50 | | | |
| Green ratio | | | 0.45 | 0.45 | | | 0.37 | | 0.10 | 0.49 | | | |
| Unit delay d' | | | 41.5 | 40.6 | | | 47.5 | | 67.4 | 25.6 | | | |
| Delay factor k | | | 0.50 | 0.48 | | | 0.50 | | 0.49 | 0.11 | | | |
| Incremental delay d2 | | | 50.3 | 28.1 | | | 117.0 | | 47.7 | 0.2 | | | |
| PF factor | | | 0.462 | 0.462 | | | 0.614 | | 0.926 | 0.351 | | | |
| Control delay | | | 62.5 | 46.9 | | | 146.1 | | 110.1 | 9.1 | | | |
| Lane group LOS | | | E | D | | | F | | F | A | | | |
| Approach delay | | | | 58.5 | | | 146.1 | | | 29.9 | | | |
| Approach LOS | | | | E | | | F | | | C | | | |
| Intersec delay | 96.8 | | | Intersection LOS | | | | | | | | | F |

11-10
2011

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT -3B WITH LA MEDIA PM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|-------|-------|----|----|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | LR | | | TR | | L | T | |
| Init. queue/lane | | | | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | | | 777 | 696 | | | 2173 | | 316 | 1921 | |
| Satflow per lane | | | | 1641 | 1593 | | | 1742 | | 1641 | 1818 | |
| Capacity/lane | | | | 733 | 712 | | | 1740 | | 319 | 2443 | |
| Flow ratio | | | | 0.47 | 0.44 | | | 0.46 | | 0.10 | 3.26 | |
| w/c ratio | | | | 1.06 | 0.96 | | | 1.25 | | 0.96 | 0.60 | |
| I factor | | | | 1.050 | 1.000 | | | 1.000 | | 1.000 | 1.000 | |
| Arrival type | | | | 5 | 5 | | | 5 | | 5 | 5 | |
| Platoon ratio | | | | 1.67 | 1.67 | | | 1.67 | | 1.67 | 1.67 | |
| PF factor | | | | 1.00 | 0.95 | | | 1.00 | | 1.00 | 0.45 | |
| Q ₁ | | | | 32.4 | 27.3 | | | 33.7 | | 6.7 | 5.6 | |
| ks | | | | 0.8 | 0.6 | | | 0.7 | | 0.3 | 0.9 | |
| Q ₂ | | | | 11.9 | 7.2 | | | 23.0 | | 2.4 | 0.9 | |
| Q avg | | | | 44.7 | 34.5 | | | 56.2 | | 9.1 | 6.5 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|--|--|--|------|------|--|--|------|--|------|------|--|
| ln ₉₅ | | | | 1.6 | 1.6 | | | 1.5 | | 1.9 | 1.9 | |
| BOQ, Q ₉₅ | | | | 68.5 | 54.7 | | | 65.6 | | 17.0 | 12.5 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|------|--|--|------|--|------|------|--|
| Q spacing | | | | 25.0 | 25.0 | | | 25.0 | | 25.0 | 25.0 | |
| Q storage | | | | 0 | 0 | | | 0 | | 0 | 0 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

11-1
L
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|---------------------------|------------------|--|--|--|
| Analyst | USA1 | Intersection | HERITAGE RD / SR-905 EB | | | | |
| Agency or Co. | USA1 | Area Type | RAMPS | | | | |
| Date Performed | 03/05/11 | Jurisdiction | 30:EBHER30P3BW1 M/W1/H | | | | |
| Time Period | PM PEAK HOUR | Analysis Year | YEAR 2030 ALT -3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|----|----|----|------|----|------|----|------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 5 | 0 | 2 | 5 | 1 | 0 | 3 | 1 | 2 | 3 | 5 |
| Lane group | | | | L | | R | | T | R | L | T | |
| Volume (vph) | | | | 900 | | 500 | | 1555 | 500 | 300 | 1160 | |
| % Heavy ven | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | | | | S | | S | | S | S | S | S | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 5 | 10 | 5 | 0 | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | 0 | 0 | 0 | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | |

| Thru only | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 |
|-----------------------------------|----------|-----|-----|-----|----------|------------------------|-----|-----|
| Timing | G = 67.5 | G = | G = | G = | G = 15.0 | G = 55.0 | G = | G = |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|------|----|----|------------------|----|-------|------|-------|-------|-------|-------|--|
| | FB | | | WB | | | NB | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | | |
| Adj. flow rate | | | | 947 | | 526 | | 1547 | 526 | 316 | 1221 | |
| Lane group cap. | | | | 1424 | | 942 | | 1816 | 1217 | 319 | 2443 | |
| w/c ratio | | | | 0.67 | | 0.62 | | 0.91 | 0.43 | 0.99 | 0.50 | |
| Green ratio | | | | 0.45 | | 0.57 | | 0.37 | 0.35 | 0.10 | 0.49 | |
| Unif. delay d1 | | | | 32.7 | | 21.3 | | 45.1 | 2.9 | 67.4 | 25.6 | |
| Delay factor k | | | | 0.24 | | 0.21 | | 0.43 | 0.11 | 0.49 | 0.11 | |
| Incremental delay d2 | | | | 1.2 | | 1.5 | | 7.1 | 0.2 | 47.7 | 0.2 | |
| PF factor | | | | 0.462 | | 0.117 | | 0.514 | 0.326 | 0.926 | 0.351 | |
| Control delay | | | | 16.3 | | 4.0 | | 34.7 | 1.2 | 110.1 | 9.1 | |
| Lane group LOS | | | | B | | A | | C | A | F | A | |
| Approach delay | | | | 11.9 | | | 26.6 | | 29.9 | | | |
| Approach LOS | | | | B | | | C | | C | | | |
| Intersection delay | 23.4 | | | Intersection LOS | | | | | | C | | |

11-2
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-3B WITH LA MEDIA PM PEAK HOUR WITH MIT

Average Back of Queue

| | FB | | | WB | | | NB | | | SB | | |
|-------------------|----|----|----|-------|-------|-------|----|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | | R | | T | R | L | T | |
| Arriv. queue/lane | | | | 0.0 | | 0.0 | | 0.0 | 3.0 | 0.0 | 0.0 | |
| Flow rate/lane | | | | 947 | | 526 | | 1647 | 528 | 316 | 1221 | |
| Sat flow per lane | | | | 1641 | | 1458 | | 1818 | 1437 | 1641 | 1818 | |
| Capacity/lane | | | | 1424 | | 842 | | 1816 | 1217 | 319 | 2443 | |
| Flow ratio | | | | 0.30 | | 0.36 | | 0.23 | 0.37 | 0.10 | 0.25 | |
| Vol ratio | | | | 0.67 | | 0.62 | | 0.91 | 0.43 | 0.99 | 0.50 | |
| PF factor | | | | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | | | | 5 | | 5 | | 5 | 5 | 5 | 5 | |
| Platoon ratio | | | | 1.67 | | 1.66 | | 1.67 | 1.12 | 1.67 | 1.67 | |
| PF factor | | | | 0.64 | | 0.19 | | 0.92 | 0.35 | 1.60 | 0.45 | |
| Q ₁ | | | | 10.3 | | 2.7 | | 21.9 | 1.9 | 6.7 | 6.0 | |
| Q ₂ | | | | 0.8 | | 0.8 | | 0.7 | 1.1 | 0.3 | 0.9 | |
| Q ₃ | | | | 1.5 | | 1.4 | | 4.5 | 0.8 | 2.4 | 0.9 | |
| Q avg. | | | | 11.7 | | 4.1 | | 26.5 | 2.7 | 9.1 | 6.5 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|--|--|--|------|--|-----|--|------|-----|------|------|--|
| fb% | | | | 1.8 | | 2.0 | | 1.6 | 2.9 | 1.9 | 1.9 | |
| BOQ Q% | | | | 21.3 | | 8.0 | | 43.3 | 5.4 | 17.0 | 12.5 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|--|------|--|------|------|------|------|--|
| Q spacing | | | | 25.0 | | 25.0 | | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | | | | 0 | | 0 | | 0 | 0 | 0 | 0 | |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

12A
X
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-----|------------------|----------|------------------------|---------------------------|-----|----|-------|----|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA/ | | | | | Intersection | HERITAGE RD/MIRWAY RD | | | | | |
| Agency or Co. | USA/ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/00/11 | | | | | Jurisdiction | HERA/R30A3BWL/MNC MIT | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| Lane group | L | T | | | TR | | | | | L | | R |
| Volume (veh) | 185 | 2260 | | | 1205 | 1855 | | | | 1510 | | 730 |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | 10 | | 10 |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | 0.95 | | 0.95 |
| Actuated (P/A) | A | A | | | A | A | | | | A | | A |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Arrival type | 5 | 5 | | | 5 | | | | | 5 | | 5 |
| Unif. Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | 10 | | | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | | 12.0 | | | | | 12.0 | | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | | | | | 0 | | 0 |
| Unif. Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Phasing | EB Only | Thru & RT | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 10.0 | G = 80.0 | G = | G = | G = 47.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 195 | 2379 | | | 3221 | | | | | 1589 | | 742 |
| Lane group cap. | 212 | 3104 | | | 2373 | | | | | 999 | | 583 |
| v/c ratio | 0.92 | 0.77 | | | 1.36 | | | | | 1.59 | | 0.42 |
| Green ratio | 0.07 | 0.53 | | | 0.53 | | | | | 0.31 | | 0.41 |
| Unif. delay d1 | 69.6 | 20.1 | | | 35.0 | | | | | 51.5 | | 31.8 |
| Delay factor k | 0.44 | 0.32 | | | 0.50 | | | | | 0.50 | | 0.11 |
| Increment. delay c2 | 31.7 | 0.6 | | | 162.8 | | | | | 270.5 | | 0.5 |
| Pi factor | 0.952 | 0.134 | | | 0.643 | | | | | 0.596 | | 0.543 |
| Control delay | 98.0 | 3.5 | | | 165.3 | | | | | 306.4 | | 17.7 |
| Lane group LOS | F | A | | | F | | | | | F | | B |
| Approach delay | 10.7 | | | 185.3 | | | | | | 268.2 | | |
| Approach LOS | B | | | F | | | | | | F | | |
| Intersec. delay | 146.3 | | | Intersection LOS | | | | | | F | | |

10-2-20

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|--|-------|-------|----|----|-------|----|----|----|----|-------|-------|-------|
| General Information | | | | | | | | | | | | |
| Project Description ALT-30 WITH LA MEDIA AM PEAK HOURING MIT | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | TR | | | | | L | | R |
| In-l queue/lane | 0.0 | 0.0 | | | 0.0 | | | | | 0.0 | | 0.0 |
| Flow rate/lane | 195 | 2379 | | | 3221 | | | | | 1589 | | 242 |
| Satflow per lane | 1641 | 1818 | | | 1633 | | | | | 1641 | | 1435 |
| Capacity/lane | 212 | 3104 | | | 2375 | | | | | 899 | | 583 |
| Flow ratio | 0.06 | 0.46 | | | 0.72 | | | | | 0.50 | | 0.17 |
| Vol ratio | 0.92 | 0.77 | | | 1.36 | | | | | 1.59 | | 0.42 |
| PF factor | 0.700 | 0.700 | | | 0.700 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | | | 5 | | | | | 5 | | 5 |
| Platoon ratio | 1.67 | 1.52 | | | 1.31 | | | | | 1.67 | | 1.67 |
| PF factor | 1.00 | 0.25 | | | 1.00 | | | | | 1.00 | | 0.63 |
| Q1 | 4.1 | 0.7 | | | 49.3 | | | | | 34.1 | | 4.5 |
| ka | 0.2 | 0.1 | | | 0.6 | | | | | 0.5 | | 0.7 |
| Q2 | 1.0 | 2.2 | | | 41.0 | | | | | 39.6 | | 0.5 |
| Q avg. | 5.1 | 8.9 | | | 90.3 | | | | | 73.7 | | 5.0 |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| fb% | 2.0 | 1.5 | | | 1.5 | | | | | 1.5 | | 2.0 |
| BOQ, Qs | 10.0 | 16.6 | | | 135 | | | | | 111 | | 9.8 |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | 25.0 | 25.0 | | | 25.0 | | | | | 25.0 | | 25.0 |
| Q storage | 0 | 0 | | | 0 | | | | | 0 | | 0 |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

12A
W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------------|---------------|---------------------------|------------------|-----------------|--------------|---------------------|
| Analyst | USA1 | Intersection | HERITAGE RD/JANINAY RD. | Area Type | All other areas | Jurisdiction | HERA/R31A39W1/MW/TH |
| Agency or Co. | USA1 | Analysis Year | YEAR 2030 ALT -3B WITH LM | | | | |
| Date Performed | 03/06/11 | | | | | | |
| Time Period | A.M. PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|------|------|----|----|------|------|----|----|----|------|----|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 0 | 1 |
| Lane group | L | T | | | T | R | | | | L | | R |
| Volume (vph) | 185 | 2260 | | | 1205 | 1855 | | | | 1510 | | 230 |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | 10 | | 10 |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | 0.95 | | 0.95 |
| Actuated (P/A) | A | A | | | A | A | | | | A | | A |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | 2.0 | | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | 2.0 | | 2.0 |
| Arrival type | 5 | 5 | | | 5 | 5 | | | | 5 | | 5 |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | 10 | | | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | | | 12.0 | | 12.0 |
| Paving/Grade/Parking | N | 0 | N | N | 0 | N | N | | | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | | | 0 | | 0 |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | 3.0 | | 3.0 |

| Phasing | EB Only | Thru & RT | 03 | 04 | SB Only | 05 | 07 | 08 |
|------------------------------|-------------------|-------------------|------------|------------|------------------------|------------|------------|------------|
| Timing | G = 17.0 Y = 4 | G = 70.0 Y = 5 | G = Y = | G = Y = | G = 50.0 Y = 4 | G = Y = | G = Y = | G = Y = |
| Duration of Analysis (hrs) = | 0.25 | | | | Cycle Length C = 150.0 | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-------|------|--|--|-------|------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 195 | 2379 | | | 1268 | 1953 | | | | 1509 | |
| Lane group cap. | 361 | 3605 | | | 2311 | 2055 | | | | 1052 | | 879 |
| v/c ratio | 0.51 | 0.79 | | | 0.55 | 0.93 | | | | 1.50 | | 0.36 |
| Green ratio | 0.11 | 0.61 | | | 0.47 | 0.82 | | | | 0.33 | | 0.47 |
| Unit delay d1 | 62.8 | 22.3 | | | 28.7 | 9.3 | | | | 50.0 | | 25.0 |
| Delay factor k | 0.14 | 0.34 | | | 0.15 | 0.45 | | | | 0.50 | | 0.11 |
| Increment delay c2 | 1.6 | 1.5 | | | 0.3 | 3.3 | | | | 228.3 | | 0.3 |
| PF factor | 0.915 | 0.127 | | | 0.417 | 0.300 | | | | 0.667 | | 0.401 |
| Control delay | 59.1 | 4.4 | | | 12.2 | 11.1 | | | | 261.6 | | 10.4 |
| Lane group LOS | E | A | | | B | B | | | | F | | B |
| Approch. delay | 8.5 | | | 11.5 | | | | | | 228.4 | | |
| Approch. LOS | A | | | D | | | | | | F | | |
| Intersec. delay | 62.8 | | | Intersection LOS | | | | | | C | | |

12-A
W
M

BACK-OF-QUEUE WORKSHEET

General information

Project Description ALT. 3B WITH LA MEDIA AM PEAK HOUR/WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|--------------------|-------|-------|----|----|-------|-------|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | T | R | | | | L | | R |
| Init. queue/lane | 0.0 | 0.0 | | | 0.0 | 0.0 | | | | 0.0 | | 0.0 |
| Flow rate/lane | 195 | 2579 | | | 1268 | 1953 | | | | 1589 | | 242 |
| Half flow per lane | 1641 | 1818 | | | 1818 | 1420 | | | | 1641 | | 1434 |
| Capacity/lane | 361 | 3055 | | | 2311 | 2095 | | | | 1052 | | 679 |
| Flow ratio | 0.05 | 0.48 | | | 0.25 | 0.78 | | | | 0.50 | | 0.17 |
| v/c ratio | 0.54 | 0.79 | | | 0.55 | 0.93 | | | | 1.50 | | 0.36 |
| PF factor | 1.000 | 1.000 | | | 1.000 | 1.000 | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | | | 5 | 5 | | | | 5 | | 5 |
| Platoon ratio | 1.67 | 1.57 | | | 1.67 | 1.14 | | | | 1.67 | | 1.57 |
| PF factor | 0.96 | 0.27 | | | 0.54 | 0.58 | | | | 1.00 | | 0.46 |
| Q ₁ | 3.8 | 7.3 | | | 7.5 | 25.1 | | | | 34.1 | | 3.0 |
| Q ₅ | 0.3 | 1.0 | | | 0.6 | 1.0 | | | | 5.7 | | 0.7 |
| Q ₁₀ | 0.4 | 3.4 | | | 1.0 | 8.0 | | | | 35.9 | | 0.4 |
| Q avg. | 4.2 | 10.7 | | | 8.5 | 25.1 | | | | 69.9 | | 3.4 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|-----|------|--|--|------|------|--|--|--|-----|--|-----|
| t ₉₅ | 2.0 | 1.8 | | | 1.9 | 1.8 | | | | 1.5 | | 2.0 |
| BOQ, Q ₉₅ | 8.2 | 19.6 | | | 16.0 | 45.6 | | | | 106 | | 6.7 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|------|------|--|--|------|------|--|--|--|------|--|------|
| Q spacing | 25.0 | 25.0 | | | 25.0 | 25.0 | | | | 25.0 | | 25.0 |
| Q storage | 0 | 5 | | | 5 | 0 | | | | 0 | | 0 |
| Avg. R ₁ | | | | | | | | | | | | |
| 95% R ₁ | | | | | | | | | | | | |

12-P
N
M

| SHORT REPORT | | | | | | | | | | | | |
|---|-------------------|-------------------|------------|------------------|-------------------|--|------------|------------|----|-------|----|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst USAI Agency or Co. USAI Date Performed 03/06/11 Time Period PM PEAK HOUR | | | | | | Intersection HERITAGE RD./AIRWAY RD. Area Type All other areas Jurisdiction HCR/AIR35P35W/LM/NO MIT Analysis Year YEAR 2010 ALT.-3E WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| Lane group | L | T | | | TR | | | | | L | | R |
| Volume (vph) | 230 | 1205 | | | 2040 | 1835 | | | | 1875 | | 185 |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | 10 | | 10 |
| PIIF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | 0.95 | | 0.95 |
| Actuated (P/A) | A | A | | | A | A | | | | A | A | A |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Ext. eff green | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Arrival type | 5 | 5 | | | 5 | | | | | 5 | | 5 |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | 10 | 0 | 0 | 10 | | | 10 | 10 | 0 |
| Lane Width | 12.0 | 12.0 | | | 12.0 | | | | | 12.0 | | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | | | | | 0 | | 0 |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Phasing | EB Only | Thru & RT | 05 | 04 | SB Only | 06 | 07 | 09 | | | | |
| Timing | G = 10.0 Y = 4 | G = 59.0 Y = 5 | G = Y = | G = Y = | G = 68.0 Y = 4 | G = Y = | G = Y = | G = Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj flow rate | 242 | 1268 | | | 4079 | | | | | 1974 | | 195 |
| Lane group cap. | 212 | 2410 | | | 1803 | | | | | 1445 | | 764 |
| v/c ratio | 1.14 | 0.53 | | | 2.26 | | | | | 1.37 | | 0.25 |
| Green ratio | 0.07 | 0.49 | | | 0.39 | | | | | 0.45 | | 0.55 |
| Unit delay d1 | 70.0 | 26.6 | | | 45.5 | | | | | 41.0 | | 17.8 |
| Delay factor k | 0.50 | 0.13 | | | 0.50 | | | | | 0.50 | | 0.11 |
| Incremental delay d2 | 165.2 | 0.2 | | | 669.8 | | | | | 169.3 | | 0.2 |
| PF factor | 0.952 | 0.368 | | | 0.956 | | | | | 0.557 | | 0.196 |
| Control delay | 171.8 | 10.0 | | | 613.3 | | | | | 192.1 | | 37 |
| Lane group LOS | F | A | | | F | | | | | F | | A |
| Approach delay | 35.9 | | | 613.3 | | | | | | 175.2 | | |
| Approach LOS | D | | | F | | | | | | F | | |
| Intersection delay | 376.4 | | | Intersection LOS | | | | | | F | | |

12-8
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT -3B WITH LA MEDIA PM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|----|-------|----|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | TR | | | | | L | | R |
| Init. queue/lane | 0.0 | 5.0 | | | 0.5 | | | | | 0.5 | | 0.5 |
| Flow rate/lane | 242 | 1268 | | | 4079 | | | | | 1974 | | 195 |
| Satflow per lane | 1641 | 1818 | | | 1693 | | | | | 1641 | | 1435 |
| Capacity/lane | 212 | 2415 | | | 1803 | | | | | 1445 | | 784 |
| Flow ratio | 0.08 | 0.25 | | | 0.99 | | | | | 0.52 | | 0.14 |
| v/c ratio | 1.14 | 0.53 | | | 2.26 | | | | | 1.37 | | 0.25 |
| I factor | 1.000 | 1.000 | | | 1.500 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | | | 5 | | | | | 5 | | 5 |
| Platoon ratio | 1.67 | 1.67 | | | 1.97 | | | | | 1.53 | | 1.67 |
| PF factor | 1.00 | 0.46 | | | 1.00 | | | | | 1.00 | | 0.22 |
| Q1 | 5.2 | 6.4 | | | 62.4 | | | | | 42.3 | | 0.9 |
| kn | 0.2 | 0.9 | | | 0.7 | | | | | 0.8 | | 0.9 |
| Q2 | 3.1 | 0.9 | | | 105.8 | | | | | 36.7 | | 0.3 |
| Q avg. | 6.3 | 7.3 | | | 158.2 | | | | | 79.0 | | 1.2 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|--|--|-----|--|--|--|--|-----|--|-----|
| len | 1.5 | 1.9 | | | 1.5 | | | | | 1.5 | | 2.1 |
| BOQ, Q% | 15.6 | 13.9 | | | 252 | | | | | 119 | | 2.5 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|--|------|--|--|--|--|------|--|------|
| Q spacing | 25.0 | 25.0 | | | 25.0 | | | | | 25.0 | | 25.0 |
| Q storage | 0 | 0 | | | 0 | | | | | 0 | | 0 |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

128
W
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-----|------------------|----------|------------------------|---------------------------|-----|----|-------|----|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA1 | | | | | Intersection | HERITAGE RD./AIRWAY RD. | | | | | |
| Agency or Co. | USA1 | | | | | Area Type | All other areas | | | | | |
| Date Performed | 02/06/11 | | | | | Jurisdiction | HERA/R30P3B/WLMM/WH | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2010 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 0 | 1 |
| Lane group | L | T | | | T | R | | | | L | | R |
| Volume (veh) | 230 | 1205 | | | 2040 | 1835 | | | | 1675 | | 185 |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | 10 | | 10 |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | 0.95 | | 0.95 |
| Actuated (P/A) | A | A | | | A | A | | | | A | A | A |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | 2.0 | | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | 2.0 | | 2.0 |
| Arrival type | S | S | | | S | S | | | | S | | S |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | 10 | 0 | 0 | 10 | | | 10 | 10 | 0 |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | | | 12.0 | | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Park ng/hr | | | | | | | | | | | | |
| Bus stops/h: | 0 | 0 | | | 0 | 0 | | | | 0 | | 0 |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | 3.0 | | 3.0 |
| Phasing | EB Only | Thru & RT | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 10.0 | G = 59.0 | G = | G = | G = 58.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 242 | 1268 | | | 2147 | 1932 | | | | 1574 | | 195 |
| Lane group cap. | 212 | 2410 | | | 1948 | 2258 | | | | 1445 | | 784 |
| v/c ratio | 1.14 | 0.53 | | | 1.10 | 0.86 | | | | 1.37 | | 0.25 |
| Green ratio | 0.07 | 0.49 | | | 0.39 | 0.58 | | | | 0.45 | | 0.55 |
| Unif. delay d1 | 70.5 | 26.6 | | | 45.5 | 4.4 | | | | 41.0 | | 17.8 |
| Delay factor k | 0.50 | 0.13 | | | 0.50 | 0.39 | | | | 0.50 | | 0.11 |
| Increment delay d2 | 105.2 | 0.2 | | | 54.4 | 3.5 | | | | 169.3 | | 0.2 |
| PF factor | 0.952 | 0.368 | | | 0.558 | 0.417 | | | | 0.557 | | 0.196 |
| Control delay | 171.8 | 10.0 | | | 80.2 | 5.3 | | | | 192.1 | | 3.7 |
| Lane group LOS | F | A | | | F | A | | | | F | | A |
| Approch. delay | 35.9 | | | 44.7 | | | | | | 175.2 | | |
| Approach LOS | D | | | D | | | | | | F | | |
| Intersec. delay | 79.5 | | | Intersection LOS | | | | | | E | | |

BACK-OF-QUEUE WORKSHEET

12 P
W
M

General Information

Project Description: ALT - 3B WITH LA MEDIA PM PEAK HOUR WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|----|----|-------|-------|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | T | R | | | | L | | R |
| Init. queue/lane | 0.0 | 0.0 | | | 0.0 | 0.0 | | | | 0.0 | | 0.0 |
| Flow rate/lane | 242 | 1268 | | | 2147 | 1932 | | | | 1974 | | 185 |
| Sat flow per lane | 1641 | 1818 | | | 1818 | 1450 | | | | 1641 | | 1435 |
| Capacity/lane | 212 | 2410 | | | 1948 | 2258 | | | | 1445 | | 784 |
| Flow ratio | 0.08 | 0.26 | | | 0.43 | 0.75 | | | | 0.62 | | 0.14 |
| Vol ratio | 1.14 | 0.53 | | | 1.10 | 0.66 | | | | 1.37 | | 0.25 |
| I factor | 1.000 | 1.000 | | | 1.000 | 1.000 | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | | | 5 | 5 | | | | 5 | | 5 |
| Platoon ratio | 1.67 | 1.67 | | | 1.67 | 1.58 | | | | 1.53 | | 1.67 |
| PF factor | 1.00 | 0.46 | | | 1.00 | 0.55 | | | | 1.00 | | 0.22 |
| Q1 | 5.2 | 6.4 | | | 32.6 | 12.1 | | | | 42.3 | | 0.9 |
| K3 | 0.2 | 0.9 | | | 0.8 | 1.1 | | | | 0.8 | | 0.8 |
| Q2 | 3.1 | 0.9 | | | 14.4 | 5.2 | | | | 38.7 | | 0.3 |
| Q avg | 8.3 | 7.3 | | | 47.2 | 17.4 | | | | 78.0 | | 1.2 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|--|--|------|------|--|--|--|-----|--|-----|
| fs% | 1.9 | 1.9 | | | 1.5 | 1.7 | | | | 1.5 | | 2.1 |
| BOQ, Q% | 15.6 | 13.9 | | | 72.9 | 30.0 | | | | 119 | | 2.5 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|--|------|------|--|--|--|------|--|------|
| Q spacing | 25.0 | 25.0 | | | 25.0 | 25.0 | | | | 25.0 | | 25.0 |
| Q storage | 0 | 0 | | | 0 | 0 | | | | 0 | | 0 |
| Avg. RoQ | | | | | | | | | | | | |
| 95% RoQ | | | | | | | | | | | | |

13

**No Intersection
With Alternative 3-B**

**Heritage Road at
Siempre Viva Road**

14-A
N
M

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|----------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | OTAY MESA RD / CACTUS RD. | | | | | |
| Agency or Co. | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 12/5/10 | | | | | Jurisdiction | DMCAC30A3BWLMMNO | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YFAR 2030 3B WITH LA MEDIA | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|------------------------|------|------|----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 1 | 3 | 0 | 2 | 3 | 0 | 2 | 1 | 1 | 1 | 1 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | R | L | TR | |
| Volume (vph) | 195 | 1920 | 1435 | 930 | 1400 | 85 | 945 | 70 | 700 | 55 | 25 | 55 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOK Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl Left | Thru & R th | 03 | 04 | NB Only | SB Only | 07 | 08 | | | | |
| Timing | G = 33.0 | G = 45.0 | G = | C = | G = 40.0 | G = 15.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 4 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|---------------|-------|-------|------------------|------|-------|-------|-------|-------|-------|----|--|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj flow rate | 205 | 3537 | 979 | 1563 | | 995 | 74 | 737 | 58 | 84 | | |
| Lane group cap. | 351 | 1376 | 751 | 1470 | | 850 | 485 | 696 | 164 | 157 | | | |
| v/c ratio | 0.57 | 2.57 | 1.40 | 1.06 | | 1.17 | 0.15 | 1.06 | 0.35 | 0.54 | | | |
| Green ratio | 0.22 | 0.30 | 0.22 | 0.30 | | 0.27 | 0.27 | 0.43 | 0.10 | 0.10 | | | |
| Unif. delay d' | 57.1 | 52.5 | 58.5 | 52.5 | | 55.0 | 42.0 | 38.5 | 63.0 | 64.2 | | | |
| Delay factor k | 0.16 | 0.50 | 0.50 | 0.50 | | 0.50 | 0.11 | 0.50 | 0.11 | 0.14 | | | |
| Incrmnt. delay d2 | 2.1 | 707.2 | 187.1 | 42.3 | | 89.3 | 0.1 | 50.5 | 1.3 | 3.6 | | | |
| PF factor | 0.812 | 0.930 | 0.812 | 0.714 | | 0.758 | 0.758 | 0.368 | 0.929 | 0.925 | | | |
| Control delay | 44.5 | 754.5 | 234.6 | 79.5 | | 130.9 | 32.0 | 64.9 | 59.5 | 63.0 | | | |
| Lane group LOS | D | F | F | F | | F | C | E | F | E | | | |
| Approch. delay | 715.5 | | | 139.4 | | | 99.9 | | | 61.6 | | | |
| Approach LOS | F | | | F | | | F | | | E | | | |
| Inters. delay | 361.1 | | | Intersection LOS | | | | | | | | | F |

14-A
W
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|----------|--|------------------------|---------|---------|-------|-------|------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAJ | | | | | Intersection OTAY MESA RD/CACTUS RD | | | | | | | |
| Agency or Co | USAJ | | | | | Area Type All other areas | | | | | | | |
| Date Performed | 12/07/10 | | | | | Jurisdiction OMCAC39A3BWLMMWMTY | | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year YEAR 2030 33 WITH LA MEDIA | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 1 | 3 | 2 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | |
| Lane group | L | T | R | L | T | R | L | TR | R | L | TR | | |
| Volume (veh) | 195 | 1920 | 1435 | 950 | 1400 | 85 | 945 | 70 | 700 | 55 | 25 | 55 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | S | S | S | S | S | S | S | S | S | S | S | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | NB Only | SB Only | | 07 | | 08 |
| Timing | G = 33.0 | G = 45.0 | G = | G = | G = 40.0 | | G = 15.0 | G = | | G = | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | | Y = 4 | Y = | | Y = | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 205 | 2021 | 1511 | 979 | 1474 | 69 | 995 | 74 | 737 | 55 | 84 | | |
| Lane group cap | 367 | 1486 | 1498 | 701 | 1486 | 564 | 850 | 485 | 696 | 164 | 157 | | |
| w/c ratio | 0.57 | 1.36 | 1.01 | 1.40 | 0.99 | 0.18 | 1.17 | 0.15 | 1.06 | 0.35 | 0.54 | | |
| Green ratio | 0.22 | 0.30 | 0.60 | 0.22 | 0.30 | 0.40 | 0.27 | 0.27 | 0.49 | 0.10 | 0.10 | | |
| Unit delay d1 | 52.1 | 52.5 | 30.0 | 58.5 | 52.3 | 29.8 | 55.0 | 42.0 | 38.5 | 63.0 | 64.2 | | |
| Delay factor k | 0.16 | 0.50 | 0.50 | 0.55 | 0.49 | 0.11 | 0.50 | 0.11 | 0.50 | 0.11 | 0.14 | | |
| Incrum delay d2 | 2.1 | 166.5 | 25.4 | 187.1 | 21.4 | 9.1 | 89.3 | 0.1 | 50.8 | 1.3 | 3.6 | | |
| PF factor | 0.812 | 0.714 | 0.143 | 0.812 | 0.714 | 0.556 | 0.756 | 0.758 | 0.368 | 0.026 | 0.026 | | |
| Control delay | 44.5 | 204.0 | 29.7 | 234.6 | 56.7 | 15.1 | 130.0 | 32.0 | 84.9 | 59.6 | 63.0 | | |
| Lane group LOS | D | F | C | F | L | B | F | C | E | E | E | | |
| Approach delay | 124.7 | | | 125.0 | | | 99.9 | | | 61.6 | | | |
| Approach LOS | F | | | F | | | F | | | F | | | |
| Intersec delay | 118.3 | | | Intersection LOS | | | | | | | | | F |

14P
N
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|----------|------------------------|--------------------------|---------|-------|---------|-------|------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA! | | | | | Intersection | OTAY MESA RD./CACTUS RD | | | | | | |
| Agency or Co | USA! | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | OMCAG30P30WILMNMO | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | 2000 ALT.-3E WILMNMO MIT | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 1 | 3 | 0 | 2 | 3 | 0 | 2 | 1 | 1 | 1 | 1 | 0 | |
| Lane group | L | TR | | L | TR | | L | TR | R | L | TR | | |
| Volume (veh) | 140 | 1090 | 945 | 545 | 1950 | 60 | 1435 | 50 | 930 | 175 | 80 | 180 | |
| % Heavy veh | 10 | 10 | 15 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | S | S | | S | S | | S | S | S | S | S | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl. Lef. | Thru & RT | 03 | | | 04 | | NB Only | | SB Only | | 07 | 08 |
| Timing | G = 53.0 | G = 45.0 | G = | G = | G = 40.0 | | G = 15.0 | | G = | | G = | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | | Y = 4 | | Y = | | Y = | | |
| Duration of Analysis (hrs) = 5.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TR | RT | LT | TR | RT | LT | TR | R | LT | TR | RT | |
| Adj. flow rate | 147 | 2142 | | 679 | 2116 | | 1511 | 53 | 979 | 184 | 273 | | |
| Lane group cap | 261 | 1356 | | 751 | 1477 | | 850 | 485 | 696 | 164 | 157 | | |
| w/c ratio | 0.41 | 1.57 | | 0.97 | 1.43 | | 1.78 | 0.11 | 1.41 | 1.12 | 1.74 | | |
| Green ratio | 0.22 | 0.50 | | 0.22 | 0.30 | | 0.27 | 0.27 | 0.49 | 0.10 | 0.10 | | |
| Unif. delay d1 | 50.1 | 52.5 | | 58.0 | 52.5 | | 55.0 | 41.5 | 38.5 | 67.5 | 67.5 | | |
| Delay factor k | 0.11 | 0.50 | | 0.48 | 0.50 | | 0.50 | 0.11 | 0.50 | 0.50 | 0.50 | | |
| Increment. delay d2 | 3.8 | 259.2 | | 25.3 | 198.6 | | 354.7 | 0.1 | 191.5 | 105.8 | 357.6 | | |
| PF factor | 0.812 | 0.714 | | 0.812 | 0.714 | | 0.758 | 0.758 | 0.632 | 0.926 | 0.926 | | |
| Control delay | 41.4 | 295.7 | | 73.4 | 235.1 | | 396.4 | 31.5 | 215.8 | 169.3 | 420.1 | | |
| Lane group LOS | D | F | | E | F | | F | C | F | F | F | | |
| Approch. delay | 280.3 | | | 196.5 | | | 319.3 | | | 319.1 | | | |
| Approach LOS | F | | | F | | | F | | | F | | | |
| Intersec. delay | 255.8 | | | Intersection LOS | | | | | | F | | | |

149
W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--------------|--------------|------------------|------------------------|--|--|
| Analyst | USAJ | USAJ | USAJ | Intersection | OTAY MESA RD/CACTUS RD | | |
| Agency or Do. | USAJ | USAJ | USAJ | Area Type | All other areas | | |
| Date Performed | 03/06/11 | 03/06/11 | 03/06/11 | Jurisdiction | OMCAC30P3BWLMA/MTM/MTM | | |
| Time Period | PM PEAK HOUR | PM PEAK HOUR | PM PEAK HOUR | Analysis Year | 2030 ALT.-3B V/I M/MTM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 3 | 2 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 0 |
| Lane group | L | T | R | L | T | R | L | TR | R | L | TR | |
| Volume (vph) | 140 | 1690 | 945 | 645 | 1950 | 50 | 1435 | 50 | 930 | 175 | 80 | 180 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. of green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | S | S | S | S | S | S | S | S | S | S | S | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Peak/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grader/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |

| Phasing | Fwd Left | Thru & R | CS | IK | NB Only | SB Only | C7 | 08 |
|-----------------------------------|-------------------|-------------------|------------|------------|-------------------|------------------------|------------|------------|
| Timing | G = 33.0 Y = 4 | G = 45.0 Y = 5 | G = Y = | G = Y = | G = 40.0 Y = 4 | G = 15.0 Y = 4 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 147 | 1147 | 995 | 679 | 2053 | 63 | 1511 | 53 | 979 | 184 | 272 |
| Lane group cap | 351 | 1486 | 1492 | 791 | 1485 | 422 | 950 | 495 | 696 | 164 | 157 | |
| v/c ratio | 0.41 | 0.77 | 0.66 | 0.87 | 1.39 | 0.15 | 1.78 | 0.11 | 1.41 | 1.12 | 1.74 | |
| Green ratio | 0.22 | 0.30 | 0.60 | 0.22 | 0.30 | 0.30 | 0.27 | 0.27 | 0.49 | 0.10 | 0.10 | |
| Unif. delay d1 | 50.1 | 47.8 | 20.0 | 58.0 | 52.5 | 38.5 | 58.0 | 41.5 | 38.5 | 67.5 | 67.5 | |
| Delay factor k | 0.11 | 0.32 | 0.24 | 0.46 | 0.50 | 0.11 | 0.50 | 0.11 | 0.50 | 0.50 | 0.50 | |
| Instrum. delay d2 | 0.8 | 2.6 | 1.1 | 26.3 | 176.0 | 0.2 | 354.7 | 0.1 | 191.5 | 105.8 | 357.6 | |
| PF factor | 0.912 | 0.714 | 0.125 | 0.912 | 0.714 | 0.714 | 0.758 | 0.758 | 0.632 | 0.926 | 0.926 | |
| Control delay | 41.4 | 36.7 | 3.6 | 73.4 | 212.5 | 27.5 | 396.4 | 31.6 | 215.8 | 169.3 | 420.1 | |
| Lane group LOS | D | D | A | E | F | C | F | C | F | F | F | |
| Approch. delay | 22.6 | | | 175.3 | | | 319.3 | | | 316.1 | | |
| Approach LOS | C | | | F | | | F | | | F | | |
| Intersec. delay | 195.5 | | | Intersection LOS | | | | | | F | | |

LS-A
N
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|----------------|---------------------------|------------------|--|--|--|
| Analyst: | USAI | Area Section: | AIRWAY RD./CACTUS RD | | | | |
| Agency or Co.: | USAI | Area Type: | All other areas | | | | |
| Date Performed: | 03/06/11 | Jurisdiction: | AIRCAC3043BWL/MNO MIT | | | | |
| Time Period: | AM PEAK HOUR | Analysis Year: | YEAR 2035 ALT.-3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 770 | 1236 | 1850 | 275 | 1320 | 1965 | 825 | 375 | 425 | 735 | 345 | 510 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHI | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Uni: Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 50 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Uni: Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & R1 | 07 | 08 | | | | |
| Timing | G = 22.0 | G = 55.0 | G = | G = | G = 32.0 | G = 23.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|------|-------|-------|-----|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 811 | 3242 | | 289 | 2510 | | 865 | 842 | | 774 | 647 |
| Lane group cap | 467 | 1629 | | 467 | 1677 | | 680 | 473 | | 680 | 475 | |
| v/c ratio | 1.74 | 1.99 | | 0.62 | 1.50 | | 1.26 | 1.76 | | 1.14 | 1.76 | |
| Green ratio | 0.15 | 0.37 | | 0.15 | 0.37 | | 0.21 | 0.15 | | 0.21 | 0.15 | |
| Unif. delay d1 | 64.0 | 47.5 | | 60.1 | 47.5 | | 59.0 | 63.5 | | 59.0 | 63.5 | |
| Delay factor k | 0.50 | 0.50 | | 0.20 | 0.50 | | 0.50 | 0.50 | | 0.50 | 0.50 | |
| Increment. delay d2 | 340.3 | 447.8 | | 2.5 | 226.7 | | 135.6 | 349.5 | | 79.3 | 360.8 | |
| PF factor | 0.885 | 0.825 | | 0.985 | 0.814 | | 0.819 | 0.879 | | 0.819 | 0.879 | |
| Control delay | 397.0 | 487.0 | | 55.7 | 253.9 | | 184.0 | 405.4 | | 127.6 | 416.7 | |
| Lane group LOS | F | F | | E | F | | F | F | | F | F | |
| Approch. delay | 469.0 | | | 235.2 | | | 293.0 | | | 278.7 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersac. delay | 344.8 | | | Intersection LOS | | | | | | F | | |

15-A

W
MT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|---------------------------|--|--|
| Analyst | USAI | | | Intersection | AIRWAY RD./CACTUS RD. | | |
| Agency or Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 03/06/11 | | | Jurisdiction | AIRCAC30A3B/WLMMWITH | | |
| Time Per sec | AM PEAK HOUR | | | Analysis Year | YEAR 2030 ALT. 3B WITH LM | | |

| | EB | | | WB | | | NB | | | SB | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 1 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 1 |
| Lane group | L | TR | R | L | T | R | L | T | R | L | TR | R |
| Volume (vph) | 170 | 1230 | 1850 | 275 | 1320 | 1065 | 825 | 375 | 425 | 735 | 345 | 510 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Act. tied (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.5 | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 50 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |

| Phasing | Excl. Left | Thru & R | J3 | O4 | Excl. Left | Thru & RT | O7 | O8 |
|-----------------------------------|-------------------|-------------------|------------|------------|-------------------|------------------------|------------|------------|
| Timing | G = 22.0 Y = 4 | G = 55.0 Y = 5 | G = Y = | G = Y = | G = 32.0 Y = 4 | G = 23.0 Y = 5 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| Adj flow rate | 811 | 2268 | 974 | 289 | 1389 | 1121 | 868 | 395 | 447 | 774 | 605 | 242 |
| Lane group cap. | 467 | 1671 | 518 | 467 | 1616 | 1534 | 680 | 531 | 473 | 580 | 491 | 217 |
| v/c ratio | 1.74 | 1.36 | 1.88 | 0.62 | 0.76 | 0.73 | 1.26 | 0.74 | 0.95 | 1.14 | 1.23 | 1.12 |
| Green ratio | 0.15 | 0.37 | 0.37 | 0.15 | 0.37 | 0.61 | 0.21 | 0.15 | 0.33 | 0.21 | 0.15 | 0.15 |
| Unl. delay d1 | 64.0 | 47.5 | 47.5 | 69.1 | 41.8 | 20.3 | 59.0 | 50.7 | 48.7 | 59.0 | 63.5 | 63.5 |
| Delay factor k | 0.50 | 0.50 | 0.50 | 0.20 | 0.32 | 0.29 | 0.50 | 0.30 | 0.46 | 0.30 | 0.50 | 0.50 |
| Incrmnt. delay d2 | 340.3 | 164.8 | 403.4 | 2.6 | 2.0 | 1.8 | 135.6 | 5.6 | 28.0 | 79.3 | 121.2 | 90.5 |
| PF factor | 0.885 | 0.614 | 0.782 | 0.865 | 0.614 | 0.129 | 0.815 | 0.879 | 0.667 | 0.918 | 0.879 | 1.000 |
| Control delay | 397.0 | 193.9 | 140.5 | 55.7 | 27.7 | 4.4 | 184.0 | 59.0 | 60.3 | 127.9 | 177.1 | 153.0 |
| Lane group LOS | F | F | F | F | C | A | F | E | B | F | F | F |
| Approch. delay | 293.8 | | | 21.3 | | | 122.8 | | | 150.8 | | |
| Approach LOS | F | | | C | | | F | | | F | | |
| Intersoc. delay | 157.4 | | | Intersection LOS | | | | | | F | | |

15-2
2
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|---------------------------|--|--|
| Analyst | USAI | | | Intersection | AIRWAY RD./CACTUS RD | | |
| Agency or Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 03/05/11 | | | Jurisdiction | AIRCAC3043BWLMWD MIT | | |
| Time Period | PM PEAK HOUR | | | Analysis Year | YEAR 2030 ALT -36 WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 2 | 0 | 2 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 510 | 1000 | 470 | 500 | 1415 | 485 | 1620 | 350 | 750 | 660 | 765 | 750 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 50 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 02 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 22.0 | G = 55.0 | G = | G = | G = 32.0 | G = 23.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|----|------------------|-------|----|-------|-------|----|-------|-------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TR | RT | LT | TR | RT | LT | TR | RT | LT | TR | RT |
| Adj. flow rate | 537 | 1548 | | 526 | 2000 | | 1705 | 1157 | | 695 | 1542 | |
| Lane group cap. | 467 | 1716 | | 457 | 1736 | | 680 | 464 | | 680 | 484 | |
| w/c ratio | 1.15 | 0.90 | | 1.13 | 1.15 | | 2.51 | 2.49 | | 1.02 | 3.19 | |
| Green ratio | 0.16 | 0.37 | | 0.15 | 0.37 | | 0.21 | 0.15 | | 0.21 | 0.16 | |
| Unif. delay d1 | 64.0 | 45.0 | | 64.0 | 47.5 | | 59.0 | 63.5 | | 59.0 | 63.5 | |
| Delay factor k | 0.50 | 0.42 | | 0.50 | 0.50 | | 0.50 | 0.50 | | 0.50 | 0.50 | |
| Incr. delay d2 | 89.7 | 7.1 | | 81.0 | 75.5 | | 682.7 | 678.5 | | 46.7 | 989.1 | |
| PF factor | 0.885 | 0.514 | | 0.855 | 0.614 | | 0.819 | 0.579 | | 0.819 | 0.879 | |
| Control delay | 145.4 | 34.7 | | 137.6 | 104.7 | | 731.0 | 734.3 | | 88.5 | 1046 | |
| Lane group LOS | F | C | | F | F | | F | F | | F | F | |
| Approach delay | 63.4 | | | 111.6 | | | 732.4 | | | 747.8 | | |
| Approach LOS | E | | | F | | | F | | | F | | |
| Intersec. delay | 430.8 | | | Intersection LOS | | | | | | F | | |

15-P
W
MTT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|---------------------------|--|--|
| Analyst | USA1 | | | Intersection | AIRWAY RD /CACTUS RD. | | |
| Agency or Co. | USA1 | | | Area Type | All other areas | | |
| Date Performed | 6/30/11 | | | Jurisdiction | AIRCAC36P3BM MW/TH | | |
| Time Period | PM PEAK HOUR | | | Analysis Year | YEAR 2030 ALT.-38 W/TH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Nbr. of Lanes | 2 | 3 | 1 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 1 |
| Lane group | L | TR | R | L | T | R | L | T | R | L | TR | R |
| Volume (vph) | 510 | 1500 | 470 | 500 | 1415 | 495 | 1620 | 350 | 750 | 660 | 765 | 750 |
| % Heavy veh. | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| P-H | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 50 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 22.0 | G = 55.0 | G = | G = | G = 32.0 | G = 23.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 537 | 1200 | 248 | 526 | 1489 | 511 | 1705 | 368 | 789 | 695 | 1173 |
| Lane group cap | 487 | 1751 | 518 | 457 | 1816 | 1536 | 680 | 531 | 473 | 580 | 500 | 217 |
| svc ratio | 1.15 | 0.74 | 0.48 | 1.13 | 0.82 | 0.33 | 2.51 | 0.69 | 1.67 | 1.02 | 2.35 | 1.70 |
| Green ratio | 0.15 | 0.37 | 0.37 | 0.15 | 0.37 | 0.61 | 0.21 | 0.15 | 0.33 | 0.21 | 0.15 | 0.15 |
| Unit delay d1 | 64.0 | 41.3 | 36.5 | 64.0 | 45.0 | 14.1 | 59.0 | 60.7 | 50.0 | 59.0 | 63.5 | 83.5 |
| Delay factor k | 0.50 | 0.30 | 0.11 | 0.50 | 0.36 | 0.11 | 0.50 | 0.26 | 0.50 | 0.50 | 0.50 | 0.50 |
| Increment delay d2 | 89.7 | 1.7 | 0.7 | 81.0 | 3.1 | 0.1 | 682.7 | 3.9 | 309.9 | 40.2 | 611.9 | 334.2 |
| PF factor | 0.985 | 0.614 | 0.614 | 0.885 | 0.614 | 0.129 | 0.819 | 0.879 | 0.667 | 0.819 | 0.879 | 1.006 |
| Control delay | 146.4 | 27.1 | 23.1 | 137.6 | 25.5 | 2.0 | 731.0 | 56.8 | 343.2 | 86.5 | 667.7 | 397.7 |
| Lane group LOS | F | C | C | F | C | A | F | E | F | F | F | F |
| Approach delay | 57.4 | | | 46.5 | | | 537.4 | | | 443.3 | | |
| Approach LOS | E | | | D | | | F | | | F | | |
| Intersec. delay | 284.9 | | | Intersection LOS | | | | | | F | | |

16-A
N
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|----------------------------|------------------|-----------------|----------|---------------------|
| Analyst | USAi | Intersection | SIEMPRE IVA RD CACTUS ROAD | Area Type | All other areas | Junction | SIEMPCAC3GA3BWLMMNO |
| Agency or Co. | USAi | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | |
| Date Performed | 03/06/11 | | | | | | |
| Time Period | AM PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|------|----------|------------------------|-----|------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| N.m. of Lanes | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 0 |
| Lane group | | | | L | | R | | TR | | L | T | |
| Volume (vph) | | | | 310 | | 1445 | | 85 | 80 | 2185 | 350 | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | | | S | | S | | S | | S | S | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 5 | 10 | | | 0 | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/Inr | | | | | | | | | | | | |
| Bus stop/Inr | | | | 0 | | 0 | | 0 | | 0 | 0 | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 30.0 | G = | G = | G = | G = 90.0 | G = 10.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 4 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 142.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|--|-------|------------------|-------|------|-------|-----|-------|-------|-----|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | | 326 | | 1521 | | 173 | | 7779 | 368 | |
| Lane group cap | | | 673 | | 2270 | | 226 | | 2020 | 2538 | | |
| svc ratio | | | 0.48 | | 0.67 | | 0.77 | | 1.13 | 0.15 | | |
| Green ratio | | | 0.21 | | 0.87 | | 0.07 | | 0.63 | 0.73 | | |
| Unit delay d1 | | | 49.2 | | 2.7 | | 64.8 | | 26.0 | 5.7 | | |
| Delay factor k | | | 0.11 | | 0.24 | | 0.32 | | 0.50 | 0.11 | | |
| Incremental delay d2 | | | 0.6 | | 0.8 | | 14.5 | | 64.7 | 6.5 | | |
| PF factor | | | 0.821 | | 0.394 | | 0.949 | | 0.431 | 0.187 | | |
| Control delay | | | 41.0 | | 1.9 | | 76.1 | | 75.9 | 1.1 | | |
| Lane group LOS | | | D | | A | | E | | E | A | | |
| Approach delay | | | | 0.8 | | | 76.1 | | | 55.5 | | |
| Approach LOS | | | | A | | | E | | | E | | |
| Intersec. delay | 42.4 | | | Intersection LOS | | | | | | D | | |

16-A
W
MST

| SHORT REPORT | | | |
|---------------------|--------------|------------------|------------------------------|
| General Information | | Site Information | |
| Analyst | USAJ | Intersector | SIEMPRE VIVA RD./CACTUS ROAD |
| Agency or Co | USAJ | Area Type | All other areas |
| Date Performed | 03/06/11 | Jurisdiction | SIEMPCAC30A35VWLM/WTM |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030 ALT.-3B WITH LM |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|------|----------|------------------------|-----|------|------|------|----|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 2 | 2 | 0 |
| Lane group | | | | L | | R | | L | R | L | | R |
| Volume (veh) | | | | 310 | | 1445 | | 65 | 80 | 2165 | | 350 |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | | 10 |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | | 0.95 |
| Actuated (P/A) | | | | A | | A | | A | A | A | | A |
| Startup lost time | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | | 2.0 |
| Exc. eff. green | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | | 2.0 |
| Arrival type | | | | 5 | | 5 | | 5 | 5 | 5 | | 5 |
| Uni. Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | 10 | | 0 | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | 12.0 | 12.0 | | 12.0 |
| Parking/Grace/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | 0 | 0 | | 0 |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | | 3.0 |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru. & RT | 07 | 08 | | | | |
| Timing | G = 30.0 | G = | G = | G = | G = 90.0 | G = 10.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 4 | Y = | Y = | | | | |
| Duration of Analysis (min) = 0.25 | | | | | | Cycle Length C = 142.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | |
|---|---------------|--|--|------------------|-----|-------|------|-------|-------|-------|-------|
| | FR | | | WB | | | NB | | | SB | |
| | Adj flow rate | | | | 325 | | 1521 | | 89 | 94 | 2279 |
| Lane group cap. | | | | 673 | | 2276 | | 244 | 455 | 2020 | 2536 |
| Volume ratio | | | | 0.48 | | 0.67 | | 0.36 | 0.18 | 1.13 | 0.15 |
| Green ratio | | | | 0.21 | | 0.67 | | 0.07 | 0.31 | 0.63 | 0.73 |
| Unit delay d1 | | | | 49.2 | | 2.7 | | 63.0 | 35.9 | 26.0 | 5.7 |
| Delay factor k | | | | 0.11 | | 0.24 | | 0.11 | 0.11 | 0.50 | 0.11 |
| Incremental delay d2 | | | | 0.6 | | 0.6 | | 0.9 | 0.2 | 64.7 | 0.0 |
| FF factor | | | | 0.821 | | 0.394 | | 0.949 | 0.701 | 0.431 | 0.187 |
| Control delay | | | | 41.0 | | 1.5 | | 60.7 | 25.3 | 75.9 | 1.1 |
| Lane group LOS | | | | D | | A | | F | C | E | A |
| Approach delay | | | | 6.8 | | | 43.5 | | | 65.5 | |
| Approach LOS | | | | A | | | D | | | E | |
| Intersect delay | 42.2 | | | Intersection LOS | | | | | | D | |

16-P
M
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-----|------------------|----------|------------------------|------------------------------|-------|------|-------|-------|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA! | | | | | Intersection | SIEMPRE VIVA RD /CACTUS ROAD | | | | | |
| Agency or Co. | USA! | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/08/11 | | | | | Jurisdiction | SIEMPCAC30P3BW/ MNM | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT. 3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 | 2 | 0 |
| Lane group | | | | L | | R | | TR | | L | T | |
| Volume (vph) | | | | 90 | | 2255 | | 355 | 310 | 1820 | 85 | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | | | 5 | | 5 | | 5 | | 5 | 5 | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | 10 | | 0 | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | | 0 | 0 | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 35.0 | G = | G = | G = | G = 73.0 | G = 30.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 4 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | | | 84 | | 2374 | | 694 | | 1916 | 89 | |
| Lane group cap. | | | | 744 | | 1941 | | 644 | | 1551 | 2470 | |
| Vol ratio | | | | 0.11 | | 1.22 | | 1.08 | | 1.24 | 0.04 | |
| Green ratio | | | | 0.23 | | 0.75 | | 0.20 | | 0.49 | 0.71 | |
| Unif. delay c1 | | | | 45.3 | | 19.5 | | 60.0 | | 38.5 | 6.3 | |
| Delay factor k | | | | 0.11 | | 0.50 | | 0.50 | | 0.50 | 0.11 | |
| Incr. delay d2 | | | | 0.1 | | 105.2 | | 58.2 | | 111.7 | 0.0 | |
| PF factor | | | | 0.797 | | 0.682 | | 0.833 | | 0.449 | 0.174 | |
| Control delay | | | | 36.2 | | 122.5 | | 108.2 | | 129.0 | 1.1 | |
| Lane group LOS | | | | D | | F | | F | | F | A | |
| Approach delay | | | | 119.1 | | | 109.2 | | | 123.3 | | |
| Approach LOS | | | | F | | | F | | | F | | |
| Intersec. delay | 119.2 | | | Intersection LOS | | | | | | F | | |

16-1
W
MT

| SHORT REPORT | | | | | | | | | | | | | |
|---|----------|-----|-----|------------------|----------|--|------|-------|-------|-------|-------|----|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst: USAI | | | | | | Intersection: SIEMPRE VIVA RD./CACTUS ROAD | | | | | | | |
| Agency or Co.: USAI | | | | | | Area Type: All other areas | | | | | | | |
| Date Performed: 03/06/11 | | | | | | Jurisdiction: SIEMPCAC30P3BWLMMW | | | | | | | |
| Time Period: PM PEAK HOUR | | | | | | Analysis Year: YEAR 2030 ALT. GR WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 2 | 2 | 0 | |
| Lane group | | | | L | | R | | T | R | L | T | | |
| Volume (veh) | | | | 80 | | 2255 | | 350 | 310 | 1820 | 85 | | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | | |
| Startup los: time | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. off green | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | | | | 5 | | 5 | | 5 | 5 | 5 | 5 | | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | 10 | | 0 | | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | 0 | 0 | 0 | | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 35.0 | G = | G = | G = | G = 73.0 | G = 30.0 | G = | G = | | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 4 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | | | | 84 | | 2374 | | 368 | 326 | 1916 | 89 | | |
| Lane group cap | | | | 744 | | 1941 | | 692 | 675 | 1551 | 2470 | | |
| v/c ratio | | | | 0.11 | | 1.22 | | 0.53 | 0.48 | 1.24 | 0.04 | | |
| Green ratio | | | | 0.23 | | 0.75 | | 0.20 | 0.40 | 0.49 | 0.71 | | |
| Unif. delay d1 | | | | 45.3 | | 19.0 | | 53.7 | 28.1 | 38.5 | 8.3 | | |
| Delay factor k | | | | 0.11 | | 0.50 | | 0.13 | 0.11 | 0.50 | 0.11 | | |
| Increm. delay d2 | | | | 0.1 | | 105.2 | | 0.8 | 5.5 | 111.7 | 5.0 | | |
| PF factor | | | | 0.197 | | 0.887 | | 0.833 | 0.432 | 0.449 | 0.174 | | |
| Control delay | | | | 26.2 | | 122.0 | | 45.6 | 12.7 | 120.0 | 1.1 | | |
| Lane group LOS | | | | D | | F | | D | B | F | A | | |
| Approch. delay | | | | 119.1 | | | 30.1 | | | 123.3 | | | |
| Approach LOS | | | | F | | | C | | | F | | | |
| Intersect delay | 109.7 | | | Intersection LOS | | | | | | | | | F |

17-A
J
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|----------|-----------|------------------|----------|------------------------|------------------------------|-------|-------|-------|-------|------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAI | | | | | Intersection | OTJY MESA RD. BRITANNIA BLVD | | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/06/17 | | | | | Collector | CMBRIT3CA3BWLM/NO MIT | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT-3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 1 | 3 | 0 | 2 | 3 | 0 | 2 | 1 | 1 | 1 | 1 | 0 | |
| Lane group | L | TR | | L | TR | | L | TR | R | L | TR | | |
| Volume (vph) | 20 | 2160 | 390 | 510 | 2045 | 10 | 550 | 35 | 730 | 5 | 15 | 10 | |
| % Heavy veh | 15 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHI | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | S | S | | S | S | | S | S | S | S | S | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Pad/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Exc. Left | WB Only | Thru & RT | 04 | NB Only | SB Only | 07 | 08 | | | | | |
| Timing | G = 5.0 | G = 25.0 | G = 60.0 | G = | G = 30.0 | G = 2.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = 5 | Y = | Y = 4 | Y = 4 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 21 | 2685 | | 537 | 2154 | | 611 | 383 | 422 | 5 | 27 | | |
| Lane group cap. | 55 | 1936 | | 722 | 2939 | | 537 | 305 | 332 | 88 | 91 | | |
| v/c ratio | 0.38 | 1.39 | | 0.74 | 0.73 | | 0.96 | 1.25 | 1.27 | 0.06 | 0.30 | | |
| Green ratio | 0.03 | 0.40 | | 0.22 | 0.60 | | 0.20 | 0.20 | 0.23 | 0.55 | 0.95 | | |
| Unif. delay d1 | 71.0 | 45.0 | | 53.9 | 21.3 | | 59.4 | 60.0 | 57.5 | 67.4 | 58.3 | | |
| Delay factor k | 0.11 | 0.50 | | 0.30 | 0.29 | | 0.47 | 0.50 | 0.50 | 0.11 | 0.11 | | |
| Incrom. delay d2 | 4.4 | 177.4 | | 4.2 | 0.9 | | 25.8 | 137.4 | 143.6 | 0.3 | 1.8 | | |
| PF factor | 0.977 | 0.556 | | 0.805 | 0.125 | | 0.833 | 0.833 | 0.797 | 0.962 | 0.952 | | |
| Control delay | 73.7 | 202.4 | | 47.5 | 3.6 | | 73.3 | 187.4 | 189.4 | 65.2 | 57.5 | | |
| Lane group LOS | C | F | | D | A | | F | F | F | E | F | | |
| Approch delay | 291.4 | | | 12.3 | | | 139.6 | | | 67.2 | | | |
| Approach LOS | F | | | E | | | F | | | E | | | |
| Intersec. delay | 113.5 | | | Intersection LOS | | | | | | | | | F |

C.A.

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT -3B WITH LA MEDIA AM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|----|-------|-------|----|-------|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | R | L | TR | |
| Init queue/lane | 0.0 | 0.0 | | 5.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | 21 | 2885 | | 537 | 2154 | | 611 | 383 | 422 | 5 | 27 | |
| Sat flow per lane | 1641 | 1776 | | 1841 | 1818 | | 1641 | 1529 | 1422 | 1641 | 1707 | |
| Capacity/lane | 55 | 1936 | | 722 | 2999 | | 637 | 306 | 332 | 98 | 91 | |
| Flow ratio | 0.01 | 0.55 | | 0.17 | 0.44 | | 0.19 | 0.25 | 0.30 | 0.00 | 0.02 | |
| w/o ratio | 0.38 | 1.39 | | 0.74 | 0.73 | | 0.96 | 1.25 | 1.27 | 0.06 | 0.30 | |
| I factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | |
| P ratio | 1.67 | 1.67 | | 1.67 | 1.58 | | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | |
| PF factor | 0.99 | 1.00 | | 0.93 | 0.23 | | 0.99 | 1.00 | 1.00 | 0.96 | 0.97 | |
| Q1 | 0.8 | 41.0 | | 8.9 | 5.4 | | 12.9 | 15.0 | 17.6 | 0.2 | 1.1 | |
| Q5 | 0.2 | 0.8 | | 0.5 | 1.0 | | 0.5 | 0.5 | 0.5 | 0.2 | 0.2 | |
| Qz | 0.1 | 36.9 | | 1.4 | 2.5 | | 3.6 | 11.5 | 13.2 | 0.0 | 0.1 | |
| Q avg. | 0.9 | 79.0 | | 11.3 | 7.9 | | 16.4 | 27.5 | 30.8 | 0.2 | 1.1 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------|-----|-----|--|------|------|--|------|------|------|-----|-----|--|
| Q95 | 2.1 | 1.5 | | 1.8 | 1.9 | | 1.7 | 1.6 | 1.6 | 2.1 | 2.1 | |
| BOQ, Q95 | 2.0 | 118 | | 20.6 | 14.8 | | 28.5 | 44.8 | 49.5 | 0.4 | 2.4 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|------|------|------|--|
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Avg Rr: | | | | | | | | | | | | |
| 95% Rr: | | | | | | | | | | | | |

17-A
W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|------------------------------|--|--|
| Analyst | USAI | | | Intersection | CTAY MESA RD/BRITANNIA BLVD. | | |
| Agency or Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 03/05/11 | | | Jurisdiction | CMEKIT30A3B/M MWITH | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YEAR 2030 A/T-3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|----------|-----------|------|----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 3 | 1 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 0 |
| Lane group | L | T | R | L | T | R | L | TR | R | L | TR | |
| Volume (vph) | 20 | 2190 | 390 | 510 | 2045 | 10 | 590 | 35 | 730 | 5 | 15 | 10 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | | 0 |
| Lane Wdtn | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 5 | N | N | 5 | N | N | 0 | N | N | 0 | N |
| Parking/Hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | WB Only | Thru & RT | 04 | NB Only | SB Only | 07 | 08 | | | | |
| Timing | G = 5.0 | G = 25.0 | G = 60.0 | G = | G = 30.0 | G = 8.0 | C = | G = | | | | |
| | Y = 4 | Y = 5 | Y = 5 | Y = | Y = 4 | Y = 4 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 21 | 2274 | 411 | 537 | 2153 | 11 | 511 | 363 | 422 | 5 | 27 |
| Lane group cap | 55 | 1961 | 597 | 722 | 2972 | 566 | 637 | 306 | 332 | 88 | 91 | |
| v/c ratio | 0.38 | 1.15 | 0.70 | 0.74 | 0.72 | 0.02 | 0.96 | 1.25 | 1.27 | 0.06 | 0.30 | |
| Green ratio | 0.53 | 0.40 | 0.40 | 0.23 | 0.60 | 0.40 | 0.20 | 0.20 | 0.23 | 0.05 | 0.55 | |
| Unif. delay d' | 71.0 | 45.0 | 37.5 | 53.3 | 21.2 | 27.2 | 59.4 | 60.0 | 57.5 | 67.4 | 68.3 | |
| Delay factor k | 6.11 | 0.50 | 0.27 | 0.30 | 0.29 | 0.11 | 0.47 | 0.50 | 0.50 | 0.11 | 0.11 | |
| Incram. delay d2 | 4.4 | 73.0 | 3.7 | 4.2 | 0.9 | 0.0 | 25.8 | 137.4 | 143.6 | 0.2 | 1.8 | |
| Pf factor | 0.977 | 0.556 | 0.556 | 0.895 | 0.125 | 0.556 | 0.633 | 0.633 | 0.797 | 0.952 | 0.952 | |
| Control delay | 73.7 | 98.0 | 74.5 | 47.5 | 3.6 | 15.1 | 75.3 | 187.4 | 189.4 | 65.2 | 67.5 | |
| Lane group LOS | E | F | C | D | A | B | E | F | F | E | E | |
| Approch. delay | 86.8 | | | 12.4 | | | 139.6 | | | 67.2 | | |
| Approach LOS | F | | | B | | | F | | | E | | |
| Intersec. delay | 58.2 | | | Intersection LOS | | | | | | F | | |

17-A
Wm

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| General Information | | | | | | | | | | | | |
| Project Description: ALT-3B WITH LA MEDIA AM PEAK HOUR WITH MIT | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | TH | R | L | TH | |
| In t. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | 21 | 2274 | 411 | 537 | 2153 | 11 | 617 | 393 | 422 | 5 | 27 | |
| Sat flow per lane | 1641 | 1819 | 1456 | 1641 | 1816 | 1414 | 1641 | 1528 | 1422 | 1641 | 1707 | |
| Capacity/lane | 55 | 1981 | 597 | 722 | 2972 | 566 | 637 | 506 | 332 | 69 | 91 | |
| Flow ratio | 0.01 | 0.46 | 0.28 | 0.17 | 0.43 | 0.01 | 0.19 | 0.25 | 0.30 | 0.00 | 0.02 | |
| v/c ratio | 0.38 | 1.16 | 5.70 | 0.74 | 0.72 | 0.02 | 0.96 | 1.25 | 1.27 | 0.06 | 0.30 | |
| f factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.58 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | |
| PF factor | 0.99 | 1.00 | 0.75 | 0.93 | 0.23 | 0.56 | 0.99 | 1.00 | 1.00 | 0.96 | 0.97 | |
| Q1 | 0.8 | 34.8 | 10.7 | 9.9 | 5.3 | 0.2 | 12.8 | 16.0 | 17.6 | 0.2 | 1.1 | |
| ka | 5.2 | 0.8 | 0.7 | 0.5 | 1.0 | 0.7 | 0.5 | 0.5 | 0.5 | 0.2 | 0.2 | |
| Q2 | 0.1 | 17.9 | 1.5 | 1.4 | 2.4 | 0.0 | 3.6 | 11.5 | 13.2 | 0.0 | 0.1 | |
| Q avg | 0.9 | 52.6 | 12.2 | 11.3 | 7.7 | 0.2 | 16.4 | 27.5 | 30.8 | 0.2 | 1.1 | |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| 10% | 2.1 | 1.5 | 1.8 | 1.9 | 1.9 | 2.1 | 1.7 | 1.6 | 1.6 | 2.1 | 2.1 | |
| BCQ Qs | 2.0 | 80.7 | 22.0 | 20.6 | 14.6 | 0.4 | 28.5 | 44.6 | 49.5 | 0.4 | 2.4 | |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | 26.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rqs | | | | | | | | | | | | |

17-9
N
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|----------|-----------|------------------|----------|---|-------|-------|-------|-------|-------|------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst: | USAI | | | | | 1:10' Section OTAY MESA RD / BRITANNIA BLVD | | | | | | | |
| Agency or Co.: | USAI | | | | | Area Type All other areas | | | | | | | |
| Date Performed: | 03/06/11 | | | | | Jurisdiction OMBRIT30P3B/M/MNO MIT | | | | | | | |
| Time Period: | PM PEAK HOUR | | | | | Analysis Year YEAR 2030 ALT.-3B WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 1 | 3 | 0 | 2 | 2 | 0 | 2 | 1 | 1 | 1 | 1 | 0 | |
| Lane group | L | TR | | L | TR | | L | TR | R | L | TR | | |
| Volume (vph) | 15 | 1920 | 590 | 835 | 2120 | 10 | 390 | 20 | 610 | 15 | 40 | 35 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| P/F | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Start up lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. off green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | S | S | | S | S | | S | S | S | S | S | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Pod/Bike/R/TOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 150 | 10 | | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/ln | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl Left | WB Only | Thru & RT | 04 | NB Only | SB Only | 07 | 08 | | | | | |
| Timing | G = 10.0 | G = 25.0 | G = 55.0 | G = | G = 23.0 | G = 15.5 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = 5 | Y = | Y = 4 | Y = 4 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TR | RT | LT | TR | RT | LT | TR | R | LT | TR | RT | |
| Adj. flow rate | 16 | 2632 | | 879 | 2243 | | 411 | 210 | 190 | 18 | 79 | | |
| Lane group cap. | 109 | 1753 | | 829 | 2604 | | 489 | 233 | 217 | 164 | 159 | | |
| v/c ratio | 0.15 | 1.50 | | 1.06 | 0.80 | | 0.84 | 0.90 | 0.88 | 0.10 | 0.47 | | |
| Green ratio | 0.07 | 0.37 | | 0.26 | 0.67 | | 0.15 | 0.15 | 0.15 | 0.10 | 0.10 | | |
| Unif. delay d1 | 66.0 | 47.5 | | 55.5 | 25.8 | | 61.7 | 62.4 | 62.1 | 61.3 | 63.7 | | |
| Delay factor k | 0.11 | 0.50 | | 0.50 | 0.34 | | 0.38 | 0.42 | 0.40 | 0.11 | 0.11 | | |
| non-tr. delay d2 | 0.0 | 228.7 | | 48.5 | 1.7 | | 12.4 | 33.9 | 30.5 | 0.3 | 2.0 | | |
| P/F factor | 0.952 | 0.614 | | 0.766 | 0.128 | | 0.679 | 0.879 | 0.879 | 0.926 | 0.926 | | |
| Control delay | 63.5 | 257.8 | | 91.0 | 5.0 | | 66.7 | 88.7 | 85.1 | 67.1 | 61.0 | | |
| Lane group LOS | E | F | | F | A | | E | F | F | E | E | | |
| Approach delay | 258.7 | | | 29.2 | | | 76.7 | | | 60.4 | | | |
| Approach LOS | F | | | C | | | E | | | F | | | |
| Intersec. delay | 125.7 | | | Intersection LOS | | | | | | | | | F |

17-1
M
M

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|---|-------|-------|----|-------|-------|----|-------|-------|-------|-------|-------|----|
| General Information | | | | | | | | | | | | |
| Project Description: ALT-3B WITH LA MEDIA PM PEAK HOUR/NO MIT | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | R | | L | R | | L | R | | L | R | |
| Init. queue/ lane | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/ lane | 15 | 2632 | | 879 | 2243 | | 411 | 210 | 190 | 16 | 79 | |
| Satflow per lane | 1641 | 1754 | | 1641 | 1616 | | 1641 | 1518 | 1412 | 1641 | 1690 | |
| Capacity/ lane | 109 | 1753 | | 829 | 2504 | | 489 | 233 | 217 | 164 | 163 | |
| Flow ratio | 0.01 | 0.55 | | 0.28 | 0.45 | | 0.13 | 0.14 | 0.13 | 0.01 | 0.05 | |
| w/c ratio | 0.15 | 1.50 | | 1.06 | 0.86 | | 0.84 | 0.90 | 0.88 | 0.16 | 0.47 | |
| I factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | |
| Patoon ratio | 1.57 | 1.67 | | 1.57 | 1.67 | | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | |
| PF factor | 0.96 | 1.03 | | 1.00 | 0.29 | | 0.98 | 0.98 | 0.98 | 0.93 | 0.96 | |
| Q1 | 0.6 | 40.3 | | 18.8 | 7.8 | | 9.3 | 8.5 | 7.6 | 0.6 | 3.0 | |
| k5 | 0.2 | 0.7 | | 0.8 | 1.0 | | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | |
| Q> | 5.0 | 42.4 | | 7.5 | 3.4 | | 1.6 | 2.1 | 1.7 | 0.0 | 0.3 | |
| Q avg. | 0.6 | 82.7 | | 26.3 | 11.2 | | 10.0 | 10.5 | 9.3 | 0.6 | 3.3 | |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| 10% | 2.1 | 1.6 | | 1.6 | 1.6 | | 1.8 | 1.8 | 1.9 | 2.1 | 2.0 | |
| BOQ, Q% | 1.3 | 125 | | 43.1 | 20.3 | | 18.4 | 19.3 | 17.3 | 1.2 | 6.6 | |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

17-2

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|----------|-----------|------------------|----------|------------------------|-------------------------------|-------|-------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA1 | | | | | Intersection | OTAY MESA RD./BRITANNIA BLVD. | | | | | |
| Agency or Co | USA1 | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | OMBRIT30P3GWLW/WHI | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-35 WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EH | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 3 | 1 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 0 |
| Lane group | L | T | R | L | T | R | L | TR | R | L | TR | |
| Volume (vph) | 15 | 1920 | 580 | 835 | 2120 | 19 | 359 | 20 | 510 | 15 | 45 | 35 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Per/Eike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 150 | 10 | | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | WB Only | Thru & RT | C4 | NB Only | SB Only | 07 | 08 | | | | |
| Timing | G = 10.0 | G = 25.0 | G = 55.0 | G = | G = 23.0 | G = 15.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = 5 | Y = | Y = 4 | Y = 4 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 16 | 2071 | 511 | 879 | 2232 | 17 | 411 | 210 | 190 | 15 | 79 | |
| Lane group cap | 109 | 1910 | 912 | 829 | 2807 | 559 | 169 | 233 | 217 | 164 | 169 | |
| Wt ratio | 0.15 | 1.11 | 0.75 | 1.06 | 0.80 | 0.02 | 0.84 | 0.90 | 0.88 | 0.10 | 0.47 | |
| Green ratio | 0.07 | 0.37 | 0.55 | 0.26 | 0.57 | 0.47 | 0.15 | 0.15 | 0.15 | 0.10 | 0.10 | |
| Unif. delay d' | 66.0 | 47.5 | 76.6 | 55.5 | 20.6 | 71.5 | 61.7 | 62.4 | 62.1 | 61.3 | 63.7 | |
| Delay factor k | 0.11 | 0.50 | 0.31 | 0.50 | 0.34 | 0.11 | 0.36 | 0.42 | 0.40 | 0.11 | 0.11 | |
| Increment delay c2 | 0.6 | 59.2 | 4.0 | 48.5 | 1.7 | 0.0 | 12.4 | 33.0 | 30.5 | 0.3 | 2.0 | |
| PF factor | 0.952 | 0.914 | 0.174 | 0.766 | 0.128 | 0.417 | 0.679 | 0.879 | 0.878 | 0.920 | 0.925 | |
| Control delay | 53.5 | 86.4 | 8.5 | 91.0 | 5.0 | 9.0 | 66.7 | 89.7 | 85.1 | 57.1 | 61.0 | |
| Lane group LOS | F | F | A | F | A | A | F | F | F | E | F | |
| Approch. delay | 69.8 | | | 75.7 | | | 76.7 | | | 60.4 | | |
| Approach LOS | E | | | C | | | E | | | E | | |
| Inters. delay | 51.5 | | | Intersection LOS | | | | | | D | | |

1-1
2
3

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: *ALT-38 WITH LA MEDIA PM PEAK HOUR/WITH MIT*

Average Back of Queue

| | FB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | TR | R | L | TR | |
| Arr't. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | 16 | 2021 | 611 | 879 | 2232 | 11 | 417 | 210 | 190 | 16 | 79 | |
| Satflow per lane | 1641 | 1618 | 1468 | 1641 | 1618 | 1413 | 1641 | 1518 | 1412 | 1641 | 1690 | |
| Capacity/lane | 109 | 1616 | 812 | 829 | 2807 | 659 | 489 | 233 | 217 | 164 | 169 | |
| Flow ratio | 0.01 | 0.41 | 0.42 | 0.28 | 0.45 | 0.51 | 0.13 | 0.14 | 0.13 | 0.01 | 0.35 | |
| Vol ratio | 0.15 | 1.11 | 0.75 | 1.06 | 0.80 | 0.52 | 0.84 | 0.30 | 0.88 | 0.10 | 0.47 | |
| PF factor | 1.009 | 1.006 | 1.000 | 1.005 | 1.000 | 1.050 | 1.000 | 1.000 | 1.000 | 1.505 | 1.000 | |
| Arrival type | S | S | S | S | S | S | S | S | S | S | S | |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | |
| PF factor | 0.96 | 1.00 | 0.33 | 1.00 | 0.28 | 0.42 | 0.98 | 0.28 | 0.98 | 0.93 | 0.96 | |
| Q1 | 0.6 | 30.9 | 6.5 | 18.8 | 7.6 | 0.1 | 8.3 | 0.5 | 7.6 | 0.9 | 3.0 | |
| Q3 | 0.2 | 0.7 | 0.8 | 0.6 | 1.0 | 0.7 | 5.4 | 0.4 | 3.4 | 0.3 | 0.3 | |
| Q2 | 0.0 | 14.2 | 2.3 | 7.5 | 3.3 | 0.0 | 1.6 | 2.1 | 1.7 | 0.0 | 0.3 | |
| Q avg | 0.6 | 45.1 | 9.8 | 26.3 | 10.9 | 0.1 | 10.0 | 10.5 | 9.3 | 0.6 | 3.3 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|------|------|------|------|-----|------|------|------|-----|-----|--|
| fb% | 2.1 | 1.5 | 1.9 | 1.6 | 1.8 | 2.1 | 1.8 | 1.8 | 1.9 | 2.1 | 2.0 | |
| BOQ, Q% | 1.3 | 63.8 | 16.4 | 43.1 | 10.9 | 0.2 | 18.4 | 19.3 | 17.3 | 1.2 | 5.5 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|--|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

187
37

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-----|------------------|----------|-------------------------|-----------------------------------|-------|----|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | SR-905WB RAMPS/BRITANNIA BLVD. | | | | | |
| Agency or Co. | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | SAN DIEGO/NO MIT | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 A/T-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 2 | 1 |
| Lane group | | | | L | TR | R | L | T | | | TR | R |
| Volume (vph) | | | | 1500 | 5 | 210 | 1000 | 1135 | | | 565 | 350 |
| % Heavy veh | | | | 10 | 10 | 10 | 10 | 10 | | | 10 | 10 |
| PHF | | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | | | | A | A | A | A | A | | | A | A |
| Startup lost time | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. eff green | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | | | | 5 | 5 | 5 | 5 | 5 | | | 5 | 3 |
| Unit Extension | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | | | | 10 | 5 | 0 |
| Lane Width | | | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Unit Extension | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Phasing | WB Only | 02 | 03 | 04 | NB Only | Thru. & RT | 07 | 08 | | | | |
| Timing | G = 60.0 | G = | G = | G = | G = 42.0 | G = 25.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length: C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | | | 1579 | 5 | 221 | 1003 | 1195 | | | 687 | 275 |
| Lane group cap | | | | 753 | 779 | 629 | 956 | 2512 | | | 601 | 247 |
| svc ratio | | | | 2.25 | 0.01 | 0.35 | 1.10 | 0.49 | | | 1.14 | 1.12 |
| Green ratio | | | | 0.43 | 0.43 | 0.43 | 0.30 | 0.51 | | | 0.18 | 0.18 |
| Unif. delay d1 | | | | 40.0 | 22.9 | 28.9 | 49.0 | 22.4 | | | 57.5 | 57.5 |
| Delay factor k | | | | 0.50 | 0.11 | 0.11 | 0.50 | 0.11 | | | 0.50 | 0.50 |
| Increment delay d2 | | | | 565.3 | 0.0 | 0.3 | 61.0 | 0.1 | | | 83.0 | 92.5 |
| PF factor | | | | 1.000 | 0.500 | 0.500 | 0.714 | 0.314 | | | 0.855 | 1.000 |
| Control delay | | | | 605.3 | 11.5 | 13.8 | 95.0 | 7.2 | | | 132.1 | 150.0 |
| Lane group LOS | | | | F | B | B | F | A | | | F | F |
| Approach delay | | | | 531.2 | | | 48.8 | | | 131.2 | | |
| Approach LOS | | | | F | | | D | | | F | | |
| Intersect. delay | 239.4 | | | Intersection LOS | | | | | | F | | |

12-23-13

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|---|----|----|----|-------|-------|-------|-------|-------|----|----|-------|-------|
| General Information | | | | | | | | | | | | |
| Project Description ALT-36-AM WITH LA MEDIA-SR905WB RAMP(S)BRITANNIA BLVD/NG MIT | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | TR | R | L | T | | | TR | R |
| Init queue/lane | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Flow rate/lane | | | | 1579 | 5 | 221 | 1053 | 1195 | | | 987 | 276 |
| Satflow per lane | | | | 1641 | 1818 | 1468 | 1641 | 1818 | | | 1767 | 1394 |
| Capacity/lane | | | | 703 | 779 | 629 | 956 | 2512 | | | 601 | 247 |
| Flow ratio | | | | 0.95 | 0.00 | 0.15 | 0.33 | 0.24 | | | 0.20 | 0.20 |
| w/o ratio | | | | 2.25 | 0.51 | 0.35 | 1.10 | 0.48 | | | 1.14 | 1.12 |
| I factor | | | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | 1.000 | 1.000 |
| Arrival type | | | | 5 | 5 | 5 | 5 | 5 | | | 5 | 3 |
| Platoon ratio | | | | 1.00 | 1.67 | 1.67 | 1.57 | 1.67 | | | 1.67 | 1.00 |
| PF factor | | | | 1.00 | 0.50 | 0.57 | 1.00 | 0.40 | | | 1.00 | 1.00 |
| Q ₁ | | | | 61.4 | 0.1 | 3.3 | 21.1 | 4.4 | | | 14.0 | 10.7 |
| kb | | | | 0.7 | 0.9 | 0.7 | 0.6 | 0.9 | | | 0.5 | 0.4 |
| Q ₂ | | | | 110.8 | 0.0 | 0.4 | 10.2 | 5.6 | | | 8.1 | 5.9 |
| Q avg. | | | | 172.2 | 3.1 | 3.5 | 31.2 | 5.2 | | | 22.1 | 16.6 |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| FB ₁ | | | | 1.5 | 2.1 | 2.0 | 1.6 | 2.0 | | | 1.7 | 1.7 |
| BOQ, Q ₅ | | | | 258 | 0.1 | 7.3 | 50.2 | 10.1 | | | 37.1 | 28.9 |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | | | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | | 25.0 | 25.0 |
| Q storage | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Avg R _q | | | | | | | | | | | | |
| 95% R _q | | | | | | | | | | | | |

BA
L
M

| SHORT REPORT | | | | | |
|---------------------|--------------|--|------------------|---------------------------|--|
| General Information | | | Site Information | | |
| Analyst | USAI | | Intersection | SR-905WB | |
| Agency or Co. | USAI | | Area Type | RAMPS/BRITANNIA BLVD. | |
| Date Performed | 03/06/11 | | Jurisdiction | All other areas | |
| Time Period | AM PEAK HOUR | | Analysis Year | SAN DIEGO WITH MIT | |
| | | | | YEAR 2030 AT T-3B WITH LM | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|----|----|----|------|------|------|------|------|----|----|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 3 | 1 |
| Lane group | | | | L | LTR | R | L | T | | | TR | R |
| Volume (vph) | | | | 1500 | 5 | 210 | 1000 | 1135 | | | 565 | 250 |
| % Heavy veh | | | | 10 | 10 | 10 | 10 | 10 | | | 10 | 10 |
| PHF | | | | 0.95 | 0.95 | 0.55 | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | | | | A | A | A | A | A | | | A | A |
| Startup lost time | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. eff. green | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | | | | S | S | S | S | S | | | S | S |
| Unit Extension | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | | | | 10 | 5 | 0 |
| Lane Width | | | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Unit Extension | | | | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |

| Phasing | WB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 |
|-----------------------------------|-------------------|------------|------------|------------|------------------------|-------------------|------------|------------|
| Timing | G = 60.0 Y = 4 | G = Y = | G = Y = | G = Y = | G = 42.0 Y = 4 | G = 25.0 Y = 5 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | Cycle Length C = 140.0 | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|--|--|------------------|-------|-------|-------|-------|------|------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | | | 790 | 794 | 221 | 1053 | 1195 | | | 761 |
| Lane group cap | | | | 703 | 742 | 629 | 956 | 2512 | | | 845 | 247 |
| Wid. ratio | | | | 1.12 | 1.07 | 0.35 | 1.10 | 0.48 | | | 0.90 | 0.62 |
| Green ratio | | | | 0.43 | 0.43 | 0.43 | 0.30 | 0.51 | | | 0.18 | 0.19 |
| Unif. delay d1 | | | | 40.0 | 40.5 | 26.9 | 49.0 | 22.4 | | | 56.3 | 55.3 |
| Delay factor k | | | | 0.50 | 0.50 | 0.11 | 0.50 | 0.11 | | | 0.42 | 0.26 |
| Incrim. delay d2 | | | | 73.3 | 52.4 | 0.3 | 61.0 | 0.1 | | | 12.7 | 19.0 |
| PF factor | | | | 0.500 | 0.500 | 0.500 | 0.714 | 0.314 | | | 0.855 | 1.000 |
| Control delay | | | | 93.3 | 73.4 | 13.8 | 96.0 | 7.2 | | | 60.5 | 74.3 |
| Lane group LOS | | | | F | E | B | F | A | | | E | F |
| Approach delay | | | | 74.9 | | | 46.8 | | | 63.7 | | |
| Approach LOS | | | | E | | | D | | | E | | |
| Intersec. delay | 61.0 | | | Intersection LOS | | | | | | E | | |

18A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-36-AM-WITH LA MEDIA-SR965WB RAMPS/BRITANNIA BLVD/WITH I-4

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|----|----|----|-------|-------|-------|-------|-------|----|----|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | LTR | R | L | T | | | TR | R |
| Inic queue/lane | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Flow rate/lane | | | | 790 | 794 | 221 | 1053 | 1195 | | | 761 | 202 |
| Sat flow per lane | | | | 1641 | 1732 | 1468 | 1641 | 1818 | | | 1736 | 1384 |
| Capacity/lane | | | | 703 | 742 | 629 | 956 | 2512 | | | 845 | 247 |
| Flow ratio | | | | 0.48 | 0.46 | 0.15 | 0.33 | 0.24 | | | 0.16 | 0.15 |
| v/c ratio | | | | 1.12 | 1.07 | 0.35 | 1.19 | 0.48 | | | 0.90 | 0.82 |
| I factor | | | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | 1.000 | 1.000 |
| Arrival type | | | | 5 | 5 | 3 | 5 | 5 | | | 5 | 3 |
| Platoon ratio | | | | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | | | 1.67 | 1.00 |
| PF factor | | | | 1.00 | 1.00 | 0.57 | 1.00 | 0.40 | | | 0.98 | 1.00 |
| Q1 | | | | 30.7 | 30.9 | 3.3 | 21.1 | 4.4 | | | 10.4 | 7.6 |
| ks | | | | 0.7 | 0.8 | 0.7 | 0.6 | 0.9 | | | 0.4 | 0.4 |
| Q2 | | | | 15.5 | 12.5 | 6.4 | 10.2 | 0.8 | | | 2.5 | 1.4 |
| Q avg. | | | | 46.2 | 43.4 | 3.6 | 31.2 | 5.2 | | | 12.9 | 9.0 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------------------|--|--|--|------|------|-----|------|------|--|--|------|------|
| l ₉₅ | | | | 1.5 | 1.6 | 2.0 | 1.6 | 2.0 | | | 1.8 | 1.9 |
| BOQ Q ₉₅ | | | | 71.5 | 67.4 | 7.3 | 59.2 | 10.1 | | | 23.1 | 16.7 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|----------------------|--|--|--|------|------|------|------|------|--|--|------|------|
| Q spacing | | | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | | 25.0 | 25.0 |
| Q storage | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro ₉₅ | | | | | | | | | | | | |

48-22

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|--------------|------------------|------------------|--------------|---------------|--------------------------|
| Analyst | USAI | Intersection | SR-905WB | Agency or Co. | USAI | Area Type | RAMPS/BRITANNIA BLVD |
| Date Performed | 03/05/11 | Jurisdiction | SAN DIEGO/NO MIT | Time Period | PM PEAK HOUR | Analysis Year | YEAR 2030 ALT-3B WITH LM |

Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|-----------------------|----|----|----|------|------|------|------|------|----|----|------|------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 2 | 1 |
| Lane group | | | | L | TR | R | L | T | | | TR | R |
| Volume (vph) | | | | 600 | 5 | 395 | 2900 | 530 | | | 1015 | 440 |
| % Heavy veh | | | | 10 | 10 | 10 | 10 | 10 | | | 10 | 10 |
| PHF | | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | | | | A | A | A | A | A | | | A | A |
| Startup lost time | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. sf. green | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | | | | 5 | 5 | 5 | 5 | 5 | | | 5 | 5 |
| Unl. Extension | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | | | | 10 | 5 | 0 |
| Lane Width | | | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grass/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Unit Extension | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |

| Phasing | WB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 |
|---------|----------|-----|-----|-----|----------|-----------|-----|-----|
| Timing | G = 35.0 | G = | G = | G = | G = 55.0 | G = 42.0 | G = | G = |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = |

Duration of Analysis (hrs): 0.25 Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|---------------------|----------------|--|--|------------------|-------|-------|-------|-------|-----|-------|-------|-----|
| | Adj. flow rate | | | | 632 | 108 | 308 | 3053 | 558 | | 1114 | 417 |
| Lane group cap. | | | | 410 | 390 | 367 | 1138 | 3396 | | 1030 | 422 | |
| w/c ratio | | | | 1.54 | 0.28 | 0.84 | 2.66 | 0.16 | | 1.06 | 0.99 | |
| Green ratio | | | | 0.25 | 0.25 | 0.25 | 0.36 | 0.69 | | 0.30 | 0.30 | |
| Unif. delay c1 | | | | 52.5 | 42.3 | 49.8 | 45.0 | 7.9 | | 43.0 | 48.8 | |
| Delay factor k | | | | 0.50 | 0.11 | 0.37 | 0.50 | 0.11 | | 0.50 | 0.49 | |
| Increment. delay c2 | | | | 255.6 | 0.4 | 15.9 | 750.8 | 0.0 | | 52.9 | 40.6 | |
| F-F factor | | | | 0.778 | 0.778 | 0.778 | 1.000 | 0.159 | | 0.714 | 1.000 | |
| Control delay | | | | 296.4 | 33.3 | 54.5 | 804.8 | 1.3 | | 87.8 | 89.3 | |
| Lane group LOS | | | | F | C | D | F | A | | F | F | |
| Approach delay | | | | 198.2 | | | 660.6 | | | 88.2 | | |
| Approach LOS | | | | F | | | F | | | F | | |
| Intersection delay | 452.4 | | | Intersection LOS | | | | | | F | | |

189
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: AL T.-3B-PM-WITH LA MEDIA-SP905WB RAMPS/BRITANNIA BLVD/NO MIT

Average Back of Queue

| | FB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|-------|-------|-------|-------|-------|----|----|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | TR | R | L | T | | | TR | R |
| In.t. queue/lane | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Flow rate/lane | | | | 532 | 168 | 308 | 3053 | 558 | | | 1114 | 417 |
| Satflow per lane | | | | 1641 | 1559 | 1488 | 1641 | 1818 | | | 1803 | 1408 |
| Capacity/lane | | | | 410 | 390 | 367 | 1138 | 3396 | | | 1030 | 422 |
| Flow ratio | | | | 0.39 | 0.07 | 0.21 | 0.95 | 0.11 | | | 0.32 | 0.30 |
| w/s ratio | | | | 1.54 | 0.28 | 0.64 | 2.65 | 0.16 | | | 1.08 | 0.99 |
| g factor | | | | 1.050 | 1.000 | 1.000 | 1.000 | 1.000 | | | 1.000 | 1.050 |
| Arrival type | | | | 5 | 5 | 5 | 5 | 5 | | | 5 | 3 |
| Platoon ratio | | | | 1.67 | 1.57 | 1.67 | 1.00 | 1.39 | | | 1.57 | 1.00 |
| PF factor | | | | 1.50 | 0.82 | 0.95 | 1.00 | 0.17 | | | 1.00 | 1.50 |
| Q1 | | | | 24.8 | 2.8 | 10.7 | 61.1 | 0.5 | | | 22.8 | 16.1 |
| Q2 | | | | 0.5 | 0.5 | 0.5 | 0.7 | 1.0 | | | 0.6 | 0.5 |
| Q3 | | | | 23.2 | 0.2 | 2.0 | 174.4 | 0.2 | | | 10.1 | 5.0 |
| Q avg | | | | 53.8 | 3.0 | 12.8 | 195.5 | 0.7 | | | 32.9 | 21.1 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|--|--|------|-----|------|-----|-----|--|--|------|------|
| FB% | | | | 1.5 | 2.0 | 1.8 | 1.5 | 2.1 | | | 1.5 | 1.7 |
| BOQ, Q% | | | | 82.3 | 5.0 | 22.9 | 278 | 1.4 | | | 52.5 | 35.6 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|------|------|------|------|--|--|------|------|
| Q spacing | | | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | | 25.0 | 25.0 |
| Q storage | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

13-8
W
M

| SHORT REPORT | | | | | | | | | | | | |
|---|-------------------|------------|------------|------------------|-------------------|---------------------------|------------|------------|----|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst: | USAi | | | | | SR-905WB | | | | | | |
| Agency or Co: | USAi | | | | | RAMPS/BRITANNIA BLVD. | | | | | | |
| Date Performed: | 03/05/11 | | | | | All other areas | | | | | | |
| Time Period: | PM PEAK HOUR | | | | | SAN DIEGO WITH MIT | | | | | | |
| | | | | | | YEAR 2030 ALT.-35 WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 3 | 1 |
| Lane group | | | | L | LTR | R | L | T | | | TR | R |
| Volume (vph) | | | | 600 | 5 | 390 | 2950 | 530 | | | 1015 | 440 |
| % Heavy veh | | | | 10 | 10 | 10 | 10 | 10 | | | 10 | 10 |
| P/F | | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | | | | A | A | A | A | A | | | A | A |
| Startup lost time | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. eff. green | | | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | | | | S | S | S | S | S | | | S | S |
| Unit Extension: | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Peak/RTOR Volume | 10 | | | 10 | | 0 | | | | 10 | 5 | 0 |
| Lane Width: | | | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Unit Extension: | | | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Phasing | WB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 35.0 Y = 4 | G = Y = | G = Y = | G = Y = | G = 50.0 Y = 4 | G = 42.0 Y = 5 | G = Y = | G = Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| Adj. flow rate | | | | 375 | 361 | 308 | 3953 | 558 | | 1299 | 232 | |
| Lane group cap. | | | | 410 | 421 | 367 | 1138 | 3396 | | 1435 | 422 | |
| V/c ratio | | | | 0.92 | 0.86 | 0.84 | 2.68 | 0.16 | | 0.91 | 0.55 | |
| Green ratio | | | | 0.25 | 0.25 | 0.25 | 0.36 | 0.63 | | 0.35 | 0.30 | |
| Unif. delay d' | | | | 51.2 | 50.1 | 49.8 | 45.0 | 7.8 | | 47.1 | 41.1 | |
| Delay factor k | | | | 0.44 | 0.35 | 0.37 | 0.50 | 0.11 | | 0.43 | 0.15 | |
| Increment delay d2 | | | | 26.0 | 16.0 | 15.8 | 759.8 | 0.0 | | 8.5 | 1.5 | |
| PF factor | | | | 0.775 | 0.778 | 0.778 | 1.000 | 0.159 | | 0.714 | 1.000 | |
| Control delay | | | | 66.4 | 55.0 | 54.5 | 894.6 | 1.3 | | 42.1 | 42.6 | |
| Lane group LOS | | | | E | D | D | F | A | | D | D | |
| Approach delay | | | | 59.0 | | | 580.6 | | | 42.2 | | |
| Approach LOS | | | | E | | | F | | | D | | |
| Intersec. delay | 417.5 | | | Intersection LOS | | | | | | F | | |

18-7
L
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-3B-PM-WITH 1 A MEDIA-SR925WB RAMPS BRITANNIA BLVD/WITH M

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-----------------|----|----|----|-------|-------|-------|-------|-------|----|----|-------|-------|
| | LT | TH | RT | LI | IH | RI | LT | IH | RI | LI | TH | RT |
| Lane group | | | | L | LTR | R | L | T | | | TR | R |
| Int. queue/lane | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Flow rate/lane | | | | 379 | 361 | 308 | 3053 | 558 | | | 1289 | 232 |
| Sallow per lane | | | | 1541 | 1522 | 1468 | 1541 | 1818 | | | 1756 | 1405 |
| Capacity/lane | | | | 410 | 421 | 367 | 1138 | 3396 | | | 1435 | 422 |
| Flow ratio | | | | 0.23 | 0.21 | 0.21 | 0.95 | 0.11 | | | 0.27 | 0.17 |
| w/c ratio | | | | 0.92 | 0.86 | 0.84 | 2.68 | 0.16 | | | 0.91 | 0.55 |
| I factor | | | | 1.000 | 1.000 | 1.000 | 1.000 | 1.050 | | | 1.000 | 1.000 |
| Arrival type | | | | 5 | 5 | 5 | 5 | 5 | | | 5 | 3 |
| Platoon ratio | | | | 1.67 | 1.67 | 1.67 | 1.00 | 1.39 | | | 1.67 | 1.00 |
| PF factor | | | | 0.97 | 0.95 | 0.95 | 1.00 | 0.17 | | | 0.95 | 1.00 |
| Q1 | | | | 14.0 | 12.7 | 10.7 | 61.1 | 0.5 | | | 16.9 | 7.6 |
| Q3 | | | | 0.5 | 0.5 | 0.5 | 0.7 | 1.0 | | | 0.6 | 0.5 |
| Q2 | | | | 3.4 | 2.4 | 2.0 | 124.4 | 0.2 | | | 3.7 | 0.6 |
| Q avg | | | | 17.4 | 15.2 | 12.8 | 185.5 | 0.7 | | | 20.6 | 6.2 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|--|--|--|------|------|------|-----|-----|--|--|------|------|
| hrs | | | | 1.7 | 1.8 | 1.8 | 1.5 | 2.1 | | | 1.7 | 1.9 |
| BOQ, Q ₉₅ | | | | 30.1 | 26.7 | 22.9 | 278 | 1.4 | | | 34.8 | 15.4 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|--|--|--|------|------|------|------|------|--|--|------|------|
| Q spacing | | | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | | 25.0 | 25.0 |
| Q storage | | | | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 |
| Avg. R ₀ | | | | | | | | | | | | |
| 95% R ₀ | | | | | | | | | | | | |

19-A
N
M

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|--|----|-------|-------|----|----|----|----|-------|----|-------|-------|----|
| General Information | | | | | | | | | | | | |
| Project Description ALT-3B AM WITH LA MEDIA ---- SR905EB RAMPS/BRITANNIA/NO MI | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | LT | R | | | | | TR | | L | T | |
| Inlt. queue/lane | | 0.0 | 0.0 | | | | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | 426 | 3263 | | | | | 2352 | | 221 | 1953 | |
| Satflow per ano | | 1733 | 1466 | | | | | 1747 | | 1641 | 1816 | |
| Capacity/lane | | 690 | 1334 | | | | | 1587 | | 212 | 2113 | |
| Flow ratio | | 0.25 | 1.26 | | | | | 0.49 | | 0.07 | 0.39 | |
| vic ratio | | 0.48 | 2.45 | | | | | 1.48 | | 1.04 | 0.92 | |
| f factor | | 1.000 | 1.000 | | | | | 1.000 | | 1.000 | 1.000 | |
| Arrival type | | 5 | 5 | | | | | 5 | | 5 | 5 | |
| Platoon ratio | | 1.67 | 1.00 | | | | | 1.67 | | 1.67 | 1.67 | |
| PF factor | | 0.38 | 1.00 | | | | | 1.00 | | 1.00 | 0.89 | |
| Q1 | | 4.3 | 76.8 | | | | | 36.0 | | 4.7 | 25.1 | |
| ks | | 0.9 | 0.8 | | | | | 0.7 | | 0.2 | 0.8 | |
| Q2 | | 0.8 | 137.6 | | | | | 37.1 | | 2.1 | 5.6 | |
| Q avg. | | 5.1 | 214.4 | | | | | 73.1 | | 6.8 | 30.7 | |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| ft/s | | 2.6 | 1.5 | | | | | 1.5 | | 1.9 | 1.6 | |
| BOQ Qx | | 10.0 | 322 | | | | | 110 | | 13.1 | 46.3 | |
| Queue Storage Ratio | | | | | | | | | | | | |
| C spacing | | 25.0 | 25.0 | | | | | 25.0 | | 25.0 | 25.0 | |
| Q storage | | 0 | 0 | | | | | 0 | | 0 | 0 | |
| Avg. Ro: | | | | | | | | | | | | |
| 95% Ro: | | | | | | | | | | | | |

19-A
L
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|--------|------|------------------|----------|---|-------|--------|-------|-------|------|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | SR-905EB | | | | | | |
| Agency or Co. | USAJ | | | | | Intersection RAMP/BRITANNIA BLVD. | | | | | | |
| Date Performed | 03/06/11 | | | | | Area Type All other areas | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Jurisdiction S05EBER130430MLMWM | | | | | | |
| | | | | | | Analysis Year YEAR 2010 ALT-2B WITH I/M | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 | 2 | 2 | 3 | 0 |
| Lane group | | L T | R | | | | | T R | L | T | | |
| Volume (vph) | 450 | 5 | 3400 | | | | | 1735 | 500 | 210 | 1655 | |
| % Heavy veh | 10 | 10 | 10 | | | | | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | | | | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | | | | | A | A | A | A | |
| Startup lost time | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | | 5 | 5 | | | | | 5 | 5 | 5 | 5 | |
| Unit Extension | | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 110 | | 350 | 10 | | | 10 | 5 | 0 | | | |
| Lane Width | | 12.0 | 12.0 | | | | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | | | | | 0 | 0 | 0 | 0 | |
| Unit Extension | | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | EB Only | C2 | C3 | C4 | SB Only | Thru & RT | C7 | C8 | | | | |
| Timing | G = 77.0 | G = | G = | G = | G = 10.0 | G = 50.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 426 | 3283 | | | | | 1925 | 526 | 221 | 1953 | | |
| Lane group cap | 890 | 1334 | | | | | 1551 | 831 | 212 | 2113 | | |
| v/c ratio | 0.48 | 2.45 | | | | | 1.11 | 0.63 | 1.04 | 0.92 | | |
| Green ratio | 0.51 | 0.51 | | | | | 0.33 | 0.33 | 0.07 | 0.43 | | |
| Unif. delay d1 | 23.5 | 36.5 | | | | | 50.0 | 42.2 | 70.0 | 40.7 | | |
| Delay factor k | 0.11 | 0.50 | | | | | 0.50 | 0.21 | 0.50 | 0.44 | | |
| Increment. delay d2 | 0.4 | 653.0 | | | | | 57.2 | 1.6 | 73.4 | 7.5 | | |
| PF factor | 0.297 | 1.003 | | | | | 0.667 | 0.667 | 0.952 | 0.504 | | |
| Control delay | 7.4 | 689.5 | | | | | 90.5 | 29.7 | 140.0 | 28.0 | | |
| Lane group LOS | A | F | | | | | F | G | F | G | | |
| Approch. delay | 610.7 | | | | | | 75.9 | | | 39.4 | | |
| Approach LOS | F | | | | | | F | | | D | | |
| Intersec. delay | 306.7 | | | Intersection LOS | | | | | | F | | |

19-A
W
N

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 3B AM WITH LA MEDIA --- SR205EB RAMP/S/BRITANNIA WITH M

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|----|-------|-------|----|----|----|----|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | L | R | | | | | T | R | L | T | |
| Inlt. queue/ lane | | 0.0 | 0.0 | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/ lane | | 426 | 3263 | | | | | 1826 | 526 | 221 | 1353 | |
| Sat flow per lane | | 1733 | 1468 | | | | | 1818 | 1409 | 1641 | 1918 | |
| Capacity/ lane | | 990 | 1334 | | | | | 1651 | 831 | 212 | 2113 | |
| Flow ratio | | 0.25 | 1.26 | | | | | 0.37 | 0.21 | 0.07 | 0.39 | |
| w/o ratio | | 0.48 | 2.45 | | | | | 1.11 | 0.63 | 1.04 | 0.32 | |
| I factor | | 1.000 | 1.050 | | | | | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | | 5 | 5 | | | | | 5 | 5 | 5 | 5 | |
| Fleetch ratio | | 1.67 | 1.00 | | | | | 1.67 | 1.67 | 1.67 | 1.67 | |
| PF factor | | 0.36 | 1.00 | | | | | 1.00 | 0.81 | 1.00 | 0.89 | |
| Q1 | | 4.7 | 76.8 | | | | | 27.9 | 8.5 | 4.7 | 25.1 | |
| kb | | 0.3 | 0.8 | | | | | 0.7 | 0.6 | 0.2 | 0.8 | |
| Q2 | | 0.8 | 137.6 | | | | | 12.6 | 1.0 | 2.1 | 5.6 | |
| Q avg. | | 5.1 | 214.4 | | | | | 40.5 | 9.5 | 6.8 | 30.7 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|--|------|-----|--|--|--|--|------|------|------|------|--|
| ft/s | | 2.0 | 1.5 | | | | | 1.8 | 1.9 | 1.9 | 1.8 | |
| BOQ Q% | | 10.0 | 322 | | | | | 63.3 | 17.6 | 13.1 | 49.3 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|------|--|--|--|--|------|------|------|------|--|
| Q spacing | | 25.0 | 25.0 | | | | | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | | 0 | 0 | | | | | 0 | 0 | 0 | 0 | |
| Avg Ro | | | | | | | | | | | | |
| 85% Ro | | | | | | | | | | | | |

19-P
32

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|---------|---------------|---------------------------|------------------|--------------|-----------------------|--------------------|
| Analyst | USA! | Intersection | SR 905EB | Agency or Co | USA! | RAMPS/BRITANNIA BLVD. | |
| Date Performed | 5/20/11 | Area Type | All other areas | Time Period | PM PEAK HOUR | Jurisdiction | 905EBRIT30P30WLMNM |
| | | Analysis Year | YEAR 2030 ALT -3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|------|------|-----|----------|------------------------|-----|------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 3 | 0 |
| Lane group | | LT | R | | | | | TR | | L | T | |
| Volume (vph) | 400 | 5 | 1200 | | | | | 3030 | 1200 | 250 | 1415 | |
| % Heavy veh | 10 | 10 | 10 | | | | | 10 | 10 | 10 | 10 | |
| PFI | 0.95 | 0.95 | 0.95 | | | | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | | | | | A | A | A | A | |
| Startup lost time | | 2.0 | 2.0 | | | | | 2.0 | | 2.0 | 2.0 | |
| Ext eff green | | 2.0 | 2.0 | | | | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | 5 | 5 | | | | | 5 | | 5 | 5 | |
| Unit Extension | | 5.0 | 3.5 | | | | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | 300 | 10 | | | 10 | 5 | 0 | | | |
| Lane Width | | 12.0 | 12.0 | | | | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | | | | | 0 | | 0 | 0 | |
| Unit Extension | | 3.0 | 3.5 | | | | | 3.0 | | 3.0 | 2.0 | |
| Phasing | EB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 40.0 | G = | G = | G = | G = 10.0 | G = 77.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-----|------------------|--|--|-------|------|-------|-------|------|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | 426 | 947 | | | | | 4452 | | 211 | 1489 | |
| Lane group cap | 490 | 743 | | | | | 2594 | | 228 | 3219 | | |
| v/c ratio | 0.86 | 1.27 | | | | | 1.72 | | 0.93 | 0.46 | | |
| Green ratio | 0.29 | 0.29 | | | | | 0.55 | | 0.97 | 0.55 | | |
| Unif. delay d1 | 47.4 | 50.0 | | | | | 31.5 | | 64.6 | 12.3 | | |
| Delay factor k | 0.39 | 0.50 | | | | | 0.50 | | 0.44 | 0.11 | | |
| Incr. delay d2 | 14.3 | 133.9 | | | | | 324.0 | | 38.7 | 0.1 | | |
| PF factor | 0.733 | 0.733 | | | | | 0.992 | | 0.949 | 0.143 | | |
| Control delay | 49.5 | 170.6 | | | | | 355.2 | | 101.0 | 1.9 | | |
| Lane group LOS | D | F | | | | | F | | F | A | | |
| Approch. delay | 132.9 | | | | | | 355.2 | | | 14.2 | | |
| Approach LOS | F | | | | | | F | | | B | | |
| Intersec. delay | 227.6 | | | Intersection LOS | | | | | | F | | |

19.8
2.2
2

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT -3R PM WITH LA MEDIA - ---SR905EB RAMP/SBRITANNIA/NO MIT

Average Back of Queue

| | EE | | | WB | | | NB | | | SB | | |
|-------------------|----|-------|-------|----|----|----|----|-------|----|-------|-------|----|
| | LI | TH | RT | LI | TH | RT | LI | TH | RT | LI | TH | RT |
| Lane group | | LT | R | | | | | TR | | L | T | |
| Init. queue/ lane | | 0.0 | 0.0 | | | | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | 425 | 947 | | | | | 4452 | | 211 | 1429 | |
| Satflow per lane | | 1733 | 1458 | | | | | 1731 | | 1641 | 1518 | |
| Capacity/lane | | 495 | 743 | | | | | 2594 | | 228 | 3219 | |
| Flow ratio | | 0.25 | 0.35 | | | | | 0.94 | | 0.07 | 0.30 | |
| w/c ratio | | 0.86 | 1.27 | | | | | 1.72 | | 0.93 | 0.46 | |
| I factor | | 1.000 | 1.000 | | | | | 1.000 | | 1.000 | 1.000 | |
| Arrival type | | 5 | 5 | | | | | 5 | | 5 | 5 | |
| Platoon ratio | | 1.67 | 1.67 | | | | | 1.01 | | 1.67 | 1.46 | |
| PF factor | | 0.94 | 1.00 | | | | | 1.00 | | 1.00 | 0.18 | |
| Q1 | | 14.7 | 20.8 | | | | | 63.5 | | 4.2 | 1.9 | |
| KB | | 0.6 | 0.5 | | | | | 0.9 | | 0.2 | 1.0 | |
| Q7 | | 2.8 | 15.6 | | | | | 87.3 | | 1.4 | 0.8 | |
| Q avg. | | 17.5 | 37.5 | | | | | 150.8 | | 5.5 | 2.7 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|------|------|--|--|--|--|-----|--|------|-----|--|
| fs% | | 1.7 | 1.6 | | | | | 1.5 | | 1.9 | 2.0 | |
| BOQ, Q% | | 30.2 | 59.0 | | | | | 226 | | 10.7 | 5.5 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|------|--|--|--|--|------|--|------|------|--|
| Q spacing | | 25.0 | 25.0 | | | | | 25.0 | | 25.0 | 25.0 | |
| Q storage | | 0 | 0 | | | | | 0 | | 0 | 0 | |
| Avg Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

198
W
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-------|------|------------------|----------|------------------------|-------|-----------------------|-------|-------|----|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA! | | | | | Intersector | | SR 905EB | | | | |
| Agency or Co. | USA! | | | | | Area Type | | RAMPS/BRITANNIA BLVD. | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | | All other areas | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | | 905EBR/T30P35W/MWM | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 3 | 0 |
| Lane group | | L | R | | | | | L | R | L | T | |
| Volume (vph) | 400 | 5 | 1200 | | | | 3030 | 1200 | 200 | 1410 | | |
| % Heavy veh | 10 | 10 | 10 | | | | 10 | 10 | 10 | 10 | | |
| PHF | 0.95 | 0.95 | 0.95 | | | | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Actuated (P/A) | A | A | A | | | | A | A | A | A | | |
| Startup lost time | | 2.0 | 2.0 | | | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | | 2.0 | 2.0 | | | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | | S | S | | | | S | S | S | S | | |
| Unit Extension | | 3.0 | 3.0 | | | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | | 300 | 10 | | | 10 | 5 | 0 | | | |
| Lane Width | | 12.0 | 12.0 | | | | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/h* | | | | | | | | | | | | |
| Bus stop/h* | | 0 | 0 | | | | 0 | 0 | 0 | 0 | | |
| Unit Extension | | 3.0 | 3.0 | | | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | EB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 40.0 | G = | G = | G = | G = 10.0 | G = 77.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| Adj. flow rate | 426 | 347 | | | | | 3189 | 1263 | 211 | 1499 | | |
| Lane group cap. | 495 | 743 | | | | | 2724 | 1383 | 228 | 3219 | | |
| Ratio | 0.86 | 1.27 | | | | | 1.17 | 0.91 | 0.93 | 0.46 | | |
| Green ratio | 0.29 | 0.20 | | | | | 0.55 | 0.35 | 0.07 | 0.65 | | |
| Unit delay d1 | 47.4 | 50.0 | | | | | 31.5 | 26.5 | 64.6 | 12.3 | | |
| Delay factor k | 0.39 | 0.50 | | | | | 0.50 | 0.43 | 0.44 | 0.11 | | |
| Incremental delay d2 | 14.3 | 133.9 | | | | | 81.1 | 9.5 | 39.7 | 0.1 | | |
| PF factor | 0.723 | 0.733 | | | | | 0.418 | 0.185 | 0.949 | 0.143 | | |
| Control delay | 46.0 | 110.6 | | | | | 54.3 | 14.8 | 101.0 | 1.9 | | |
| Lane group LOS | D | F | | | | | F | U | F | A | | |
| Approach delay | 132.6 | | | | | | 71.7 | | | 14.2 | | |
| Approach LOS | F | | | | | | E | | | U | | |
| Intersec. delay | 69.9 | | | Intersection LOS | | | | | | E | | |

198
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT - 3B PM WITH I A MEDIA . - SR905EB RAMP/BRITANNIA WITH M

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|----|-------|-------|----|----|----|----|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | T | R | | | | | T | R | L | T | |
| Init queue/lane | | 0.0 | 0.0 | | | | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | | 426 | 947 | | | | | 3189 | 1263 | 211 | 1469 | |
| Sat flow per lane | | 1733 | 1469 | | | | | 1919 | 1421 | 1641 | 1918 | |
| Capacity/lane | | 495 | 743 | | | | | 2724 | 1363 | 226 | 3219 | |
| Flow ratio | | 0.25 | 0.35 | | | | | 0.64 | 0.50 | 0.07 | 0.30 | |
| w/c ratio | | 0.65 | 1.27 | | | | | 1.17 | 0.91 | 0.93 | 0.46 | |
| I factor | | 1.000 | 1.000 | | | | | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | | S | S | | | | | S | S | S | S | |
| Platoon ratio | | 1.67 | 1.67 | | | | | 1.48 | 1.67 | 1.67 | 1.46 | |
| PF factor | | 0.54 | 1.00 | | | | | 1.00 | 0.56 | 1.00 | 0.18 | |
| Q1 | | 14.7 | 26.8 | | | | | 45.5 | 14.1 | 4.2 | 1.9 | |
| kd | | 0.6 | 0.5 | | | | | 0.9 | 0.9 | 0.2 | 1.0 | |
| Q2 | | 2.8 | 16.6 | | | | | 20.3 | 5.1 | 1.4 | 0.8 | |
| Q avg | | 17.5 | 37.5 | | | | | 71.8 | 19.2 | 5.5 | 2.7 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|------|------|--|--|--|--|-----|------|------|-----|--|
| fs% | | 1.7 | 1.6 | | | | | 1.5 | 1.7 | 1.9 | 2.0 | |
| BOQ, Q% | | 30.2 | 59.0 | | | | | 108 | 32.9 | 10.7 | 5.5 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|------|--|--|--|--|------|------|------|------|--|
| Q spacing | | 25.0 | 25.0 | | | | | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | | 3 | 0 | | | | | 0 | 0 | 0 | 3 | |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq% | | | | | | | | | | | | |

20 A
22

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|------------|------------------|----------------------------|-------|------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | AIRWAY RD./BRITANNIA BLVD. | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 11/15/11 | | | | | Jurisdiction | AIRBRIT30A3BWL/M/NO MIT | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 2 | 0 | 2 | 3 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 285 | 540 | 375 | 380 | 875 | 825 | 875 | 1050 | 200 | 985 | 2520 | 1750 |
| % Heavy veh | 10 | 10 | 5 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 25.0 | G = 23.0 | G = | G = | G = 32.0 | G = 52.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 300 | 963 | | 400 | 1789 | | 921 | 1316 | | 1037 | 4495 | |
| Lane group cap. | 531 | 715 | | 531 | 483 | | 680 | 1670 | | 680 | 1596 | |
| v/c ratio | 0.56 | 1.35 | | 0.75 | 3.70 | | 1.35 | 0.79 | | 1.52 | 2.82 | |
| Green ratio | 0.17 | 0.15 | | 0.17 | 0.15 | | 0.21 | 0.35 | | 0.21 | 0.35 | |
| Unif. delay d1 | 57.5 | 63.5 | | 59.6 | 63.5 | | 59.0 | 44.0 | | 59.0 | 49.0 | |
| Delay factor k | 0.16 | 0.50 | | 0.31 | 0.50 | | 0.50 | 0.33 | | 0.50 | 0.50 | |
| Increm. delay d2 | 1.4 | 165.3 | | 6.0 | 1222 | | 169.0 | 2.6 | | 243.7 | 819.1 | |
| PF factor | 0.867 | 0.879 | | 0.867 | 0.879 | | 0.819 | 0.646 | | 0.819 | 1.000 | |
| Control delay | 51.2 | 221.1 | | 57.7 | 1278 | | 217.4 | 31.1 | | 292.0 | 868.1 | |
| Lane group LOS | D | F | | E | F | | F | C | | F | F | |
| Apprch. delay | 180.8 | | | 1055 | | | 107.8 | | | 760.1 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersec. delay | 622.3 | | | Intersection LOS | | | | | | F | | |

BACK-OF-QUEUE WORKSHEET

3-2-20

General Information

Project Description *ALT.-3B-AM WITH LA MEDIA-AIRWAY RD./BRITANNIA BLVD./NO M/IT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Init. queue/lane | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 300 | 963 | | 400 | 1789 | | 921 | 1316 | | 1037 | 4495 | |
| Satflow per lane | 1641 | 1711 | | 1641 | 1654 | | 1641 | 1767 | | 1641 | 1690 | |
| Capacity/lane | 531 | 715 | | 531 | 483 | | 680 | 1670 | | 680 | 1596 | |
| Flow ratio | 0.09 | 0.21 | | 0.12 | 0.57 | | 0.29 | 0.27 | | 0.32 | 0.98 | |
| w/c ratio | 0.56 | 1.35 | | 0.75 | 3.70 | | 1.35 | 0.79 | | 1.52 | 2.82 | |
| l factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.00 | |
| PF factor | 0.93 | 1.00 | | 0.96 | 1.00 | | 1.00 | 0.86 | | 1.00 | 1.00 | |
| Q1 | 5.5 | 14.7 | | 7.8 | 39.1 | | 19.8 | 15.6 | | 22.2 | 68.8 | |
| kb | 0.4 | 0.4 | | 0.4 | 0.4 | | 0.5 | 0.7 | | 0.5 | 0.7 | |
| Q2 | 0.5 | 12.8 | | 1.1 | 86.3 | | 17.2 | 2.3 | | 24.2 | 134.2 | |
| Q avg. | 6.0 | 27.5 | | 8.9 | 125.4 | | 37.0 | 17.9 | | 46.5 | 202.9 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|--|------|-----|--|------|------|--|------|-----|--|
| fB% | 1.9 | 1.6 | | 1.9 | 1.5 | | 1.6 | 1.7 | | 1.5 | 1.5 | |
| BOQ, Q% | 11.6 | 44.9 | | 16.7 | 188 | | 58.3 | 30.8 | | 71.8 | 304 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq% | | | | | | | | | | | | |

20-A
W
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-------|------------------|----------------------------|------------|-----------|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | AIRWAY RD./BRITANNIA BLVD. | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 11/15/11 | | | | | Jurisdiction | AIRBRIT30A3BWLM/WITH MIT | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 3 | 2 |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Volume (vph) | 285 | 540 | 375 | 380 | 875 | 825 | 875 | 1050 | 200 | 985 | 2520 | 1750 |
| % Heavy veh | 10 | 10 | 5 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | Excl. Left | Thru & RT | 07 | | 08 |
| Timing | G = 25.0 | G = 23.0 | G = | G = | | G = 32.0 | | G = 52.0 | G = | | G = | |
| | Y = 4 | Y = 5 | Y = | Y = | | Y = 4 | | Y = 5 | Y = | | Y = | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 300 | 568 | 395 | 400 | 921 | 868 | 921 | 1105 | 211 | 1037 | 2653 | 1842 |
| Lane group cap. | 531 | 759 | 594 | 531 | 531 | 1004 | 680 | 1717 | 785 | 680 | 1717 | 1368 |
| v/c ratio | 0.56 | 0.75 | 0.66 | 0.75 | 1.73 | 0.86 | 1.35 | 0.64 | 0.27 | 1.52 | 1.55 | 1.35 |
| Green ratio | 0.17 | 0.15 | 0.40 | 0.17 | 0.15 | 0.40 | 0.21 | 0.35 | 0.55 | 0.21 | 0.35 | 0.55 |
| Unif. delay d1 | 57.5 | 60.7 | 36.8 | 59.6 | 63.5 | 41.3 | 59.0 | 41.2 | 18.1 | 59.0 | 49.0 | 34.0 |
| Delay factor k | 0.16 | 0.30 | 0.24 | 0.31 | 0.50 | 0.39 | 0.50 | 0.22 | 0.11 | 0.50 | 0.50 | 0.50 |
| Increm. delay d2 | 1.4 | 4.1 | 2.8 | 6.0 | 338.3 | 8.0 | 169.0 | 0.8 | 0.2 | 243.7 | 248.2 | 160.9 |
| PF factor | 0.867 | 0.879 | 0.556 | 0.867 | 0.879 | 0.556 | 0.819 | 0.646 | 0.196 | 0.819 | 0.646 | 1.000 |
| Control delay | 51.2 | 57.5 | 23.3 | 57.7 | 394.2 | 30.9 | 217.4 | 27.5 | 3.7 | 292.0 | 279.9 | 194.9 |
| Lane group LOS | D | E | C | E | F | C | F | C | A | F | F | F |
| Apprch. delay | 45.3 | | | 188.6 | | | 103.4 | | | 253.9 | | |
| Approach LOS | D | | | F | | | F | | | F | | |
| Intersec. delay | 187.7 | | | Intersection LOS | | | | | | F | | |

20-A
W
M

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| General Information | | | | | | | | | | | | |
| Project Description ALT.-3B-AM WITH LA MEDIA-AIRWAY RD./BRITANNIA BLVD./MTH MIT | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 300 | 568 | 395 | 400 | 921 | 868 | 921 | 1105 | 211 | 1037 | 2653 | 1842 |
| Satflow per lane | 1641 | 1818 | 1486 | 1641 | 1818 | 1419 | 1641 | 1818 | 1436 | 1641 | 1818 | 1414 |
| Capacity/lane | 531 | 759 | 594 | 531 | 531 | 1004 | 680 | 1717 | 785 | 680 | 1717 | 1368 |
| Flow ratio | 0.09 | 0.11 | 0.27 | 0.12 | 0.27 | 0.35 | 0.29 | 0.22 | 0.15 | 0.32 | 0.54 | 0.74 |
| v/c ratio | 0.56 | 0.75 | 0.66 | 0.75 | 1.73 | 0.86 | 1.35 | 0.64 | 0.27 | 1.52 | 1.55 | 1.35 |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.00 |
| PF factor | 0.93 | 0.96 | 0.73 | 0.96 | 1.00 | 0.86 | 1.00 | 0.80 | 0.22 | 1.00 | 1.00 | 1.00 |
| Q1 | 5.5 | 8.0 | 9.9 | 7.8 | 20.1 | 16.0 | 19.8 | 11.3 | 1.0 | 22.2 | 40.5 | 43.3 |
| k _B | 0.4 | 0.4 | 0.7 | 0.4 | 0.4 | 0.7 | 0.5 | 0.7 | 0.8 | 0.5 | 0.7 | 0.8 |
| Q2 | 0.5 | 1.1 | 1.3 | 1.1 | 26.6 | 3.2 | 17.2 | 1.2 | 0.3 | 24.2 | 44.8 | 36.4 |
| Q avg. | 6.0 | 9.1 | 11.1 | 8.9 | 46.7 | 19.2 | 37.0 | 12.6 | 1.3 | 46.5 | 85.3 | 79.7 |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| f _{95%} | 1.9 | 1.9 | 1.8 | 1.9 | 1.5 | 1.7 | 1.6 | 1.8 | 2.1 | 1.5 | 1.5 | 1.5 |
| BOQ, Q% | 11.6 | 17.0 | 20.3 | 16.7 | 72.2 | 32.8 | 58.3 | 22.6 | 2.7 | 71.8 | 128 | 120 |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg. R _o | | | | | | | | | | | | |
| 95% R _o | | | | | | | | | | | | |

202
3

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|-------|------------------------|----------------------------|-------|------------|-----------|-------|------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAI | | | | | Intersection | AIRWAY RD./BRITANNIA BLVD. | | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 11/15/11 | | | | | Jurisdiction | AIRBRIT30P3BWLM/NO MIT | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 3 | 0 | 2 | 2 | 0 | 2 | 3 | 0 | 2 | 3 | 0 | |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | | |
| Volume (vph) | 1350 | 1090 | 735 | 145 | 1000 | 900 | 700 | 1980 | 730 | 800 | 1095 | 720 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 |
| Timing | G = 25.0 | G = 23.0 | G = | G = | | | G = 32.0 | | | G = 52.0 | G = | | |
| | Y = 4 | Y = 5 | Y = | Y = | | | Y = 4 | | | Y = 5 | Y = | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 1421 | 1921 | | 153 | 2000 | | 737 | 2852 | | 842 | 1911 | | |
| Lane group cap. | 531 | 703 | | 531 | 484 | | 680 | 1637 | | 680 | 1600 | | |
| v/c ratio | 2.68 | 2.73 | | 0.29 | 4.13 | | 1.08 | 1.74 | | 1.24 | 1.19 | | |
| Green ratio | 0.17 | 0.15 | | 0.17 | 0.15 | | 0.21 | 0.35 | | 0.21 | 0.35 | | |
| Unif. delay d1 | 62.5 | 63.5 | | 54.7 | 63.5 | | 59.0 | 49.0 | | 59.0 | 49.0 | | |
| Delay factor k | 0.50 | 0.50 | | 0.11 | 0.50 | | 0.50 | 0.50 | | 0.50 | 0.50 | | |
| Increment. delay d2 | 759.6 | 783.7 | | 0.3 | 1414 | | 59.4 | 336.6 | | 119.5 | 93.9 | | |
| PF factor | 0.867 | 0.879 | | 0.867 | 0.909 | | 0.819 | 0.695 | | 0.819 | 0.646 | | |
| Control delay | 813.8 | 839.5 | | 47.7 | 1472 | | 107.8 | 370.6 | | 167.9 | 125.6 | | |
| Lane group LOS | F | F | | D | F | | F | F | | F | F | | |
| Approch. delay | 828.6 | | | 1371 | | | 316.7 | | | 138.5 | | | |
| Approach LOS | F | | | F | | | F | | | F | | | |
| Intersec. delay | 611.5 | | | Intersection LOS | | | | | | F | | | |

20-P
MN

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|---|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| General Information | | | | | | | | | | | | |
| Project Description ALT.-3B-PM WITH LA MEDIA-AIRWAY RD/BRITANNIA BLVD./NO MIT | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Init. queue/lane | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 1421 | 1921 | | 153 | 2000 | | 737 | 2852 | | 842 | 1911 | |
| Satflow per lane | 1641 | 1682 | | 1641 | 1658 | | 1641 | 1733 | | 1641 | 1694 | |
| Capacity/lane | 531 | 703 | | 531 | 484 | | 680 | 1637 | | 680 | 1600 | |
| Flow ratio | 0.45 | 0.42 | | 0.05 | 0.63 | | 0.23 | 0.60 | | 0.26 | 0.41 | |
| v/c ratio | 2.68 | 2.73 | | 0.29 | 4.13 | | 1.08 | 1.74 | | 1.24 | 1.19 | |
| I factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.50 | | 1.67 | 1.57 | | 1.67 | 1.67 | |
| PF factor | 1.00 | 1.00 | | 0.90 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Q1 | 30.5 | 29.4 | | 2.5 | 43.8 | | 15.8 | 43.6 | | 18.0 | 29.2 | |
| kB | 0.4 | 0.4 | | 0.4 | 0.4 | | 0.5 | 0.7 | | 0.5 | 0.7 | |
| Q2 | 57.9 | 56.5 | | 0.2 | 100.0 | | 7.0 | 57.3 | | 12.5 | 17.6 | |
| Q avg. | 88.4 | 85.9 | | 2.7 | 143.8 | | 22.8 | 100.9 | | 30.6 | 46.8 | |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| fe% | 1.5 | 1.5 | | 2.0 | 1.5 | | 1.7 | 1.5 | | 1.6 | 1.5 | |
| BOQ, Q% | 133 | 129 | | 5.5 | 216 | | 38.0 | 152 | | 49.2 | 72.3 | |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro% | | | | | | | | | | | | |

2010
M
W
P

| SHORT REPORT | | | | | | | | | | | | | |
|---|----------------|-----------------|-----------|------------------|----------------|------------------|----------------------------|-----------|---------------|----------------|---------------|--------------|-----------------|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAI | | | | | Intersection | AIRWAY RD./BRITANNIA BLVD. | | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 11/15/11 | | | | | Jurisdiction | AIRBRIT30P3BWLM/WITH MIT | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 3 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 3 | 2 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (vph) | 1350 | 1090 | 735 | 145 | 1000 | 900 | 700 | 1980 | 730 | 800 | 1095 | 720 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 |
| Timing | G = 25.0 | G = 23.0 | G = | G = | | | G = 32.0 | | | G = 52.0 | G = | | |
| | Y = 4 | Y = 5 | Y = | Y = | | | Y = 4 | | | Y = 5 | Y = | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj. flow rate | Lane group cap. | w/c ratio | Green ratio | Unif. delay d1 | Delay factor k | Increment. delay d2 | PF factor | Control delay | Lane group LOS | Apprch. delay | Approach LOS | Intersec. delay |
| Adj. flow rate | 1421 | 1147 | 774 | 153 | 1053 | 947 | 737 | 2084 | 768 | 842 | 1153 | 758 | |
| Lane group cap. | 531 | 759 | 568 | 531 | 531 | 1004 | 680 | 1717 | 785 | 680 | 1717 | 1368 | |
| w/c ratio | 2.68 | 1.51 | 1.36 | 0.29 | 1.98 | 0.94 | 1.08 | 1.21 | 0.98 | 1.24 | 0.67 | 0.55 | |
| Green ratio | 0.17 | 0.15 | 0.40 | 0.17 | 0.15 | 0.40 | 0.21 | 0.35 | 0.55 | 0.21 | 0.35 | 0.55 | |
| Unif. delay d1 | 62.5 | 63.5 | 45.0 | 54.7 | 63.5 | 43.4 | 59.0 | 49.0 | 33.1 | 59.0 | 41.7 | 22.1 | |
| Delay factor k | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 | 0.46 | 0.50 | 0.50 | 0.48 | 0.50 | 0.24 | 0.15 | |
| Increment. delay d2 | 759.6 | 236.8 | 174.3 | 0.3 | 449.1 | 16.5 | 59.4 | 101.8 | 26.7 | 119.5 | 1.0 | 0.5 | |
| PF factor | 0.867 | 0.879 | 0.556 | 0.867 | 0.879 | 0.556 | 0.819 | 0.646 | 0.196 | 0.819 | 0.646 | 1.000 | |
| Control delay | 813.8 | 292.7 | 199.3 | 47.7 | 504.9 | 40.6 | 107.8 | 133.5 | 33.2 | 167.9 | 28.0 | 22.6 | |
| Lane group LOS | F | F | F | D | F | D | F | F | C | F | C | C | |
| Apprch. delay | 492.6 | | | 268.2 | | | 106.7 | | | 69.3 | | | |
| Approach LOS | F | | | F | | | F | | | E | | | |
| Intersec. delay | 236.4 | | | Intersection LOS | | | | | | F | | | |

20-8
M
W
M

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| General Information | | | | | | | | | | | | |
| Project Description ALT.-3B-PM WITH LA MEDIA-AIRWAY RD./BRITANNIA BLVD./WITH MIT | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 1421 | 1147 | 774 | 153 | 1053 | 947 | 737 | 2084 | 768 | 842 | 1153 | 758 |
| Satflow per lane | 1641 | 1818 | 1419 | 1641 | 1818 | 1419 | 1641 | 1818 | 1436 | 1641 | 1818 | 1414 |
| Capacity/lane | 531 | 759 | 568 | 531 | 531 | 1004 | 680 | 1717 | 785 | 680 | 1717 | 1368 |
| Flow ratio | 0.45 | 0.23 | 0.55 | 0.05 | 0.30 | 0.38 | 0.23 | 0.42 | 0.53 | 0.26 | 0.23 | 0.30 |
| v/c ratio | 2.68 | 1.51 | 1.36 | 0.29 | 1.98 | 0.94 | 1.08 | 1.21 | 0.98 | 1.24 | 0.67 | 0.55 |
| I factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.00 |
| PF factor | 1.00 | 1.00 | 1.00 | 0.90 | 1.00 | 0.93 | 1.00 | 1.00 | 0.84 | 1.00 | 0.81 | 1.00 |
| Q ₁ | 30.5 | 17.5 | 32.3 | 2.5 | 23.0 | 20.0 | 15.8 | 31.9 | 26.2 | 18.0 | 12.2 | 11.6 |
| k _a | 0.4 | 0.4 | 0.7 | 0.4 | 0.4 | 0.7 | 0.5 | 0.7 | 0.8 | 0.5 | 0.7 | 0.8 |
| Q ₂ | 57.9 | 19.1 | 28.1 | 0.2 | 35.2 | 5.0 | 7.0 | 20.2 | 7.8 | 12.5 | 1.4 | 1.0 |
| Q avg. | 88.4 | 36.6 | 60.3 | 2.7 | 58.3 | 25.0 | 22.8 | 52.1 | 34.0 | 30.6 | 13.5 | 12.6 |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| fb% | 1.5 | 1.6 | 1.5 | 2.0 | 1.5 | 1.6 | 1.7 | 1.5 | 1.6 | 1.6 | 1.8 | 1.8 |
| BOQ, Q% | 133 | 57.8 | 91.7 | 5.5 | 88.8 | 41.2 | 38.0 | 79.9 | 54.1 | 49.2 | 24.1 | 22.6 |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg. R _q | | | | | | | | | | | | |
| 95% R _{q%} | | | | | | | | | | | | |

21A
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| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|------------|------------------------|-----------------------------------|-------|------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | SIEMPRE VIVA RD./BRITANNIA BLV | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 05/13/12 | | | | | Jurisdiction | SIEMBRIT3BAWLM/NO MIT | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 2 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 225 | 1310 | 370 | 450 | 1215 | 800 | 150 | 105 | 50 | 1275 | 1100 | 900 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 50 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = 38.0 | G = | G = | G = 36.0 | G = 38.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 237 | 1768 | | 474 | 2121 | | 158 | 164 | | 1342 | 2105 | |
| Lane group cap. | 425 | 1206 | | 425 | 1167 | | 765 | 827 | | 765 | 963 | |
| v/c ratio | 0.56 | 1.47 | | 1.12 | 1.82 | | 0.21 | 0.20 | | 1.75 | 2.19 | |
| Green ratio | 0.13 | 0.25 | | 0.13 | 0.25 | | 0.24 | 0.25 | | 0.24 | 0.25 | |
| Unif. delay d1 | 60.9 | 56.0 | | 65.0 | 56.0 | | 45.6 | 44.0 | | 57.0 | 56.0 | |
| Delay factor k | 0.15 | 0.50 | | 0.50 | 0.50 | | 0.11 | 0.11 | | 0.50 | 0.50 | |
| Increm. delay d2 | 1.6 | 214.3 | | 78.8 | 371.3 | | 0.1 | 0.1 | | 344.8 | 537.1 | |
| PF factor | 0.897 | 0.774 | | 0.897 | 0.774 | | 0.789 | 0.774 | | 0.789 | 0.774 | |
| Control delay | 56.3 | 257.6 | | 137.2 | 414.6 | | 36.1 | 34.2 | | 389.8 | 580.4 | |
| Lane group LOS | E | F | | F | F | | D | C | | F | F | |
| Approch. delay | 233.8 | | | 363.9 | | | 35.1 | | | 506.2 | | |
| Approach LOS | F | | | F | | | D | | | F | | |
| Intersec. delay | 378.7 | | | Intersection LOS | | | | | | F | | |

21A
3-3-21

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|----------|------------------------|------------------------|-------|------------|-----------|-------|-------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA/ | | | | | Intersection | SIEMPRE VIVA | | | | | | |
| Agency or Co | USA/ | | | | | Area Type | RD /BRITANNIA BLV | | | | | | |
| Date Performed | 04/19/11 | | | | | Jurisdiction | SIEMHRIT3HAWLM/WITH | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-30 WITH | | | | | | |
| | | | | | | | LA | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 2 | 3 | 1 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (vph) | 225 | 1310 | 370 | 450 | 1215 | 600 | 150 | 105 | 50 | 1275 | 1100 | 905 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 50 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.5 | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 |
| Timing | G = 20.0 | G = 38.0 | G = | G = | G = 36.0 | G = 38.0 | G = | G = | | | | | |
| | Y = 4 | Y = 6 | Y = | Y = | Y = 4 | Y = 6 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 237 | 1379 | 389 | 474 | 1279 | 342 | 158 | 111 | 53 | 1342 | 1158 | 947 | |
| Lane group cap. | 425 | 1255 | 754 | 425 | 1255 | 1311 | 765 | 877 | 501 | 785 | 642 | 1053 | |
| Vol ratio | 0.56 | 1.10 | 0.52 | 1.12 | 1.02 | 0.04 | 0.21 | 0.13 | 0.09 | 1.75 | 1.60 | 0.89 | |
| Green ratio | 0.13 | 0.25 | 0.53 | 0.13 | 0.26 | 0.55 | 0.24 | 0.25 | 0.42 | 0.24 | 0.25 | 0.42 | |
| Unit delay d1 | 50.9 | 56.0 | 23.1 | 65.0 | 56.0 | 25.4 | 45.5 | 43.2 | 26.2 | 57.0 | 56.0 | 40.3 | |
| Delay factor k | 0.15 | 0.50 | 0.12 | 0.10 | 0.50 | 0.22 | 0.11 | 0.11 | 0.11 | 0.50 | 0.50 | 0.41 | |
| Incr. delay d2 | 1.6 | 55.0 | 0.5 | 78.8 | 30.3 | 1.1 | 0.1 | 0.1 | 0.1 | 344.5 | 355.6 | 9.6 | |
| PF factor | 0.597 | 0.774 | 0.258 | 0.807 | 0.774 | 0.258 | 0.799 | 0.774 | 0.517 | 0.799 | 0.774 | 1.000 | |
| Control delay | 56.3 | 100.3 | 6.6 | 137.2 | 73.6 | 7.5 | 36.1 | 33.5 | 13.6 | 329.3 | 409.9 | 49.9 | |
| Lane group LOS | E | F | A | F | E | A | D | C | B | F | F | D | |
| Approach delay | 76.9 | | | 63.8 | | | 31.5 | | | 363.2 | | | |
| Approach LOS | E | | | E | | | C | | | F | | | |
| Intersec. delay | 164.3 | | | Intersection LOS | | | | | | | | | F |

21P
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| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|------------|------------------------|-----------------------------------|-------|------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | SIEMPRE VIVA RD./BRITANNIA BLV | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 05/13/12 | | | | | Jurisdiction | SIEMBRIT3BPWLM/NO MIT | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 2 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 800 | 1680 | 100 | 160 | 800 | 1600 | 440 | 300 | 480 | 895 | 775 | 690 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 50 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 24.0 | G = 38.0 | G = | G = | G = 30.0 | G = 40.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 842 | 1873 | | 168 | 2526 | | 463 | 821 | | 942 | 1542 | |
| Lane group cap. | 510 | 1242 | | 510 | 1108 | | 637 | 824 | | 637 | 1016 | |
| v/c ratio | 1.65 | 1.51 | | 0.33 | 2.28 | | 0.73 | 1.00 | | 1.48 | 1.52 | |
| Green ratio | 0.16 | 0.25 | | 0.16 | 0.25 | | 0.20 | 0.27 | | 0.20 | 0.27 | |
| Unif. delay d1 | 63.0 | 56.0 | | 55.9 | 56.0 | | 56.2 | 54.9 | | 60.0 | 55.0 | |
| Delay factor k | 0.50 | 0.50 | | 0.11 | 0.50 | | 0.29 | 0.50 | | 0.50 | 0.50 | |
| Increm. delay d2 | 301.6 | 232.8 | | 0.4 | 578.8 | | 4.2 | 30.4 | | 223.9 | 238.1 | |
| PF factor | 0.873 | 0.774 | | 0.873 | 0.781 | | 0.833 | 0.758 | | 0.833 | 0.758 | |
| Control delay | 356.6 | 276.2 | | 49.2 | 622.5 | | 51.0 | 72.0 | | 273.9 | 279.7 | |
| Lane group LOS | F | F | | D | F | | D | E | | F | F | |
| Apprch. delay | 301.1 | | | 586.8 | | | 64.4 | | | 277.5 | | |
| Approach LOS | F | | | F | | | E | | | F | | |
| Intersec. delay | 345.5 | | | Intersection LOS | | | | | | F | | |

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| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-------|------------------|---------------------------------|-------|------------|-----------|-------|-------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA! | | | | | Intersection | SIEMPRE VIVA RD./BRITANNIA BLVD | | | | | | |
| Agency or Co. | USA! | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 04/19/11 | | | | | Jurisdiction | SIEMBRIT381VA.MMTH | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT 3B WITH | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 3 | 1 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (vph) | 800 | 1680 | 100 | 160 | 850 | 1600 | 440 | 300 | 480 | 655 | 775 | 690 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 50 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Adjusted (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | S | S | S | S | S | S | S | S | S | S | S | S | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTCR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 |
| Timing | G = 24.0 | G = 38.0 | G = | G = | | | G = 30.0 | | | G = 40.0 | G = | | |
| | Y = 4 | Y = 5 | Y = | Y = | | | Y = 4 | | | Y = 5 | Y = | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| Adj. flow rate | 842 | 1768 | 105 | 160 | 842 | 1684 | 483 | 316 | 505 | 642 | 818 | 726 | |
| Lane group cap. | 610 | 1255 | 696 | 510 | 1255 | 1211 | 637 | 623 | 658 | 637 | 677 | 1155 | |
| v/c ratio | 1.65 | 1.41 | 0.15 | 0.33 | 0.67 | 1.36 | 0.73 | 0.34 | 0.77 | 1.48 | 1.21 | 0.62 | |
| Green ratio | 0.16 | 0.25 | 0.49 | 0.15 | 0.25 | 0.49 | 0.20 | 0.27 | 0.45 | 0.20 | 0.27 | 0.46 | |
| Unif. delay d1 | 63.0 | 56.0 | 21.2 | 55.9 | 50.4 | 38.5 | 56.2 | 44.4 | 33.8 | 60.0 | 55.0 | 30.7 | |
| Delay factor k | 0.50 | 0.50 | 0.11 | 0.11 | 0.24 | 0.50 | 0.29 | 0.11 | 0.32 | 0.50 | 0.50 | 0.21 | |
| Incrmnt. delay d2 | 391.5 | 188.8 | 0.1 | 0.4 | 1.4 | 180.9 | 4.2 | 0.2 | 5.5 | 223.9 | 106.0 | 1.0 | |
| PF factor | 0.873 | 0.774 | 0.368 | 0.873 | 0.774 | 0.616 | 0.833 | 0.758 | 0.432 | 0.833 | 0.750 | 1.000 | |
| Control delay | 356.6 | 232.1 | 7.9 | 49.2 | 40.4 | 204.6 | 51.0 | 33.8 | 20.1 | 273.9 | 147.7 | 31.7 | |
| Lane group LOS | F | F | A | D | D | F | D | C | C | F | F | C | |
| Approch. delay | 202.0 | | | 143.5 | | | 34.6 | | | 161.9 | | | |
| Approach LOS | F | | | F | | | C | | | F | | | |
| Intersec. delay | 168.3 | | | Intersection LOS | | | | | | | | | F |

22-A
N

| SHORT REPORT | | | | | | | | | | | | | |
|---|------------------------|-----------|------|------------------|------------|------------------------|-----------------------------|-------|------|-------|-------|------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAi | | | | | Intersection | OTAY MESA RD/LA MEDIA RD | | | | | | |
| Agency or Co | USAi | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 04/10/11 | | | | | Jurisdiction | OMLM30A3BWLM/NO MIT | | | | | | |
| Time Period | YEAR 2030 AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 - ALT-3S WITH LIA | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 | |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | | |
| Volume (vph) | 675 | 1500 | 635 | 850 | 860 | 500 | 975 | 1150 | 850 | 870 | 800 | 810 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 30.0 | G = 35.0 | G = | G = | G = 35.0 | G = 35.0 | G = | G = | | | | | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TR | RT | LT | TR | RT | LT | TR | RT | LT | TR | RT | |
| Adj. flow rate | 711 | 2268 | | 635 | 1556 | | 1026 | 2106 | | 916 | 1695 | | |
| Lane group cap. | 637 | 945 | | 637 | 318 | | 744 | 1569 | | 744 | 1053 | | |
| Vol ratio | 1.12 | 2.46 | | 1.41 | 1.70 | | 1.38 | 1.97 | | 1.23 | 1.61 | | |
| Green ratio | 0.29 | 0.20 | | 0.20 | 0.20 | | 0.23 | 0.23 | | 0.23 | 0.23 | | |
| Unif. delay d1 | 60.0 | 60.0 | | 60.0 | 60.0 | | 57.5 | 57.5 | | 57.5 | 57.5 | | |
| Delay factor k | 0.50 | 0.50 | | 0.50 | 0.50 | | 0.50 | 0.50 | | 0.50 | 0.50 | | |
| Incremental delay d2 | 72.0 | 633.2 | | 191.5 | 318.4 | | 179.0 | 439.9 | | 115.6 | 276.8 | | |
| PF factor | 0.833 | 0.833 | | 0.833 | 0.833 | | 0.797 | 0.797 | | 0.797 | 0.797 | | |
| Control delay | 122.0 | 683.2 | | 241.6 | 366.4 | | 224.5 | 485.8 | | 161.5 | 324.6 | | |
| Lane group LOS | F | F | | F | F | | F | F | | F | F | | |
| Approach delay | 549.3 | | | 322.1 | | | 400.3 | | | 257.4 | | | |
| Approach LOS | F | | | F | | | F | | | F | | | |
| Intersection delay | 391.8 | | | Intersection LOS | | | | | | | | | F |

22-A
N
M

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|--|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| General Information | | | | | | | | | | | | |
| Project Description: AM PEAK HOUR / WITH LA MEDIA / OM-LIMNO MIT | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Init. queue/lane | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 711 | 2268 | | 805 | 1558 | | 1026 | 2108 | | 916 | 1695 | |
| Satflow per lane | 1641 | 1735 | | 1541 | 1685 | | 1541 | 1681 | | 1541 | 1656 | |
| Capacity/lane | 637 | 945 | | 637 | 918 | | 744 | 1069 | | 744 | 1053 | |
| Flow ratio | 0.22 | 0.48 | | 0.28 | 0.34 | | 0.32 | 0.46 | | 0.29 | 0.38 | |
| w/c ratio | 1.12 | 2.40 | | 1.41 | 1.70 | | 1.38 | 1.97 | | 1.23 | 1.61 | |
| I factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| P ation ratio | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.67 | |
| PF factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Q ₁ | 15.3 | 34.7 | | 19.2 | 23.8 | | 22.0 | 32.2 | | 19.6 | 25.9 | |
| k ₁ | 0.5 | 0.5 | | 0.5 | 0.5 | | 0.5 | 0.5 | | 0.5 | 0.5 | |
| Q ₂ | 7.9 | 61.9 | | 18.0 | 30.4 | | 19.9 | 48.7 | | 13.3 | 30.8 | |
| Q avg. | 22.0 | 96.3 | | 37.2 | 54.2 | | 41.9 | 80.9 | | 33.0 | 56.8 | |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| f ₉₅ | 1.7 | 1.5 | | 1.6 | 1.5 | | 1.6 | 1.5 | | 1.6 | 1.5 | |
| BOQ, Q ₉₅ | 38.2 | 145 | | 58.6 | 82.9 | | 65.3 | 122 | | 52.6 | 96.6 | |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | 24.9 | 24.9 | | 24.9 | 24.9 | | 24.9 | 24.9 | | 24.9 | 24.9 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg R _q | | | | | | | | | | | | |
| 95% R ₉₅ | | | | | | | | | | | | |

22-A
W
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|-----------|-----------|-------|------------------|-----------|--|------------------------|-------|-------|-------|-------|-------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst: USAI | | | | | | Intersection: OTAY MESA RD/LA MEDIA RD. | | | | | | | |
| Agency or Co.: USAI | | | | | | Area Type: All other areas | | | | | | | |
| Date Performed: 04/10/11 | | | | | | Jurisdiction: CMLM3543BWL/M/WITH MIT | | | | | | | |
| Time Period: YEAR 2030 AM PEAK HOUR | | | | | | Analysis Year: YEAR 2030 - ALT-3B WITH LIA | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (vph) | 875 | 1500 | 555 | 850 | 880 | 600 | 975 | 1150 | 850 | 870 | 800 | 810 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext of green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | S | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Exc. Left | Thru & RT | 03 | 04 | Exc. Left | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 30.0 | G = 30.0 | G = | G = | G = 35.0 | G = 35.0 | G = | G = | | | | | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 3.25 | | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj flow rate | 711 | 1579 | 689 | 895 | 926 | 532 | 1026 | 1211 | 895 | 916 | 842 | 853 | |
| Lane group cap. | 637 | 991 | 1213 | 637 | 991 | 1177 | 744 | 1156 | 1190 | 744 | 1156 | 1160 | |
| w/c ratio | 1.12 | 1.59 | 0.57 | 1.41 | 0.93 | 0.54 | 1.38 | 1.05 | 0.75 | 1.23 | 0.73 | 0.72 | |
| Green ratio | 0.20 | 0.20 | 0.47 | 0.20 | 0.20 | 0.47 | 0.23 | 0.23 | 0.47 | 0.23 | 0.23 | 0.47 | |
| Unit delay d1 | 60.0 | 60.0 | 29.0 | 60.0 | 59.0 | 28.5 | 57.5 | 57.5 | 33.0 | 57.5 | 53.1 | 32.2 | |
| Delay factor k | 0.50 | 0.50 | 0.16 | 0.50 | 0.45 | 0.14 | 0.50 | 0.50 | 0.31 | 0.50 | 0.29 | 0.28 | |
| Increment delay d2 | 72.0 | 271.9 | 0.5 | 191.6 | 15.3 | 0.5 | 179.0 | 39.8 | 2.9 | 115.6 | 2.4 | 2.2 | |
| PF factor | 0.833 | 0.833 | 0.417 | 0.833 | 0.833 | 0.417 | 0.797 | 0.797 | 0.417 | 0.797 | 0.797 | 0.417 | |
| Control delay | 122.5 | 321.9 | 12.7 | 241.6 | 64.5 | 12.4 | 224.8 | 95.7 | 16.7 | 161.5 | 44.7 | 15.6 | |
| Lane group LOS | F | F | D | F | E | D | F | F | B | F | D | D | |
| Approach delay | 202.6 | | | 113.7 | | | 111.5 | | | 76.2 | | | |
| Approach LOS | F | | | F | | | F | | | E | | | |
| Intersec. delay | 128.5 | | | Intersection LOS | | | | | | | | | F |

22-A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: AM PEAK HOUR / WITH LA MEDIA / OM-LMM/TH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | L1 | T1 | R1 | L1 | T1 | R1 | L1 | T1 | R1 | L1 | T1 | R1 |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Int. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 711 | 1579 | 689 | 895 | 526 | 632 | 1026 | 1211 | 895 | 916 | 842 | 853 |
| Satflow per lane | 1641 | 1818 | 1468 | 1541 | 1516 | 1425 | 1641 | 1818 | 1429 | 1641 | 1818 | 1429 |
| Capacity/lane | 637 | 991 | 1213 | 637 | 991 | 1177 | 744 | 1156 | 1160 | 744 | 1156 | 1190 |
| Flow ratio | 0.22 | 0.32 | 0.26 | 0.26 | 0.19 | 0.25 | 0.32 | 0.24 | 0.35 | 0.29 | 0.17 | 0.34 |
| w/c ratio | 1.12 | 1.59 | 0.57 | 1.41 | 0.93 | 0.54 | 1.38 | 1.05 | 0.76 | 1.23 | 0.73 | 0.72 |
| I factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.050 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.57 | 1.67 | 1.67 | 1.57 | 1.67 | 1.67 |
| PF factor | 1.00 | 1.00 | 0.56 | 1.00 | 0.98 | 0.54 | 1.00 | 1.00 | 0.66 | 1.00 | 0.92 | 0.63 |
| Q1 | 15.2 | 24.1 | 8.5 | 19.2 | 13.7 | 5.7 | 22.0 | 18.5 | 11.4 | 19.6 | 11.0 | 10.2 |
| ks | 0.5 | 0.5 | 0.7 | 0.5 | 0.5 | 0.7 | 0.5 | 0.5 | 0.7 | 0.5 | 0.5 | 0.7 |
| Q2 | 7.6 | 28.3 | 1.0 | 16.0 | 3.4 | 0.8 | 19.9 | 7.0 | 2.1 | 13.3 | 1.4 | 1.8 |
| Q avg. | 22.9 | 52.4 | 7.4 | 37.2 | 17.1 | 6.5 | 41.9 | 25.5 | 13.5 | 33.0 | 12.4 | 11.9 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|
| ks | 1.7 | 1.5 | 1.9 | 1.6 | 1.7 | 1.9 | 1.6 | 1.5 | 1.8 | 1.6 | 1.8 | 1.8 |
| BOQ, Q% | 38.2 | 80.4 | 14.1 | 58.6 | 29.6 | 12.5 | 65.3 | 41.9 | 24.0 | 52.6 | 22.3 | 21.6 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

228

NM

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|------------------------|---------------|----------------------------|------------------|--|--|--|
| Analyst | USA/ | Intersection | OTAY MESA HOULA MEDIA RD | | | | |
| Agency or Co | USA/ | Area Type | All other areas | | | | |
| Date Performed | 03/06/11 | Jurisdiction | CALM30P3B ALMNO MIT | | | | |
| Time Period | YEAR 2030 PM PFAK HCLR | Analysis Year | YEAR 2030 - ALT-3B WITH LM | | | | |

| | EB | | | WB | | | NB | | | SB | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vch) | 665 | 1000 | 960 | 950 | 1300 | 900 | 670 | 1170 | 850 | 850 | 780 | 795 |
| % Heavy Vch | 15 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext eff green | 2.0 | 2.0 | | 2.5 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |

| Phasing | Excl Left | Thru & RT | 03 | | 04 | | Excl Left | Thru & RT | 07 | | 08 | |
|---------|-----------|-----------|-----|-----|----------|----------|-----------|-----------|-----|-----|-----|-----|
| Timing | G = 30.0 | G = 30.0 | G = | C = | G = 35.0 | G = 35.0 | G = | G = | G = | G = | G = | G = |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = 5 | Y = | Y = | Y = | Y = | Y = | Y = |

Duration of Analysis (hrs) = 0.25 Cycle Length C = 150.0

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|----|------------------|-------|----|-------|-------|----|-------|-------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 700 | 2064 | | 1037 | 2315 | | 705 | 2177 | | 895 | 1658 | |
| Lane group cap. | 657 | 918 | | 637 | 916 | | 744 | 1070 | | 744 | 1053 | |
| v/c ratio | 1.10 | 2.25 | | 1.62 | 2.57 | | 0.95 | 1.99 | | 1.20 | 1.57 | |
| Green ratio | 0.25 | 0.20 | | 0.20 | 0.20 | | 0.23 | 0.23 | | 0.23 | 0.23 | |
| Unit. delay d1 | 60.0 | 65.0 | | 60.0 | 60.0 | | 56.6 | 57.5 | | 57.5 | 57.5 | |
| Delay factor k | 0.50 | 0.50 | | 0.50 | 0.50 | | 0.46 | 0.50 | | 0.50 | 0.50 | |
| Incrmnt. delay d2 | 65.8 | 665.3 | | 686.2 | 698.0 | | 21.2 | 147.9 | | 163.9 | 263.1 | |
| PT factor | 0.933 | 0.833 | | 0.833 | 0.833 | | 0.797 | 0.797 | | 0.797 | 0.797 | |
| Control delay | 115.8 | 615.3 | | 336.2 | 736.0 | | 66.3 | 493.7 | | 149.8 | 309.0 | |
| Lane group LOS | F | F | | F | F | | E | F | | F | F | |
| Approch. delay | 489.5 | | | 814.1 | | | 397.3 | | | 253.2 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersect. delay | 416.0 | | | Intersection LOS | | | | | | F | | |

22P
N
7

BACK-OF-QUEUE WORKSHEET

General Information

Project Descriptor 2030 3B WITH LA MEDIA PM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Infl queue/lane | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 700 | 2084 | | 1037 | 2315 | | 705 | 2127 | | 895 | 1658 | |
| Satflow per lane | 1641 | 1684 | | 1641 | 1684 | | 1641 | 1682 | | 1641 | 1656 | |
| Capacity/lane | 637 | 918 | | 637 | 918 | | 744 | 1070 | | 744 | 1053 | |
| Flow ratio | 0.22 | 0.45 | | 0.32 | 0.50 | | 0.22 | 0.45 | | 0.28 | 0.37 | |
| v/c ratio | 1.10 | 2.25 | | 1.62 | 2.52 | | 0.95 | 1.98 | | 1.20 | 1.57 | |
| I factor | 1.500 | 1.000 | | 1.005 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.67 | |
| PF factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.50 | |
| Q1 | 15.0 | 31.5 | | 22.1 | 35.4 | | 14.6 | 32.5 | | 19.2 | 25.3 | |
| kb | 0.5 | 0.5 | | 0.5 | 0.5 | | 0.5 | 0.5 | | 0.5 | 0.5 | |
| Q2 | 7.1 | 53.4 | | 26.6 | 64.8 | | 3.8 | 49.6 | | 12.1 | 29.1 | |
| Q avg. | 22.1 | 84.9 | | 48.7 | 100.2 | | 18.4 | 82.1 | | 31.3 | 54.5 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|------|-----|--|------|-----|--|------|-----|--|------|------|--|
| fxs | 1.7 | 1.5 | | 1.5 | 1.5 | | 1.7 | 1.5 | | 1.6 | 1.5 | |
| BOQ Qx | 37.0 | 128 | | 75.0 | 150 | | 31.5 | 124 | | 60.2 | 83.3 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q spacing | 24.9 | 24.9 | | 24.9 | 24.9 | | 24.9 | 24.9 | | 24.9 | 24.9 | |
| Q storage | 5 | 0 | | 9 | 0 | | 0 | 0 | | 0 | 5 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

22-P
W
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|------------------------|-----------|-------|------------------|-----------|------------------------|------------------------------|-------|-------|-------|-------|-------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA/ | | | | | Intersection | DTAY MCSA RD/LA MEDIA RD | | | | | | |
| Agency or Co. | USA/ | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | CMLM3043BWLM/WITH MIT | | | | | | |
| Time Period | YEAR 2030 PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 - A.I.T-3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (vph) | 665 | 1005 | 950 | 980 | 1300 | 800 | 670 | 1170 | 650 | 850 | 780 | 785 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Exc. Left | Thru & RT | 03 | 04 | Exc. Left | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 30.0 | C = 30.0 | G = | G = | G = 35.0 | G = 35.0 | G = | G = | | | | | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 700 | 1053 | 1011 | 1032 | 1366 | 947 | 705 | 1232 | 895 | 895 | 821 | 837 | |
| Lane group cap | 637 | 991 | 1213 | 637 | 991 | 1177 | 744 | 1156 | 1160 | 744 | 1156 | 1160 | |
| wc ratio | 1.10 | 1.06 | 0.83 | 1.62 | 1.38 | 0.80 | 0.95 | 1.07 | 0.76 | 1.20 | 0.71 | 0.71 | |
| Green ratio | 0.20 | 0.20 | 0.47 | 0.20 | 0.20 | 0.47 | 0.23 | 0.23 | 0.47 | 0.23 | 0.23 | 0.47 | |
| Unit. delay d1 | 60.0 | 60.0 | 34.8 | 60.0 | 60.0 | 34.2 | 55.5 | 57.5 | 33.0 | 57.5 | 52.8 | 31.9 | |
| Delay factor k | 0.50 | 0.50 | 0.37 | 0.50 | 0.50 | 0.35 | 0.46 | 0.50 | 0.31 | 0.50 | 0.27 | 0.27 | |
| Incr. delay d2 | 65.8 | 46.7 | 5.1 | 265.2 | 177.5 | 4.2 | 21.2 | 45.9 | 2.9 | 163.9 | 2.1 | 2.0 | |
| PF factor | 0.833 | 0.833 | 0.417 | 0.833 | 0.833 | 0.417 | 0.797 | 0.797 | 0.417 | 0.797 | 0.797 | 0.417 | |
| Control delay | 115.8 | 95.7 | 19.7 | 336.2 | 227.5 | 18.4 | 66.3 | 91.7 | 16.7 | 149.8 | 41.2 | 15.3 | |
| Lane group LOS | F | F | B | F | F | B | E | F | B | F | D | B | |
| Approch. delay | 73.4 | | | 201.9 | | | 61.7 | | | 71.7 | | | |
| Approach LOS | E | | | F | | | E | | | E | | | |
| Intersec. delay | 107.5 | | | Intersection LOS | | | | | | | | | F |

22-P
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: 2030 3B WITH LA MEDIA PM PEAK HOUR WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 700 | 1053 | 1511 | 1032 | 1369 | 947 | 705 | 1232 | 895 | 895 | 821 | 637 |
| Satflow per lane | 1641 | 1918 | 1468 | 1641 | 1815 | 1425 | 1641 | 1818 | 1428 | 1641 | 1918 | 1429 |
| Capacity/lane | 637 | 991 | 1213 | 637 | 891 | 1171 | 744 | 1156 | 1180 | 744 | 1156 | 1160 |
| Flow ratio | 0.72 | 0.71 | 0.39 | 0.32 | 0.78 | 0.38 | 0.22 | 0.75 | 0.35 | 0.28 | 0.17 | 0.33 |
| W/C ratio | 1.10 | 1.06 | 0.93 | 1.62 | 1.38 | 0.90 | 0.85 | 1.07 | 0.76 | 1.20 | 0.71 | 0.71 |
| I factor | 1.500 | 1.000 | 1.000 | 1.000 | 1.000 | 1.050 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.97 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| PF factor | 1.00 | 1.00 | 0.77 | 1.00 | 1.50 | 0.70 | 0.98 | 1.00 | 0.66 | 1.00 | 0.92 | 0.62 |
| Q1 | 15.0 | 15.1 | 15.0 | 22.1 | 20.9 | 13.2 | 14.6 | 18.9 | 11.4 | 19.2 | 10.6 | 9.7 |
| k2 | 0.5 | 0.5 | 0.7 | 0.5 | 0.5 | 0.7 | 0.5 | 0.6 | 0.7 | 0.5 | 0.6 | 0.7 |
| Q2 | 7.1 | 6.6 | 3.1 | 26.6 | 19.1 | 2.6 | 3.8 | 7.6 | 2.1 | 17.1 | 1.3 | 1.7 |
| Q avg | 22.1 | 22.7 | 18.1 | 48.7 | 40.0 | 15.9 | 18.4 | 26.5 | 13.5 | 31.3 | 11.9 | 11.4 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|------|------|------|------|------|------|------|------|------|------|
| lbs. | 1.7 | 1.7 | 1.7 | 1.5 | 1.5 | 1.7 | 1.7 | 1.6 | 1.8 | 1.5 | 1.8 | 1.8 |
| BOQ, Q2 | 37.0 | 37.9 | 31.1 | 75.0 | 62.6 | 27.7 | 31.6 | 43.4 | 24.0 | 50.7 | 21.5 | 20.7 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 | 24.9 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg Ro | | | | | | | | | | | | |
| 35% Ro | | | | | | | | | | | | |

23A
N/A

| SHORT REPORT | | | | | | | | | | | | | | |
|---|--------------|----------|-------|-------|------------------|---|-------|-------|-------|----|-------|-------|--|--|
| General Information | | | | | | Site Information | | | | | | | | |
| Analyst | USAI | | | | | Intersect on SR905 WB RAMPSLA MEDIA RD. | | | | | | | | |
| Agency or Co | USAI | | | | | Area Type All other areas | | | | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction 935WBLAMEDJ00A3BWLMNO | | | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year YEAR 2030 ALT -35 WITH LM | | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| Num of Lanes | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 3 | 1 | | |
| Lane group | | LT | R | L | LT | R | L | T | R | | T | R | | |
| Volume (vph) | 35 | 100 | 130 | 1325 | 50 | 830 | 110 | 2060 | 1300 | | 2205 | 100 | | |
| % heavy veh | 5 | 5 | 5 | 10 | 5 | 10 | 5 | 10 | 10 | | 10 | 5 | | |
| PIF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | | A | A | | |
| Startup lost time | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Ext eff green | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 3 | | |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | | 0 | 10 | | 0 | 10 | 5 | 0 | 10 | 5 | 0 | | |
| Lane Width | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | | |
| Parking/h | | | | | | | | | | | | | | |
| Bus stops/h | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | EB Only | WB Only | 03 | 04 | NB Only | Thru & RT | J/T | OR | | | | | | |
| Timing | G = 10.0 | G = 47.0 | G = | G = | G = 15.0 | G = 55.0 | G = | G = | | | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | | |
| Duration of Analysis (Hrs) = 0.25 | | | | | | Cycle Length C = 145.0 | | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| Adj. flow rate | | 194 | 137 | 698 | 750 | 874 | 116 | 2168 | 1368 | | 2321 | 105 | | |
| Lane group cap | | 133 | 220 | 551 | 585 | 493 | 238 | 1706 | 590 | | 1946 | 753 | | |
| w/c ratio | | 1.46 | 0.62 | 1.27 | 1.28 | 1.77 | 0.49 | 1.27 | 2.32 | | 1.19 | 0.14 | | |
| Green ratio | | 0.07 | 0.14 | 0.34 | 0.34 | 0.34 | 0.07 | 0.45 | 0.44 | | 0.39 | 0.50 | | |
| Unif. delay d1 | | 65.0 | 55.5 | 45.5 | 45.5 | 45.5 | 62.0 | 35.5 | 39.0 | | 42.5 | 18.8 | | |
| Delay factor k | | 0.50 | 0.21 | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 | 0.50 | | 0.50 | 0.11 | | |
| Increm delay d2 | | 243.0 | 5.4 | 134.0 | 139.6 | 356.0 | 1.6 | 126.6 | 598.7 | | 92.1 | 5.1 | | |
| PF factor | | 0.649 | 0.589 | 0.563 | 0.653 | 0.699 | 0.949 | 0.457 | 1.000 | | 0.563 | 1.000 | | |
| Control delay | | 304.6 | 55.6 | 164.8 | 170.5 | 385.5 | 60.9 | 144.3 | 637.7 | | 116.3 | 18.9 | | |
| Lane group LOS | | F | F | F | F | F | E | F | F | | F | F | | |
| Approach delay | | 251.6 | | | 250.8 | | | 375.5 | | | 117.1 | | | |
| Approach LOS | | F | | | F | | | F | | | F | | | |
| Intersec delay | | 242.0 | | | Intersection LOS | | | | | | | F | | |

23 A
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT -36 WITH LA MEDIA AM PEAK HOUR NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | LT | R | L | LT | R | L | T | R | | T | R |
| Init queue/lane | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Flow rate/lane | | 194 | 137 | 858 | 750 | 874 | 115 | 2168 | 1368 | | 2321 | 105 |
| Satflow per lane | | 1862 | 1538 | 1941 | 1743 | 1468 | 1719 | 1818 | 1333 | | 1818 | 1505 |
| Capacity/lane | | 133 | 220 | 551 | 585 | 433 | 238 | 1706 | 590 | | 1346 | 753 |
| Flow ratio | | 0.10 | 0.09 | 0.43 | 0.43 | 0.50 | 0.03 | 0.53 | 1.03 | | 0.47 | 0.07 |
| w/c ratio | | 1.46 | 0.62 | 1.27 | 1.28 | 1.77 | 0.49 | 1.27 | 2.32 | | 1.19 | 0.14 |
| factor | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 |
| Arrival type | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 3 |
| Platoon ratio | | 1.67 | 1.67 | 1.67 | 1.67 | 1.50 | 1.67 | 1.52 | 1.00 | | 1.67 | 1.00 |
| PF factor | | 1.00 | 0.95 | 1.00 | 1.00 | 1.50 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 |
| Q1 | | 7.5 | 4.8 | 27.1 | 29.2 | 34.0 | 2.1 | 44.3 | 53.2 | | 33.1 | 2.2 |
| Q3 | | 0.3 | 0.4 | 0.6 | 0.7 | 0.6 | 0.3 | 0.9 | 0.7 | | 0.7 | 0.6 |
| Q2 | | 8.4 | 5.6 | 21.0 | 23.3 | 46.9 | 5.2 | 33.6 | 98.4 | | 21.0 | 0.1 |
| Q avg | | 15.9 | 5.3 | 48.1 | 52.4 | 82.9 | 2.4 | 78.0 | 151.6 | | 54.1 | 2.3 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|------|------|------|------|-----|-----|-----|-----|--|------|-----|
| PL | | 1.7 | 1.5 | 1.5 | 1.5 | 1.5 | 2.0 | 1.5 | 1.5 | | 1.5 | 2.0 |
| BOQ, Qx | | 27.9 | 19.4 | 74.2 | 60.3 | 125 | 4.8 | 116 | 227 | | 92.6 | 4.7 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|------|------|------|------|------|------|------|--|------|------|
| Q spacing | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | 25.0 | 25.0 |
| Q storage | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

23A
W
M

| SHORT REPORT | | | | | | | | | | | | | | |
|---|--------------|----|----------|------------------|-------|--|------------------------|-------|----------|------|-----------|-------|-----|-----|
| General Information | | | | | | Site Information | | | | | | | | |
| Analyst | USAI | | | | | Intersection SR905 WB RAMPS/LA MEDIA RD. | | | | | | | | |
| Agency or Co. | USAI | | | | | Area Type All other areas | | | | | | | | |
| Date Performed | 05/13/12 | | | | | Jurisdiction 905WBLAMED30A3BWLWWITHMIT | | | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year YEAR 2030 ALT.-3B WITH LM | | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| Num. of Lanes | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 0 | 3 | 1 | | |
| Lane group | L | | R | L | LT | R | L | T | R | | T | R | | |
| Volume (vph) | 85 | | 230 | 1325 | 50 | 830 | 110 | 1940 | 1300 | | 1945 | 100 | | |
| % Heavy veh | 5 | | 5 | 10 | 5 | 10 | 5 | 10 | 10 | | 10 | 5 | | |
| PHF | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 | | |
| Actuated (P/A) | A | | A | A | A | A | A | A | A | | A | A | | |
| Startup lost time | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | 5 | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 3 | | |
| Unit Extension | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | | 0 | 10 | | 0 | 10 | 5 | 0 | 10 | 5 | 0 | | |
| Lane Width | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | | |
| Parking/hr | | | | | | | | | | | | | | |
| Bus stops/hr | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | |
| Unit Extension | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | EB Only | | WB Only | | 03 | | 04 | | NB Only | | Thru & RT | | 07 | 08 |
| Timing | G = 10.0 | | G = 47.0 | | G = | | G = | | G = 10.0 | | G = 55.0 | | G = | G = |
| | Y = 4 | | Y = 5 | | Y = | | Y = | | Y = 4 | | Y = 5 | | Y = | Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| Adj. flow rate | 89 | | 242 | 698 | 750 | 874 | 116 | 2042 | 1368 | | 2047 | 105 | | |
| Lane group cap. | 123 | | 220 | 551 | 585 | 493 | 238 | 2441 | 1422 | | 1946 | 753 | | |
| v/c ratio | 0.72 | | 1.10 | 1.27 | 1.28 | 1.77 | 0.49 | 0.84 | 0.96 | | 1.05 | 0.14 | | |
| Green ratio | 0.07 | | 0.14 | 0.34 | 0.34 | 0.34 | 0.07 | 0.49 | 1.00 | | 0.39 | 0.50 | | |
| Unif. delay d1 | 63.6 | | 60.0 | 46.5 | 46.5 | 46.5 | 62.5 | 30.6 | 0.0 | | 42.5 | 18.8 | | |
| Delay factor k | 0.28 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.11 | 0.37 | 0.47 | | 0.50 | 0.11 | | |
| Increm. delay d2 | 18.9 | | 90.0 | 134.0 | 139.6 | 356.0 | 1.6 | 2.7 | 15.7 | | 35.6 | 0.1 | | |
| PF factor | 0.949 | | 0.889 | 0.663 | 0.663 | 0.699 | 0.949 | 0.352 | 0.950 | | 0.569 | 1.000 | | |
| Control delay | 79.3 | | 143.3 | 164.8 | 170.5 | 388.5 | 60.9 | 13.5 | 15.7 | | 59.8 | 18.9 | | |
| Lane group LOS | E | | F | F | F | F | E | B | B | | E | B | | |
| Apprch. delay | 126.1 | | | 250.8 | | | 15.9 | | | 57.8 | | | | |
| Approach LOS | F | | | F | | | B | | | E | | | | |
| Intersec. delay | 96.6 | | | Intersection LOS | | | | | | F | | | | |

23A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B WITH LA MEDIA AM PEAK HOUR/WITH MIT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----------|-------|----------|----------|-----------|----------|----------|----------|----------|----|----------|----------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | <i>L</i> | | <i>R</i> | <i>L</i> | <i>LT</i> | <i>R</i> | <i>L</i> | <i>T</i> | <i>R</i> | | <i>T</i> | <i>R</i> |
| Init. queue/lane | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Flow rate/lane | 89 | | 242 | 698 | 750 | 874 | 116 | 2042 | 1368 | | 2047 | 105 |
| Satflow per lane | 1719 | | 1538 | 1641 | 1743 | 1468 | 1719 | 1818 | 1422 | | 1818 | 1505 |
| Capacity/lane | 123 | | 220 | 551 | 585 | 493 | 238 | 2441 | 1422 | | 1946 | 753 |
| Flow ratio | 0.05 | | 0.16 | 0.43 | 0.43 | 0.60 | 0.03 | 0.41 | 0.96 | | 0.41 | 0.07 |
| v/c ratio | 0.72 | | 1.10 | 1.27 | 1.28 | 1.77 | 0.49 | 0.84 | 0.96 | | 1.05 | 0.14 |
| I factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 |
| Arrival type | 5 | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 3 |
| Platoon ratio | 1.67 | | 1.67 | 1.67 | 1.67 | 1.60 | 1.67 | 1.67 | 1.00 | | 1.67 | 1.00 |
| PF factor | 0.98 | | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.66 | | | 1.00 | 1.00 |
| Q1 | 3.3 | | 9.4 | 27.1 | 29.2 | 34.0 | 2.1 | 16.6 | | | 29.2 | 2.2 |
| kB | 0.3 | | 0.4 | 0.6 | 0.7 | 0.6 | 0.3 | 0.8 | 1.1 | | 0.7 | 0.8 |
| Q2 | 0.6 | | 5.0 | 21.0 | 23.3 | 48.9 | 0.2 | 3.6 | 10.8 | | 10.9 | 0.1 |
| Q avg. | 3.9 | | 14.4 | 48.1 | 52.4 | 82.9 | 2.4 | 20.2 | | | 40.1 | 2.3 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|--|------|------|------|-----|-----|------|--|--|------|-----|
| fB% | 2.0 | | 1.8 | 1.5 | 1.5 | 1.5 | 2.0 | 1.7 | | | 1.6 | 2.0 |
| BOQ, Q% | 7.8 | | 25.4 | 74.2 | 80.3 | 125 | 4.8 | 34.2 | | | 62.8 | 4.7 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|--|------|------|------|------|------|------|------|--|------|------|
| Q spacing | 25.0 | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | 25.0 | 25.0 |
| Q storage | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro% | | | | | | | | | | | | |

238
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| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|----------|-------|------------------|----------|------------------------|---------------------------|-------|------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Interseccion | SR905 WB RAMPALA MEDIA RD | | | | | |
| Agency or Co. | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | 905WBLAMED30P39WLMNO | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT. 3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 3 | 1 |
| Lane group | | LT | R | L | LT | R | L | T | R | | T | R |
| Volume (vph) | 270 | 150 | 305 | 525 | 125 | 350 | 225 | 2070 | 1350 | | 2470 | 250 |
| % Heavy veh | 5 | 5 | 5 | 10 | 5 | 10 | 5 | 10 | 10 | | 10 | 5 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | | A | A |
| Startup lost time | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 |
| Ext. eff. green | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 |
| Arrival type | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 3 |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Foot/Bike/RTOR Volume | 10 | | 0 | 10 | | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | S | N | N | 0 | N | N | 0 | N | N | S | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Phasing | CB Only | WB Only | 03 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = 40.0 | G = | G = | G = 12.0 | G = 60.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 389 | 321 | 277 | 459 | 368 | 237 | 2179 | 1358 | | 2600 | 263 | |
| Lane group cap. | 245 | 328 | 438 | 476 | 391 | 267 | 1754 | 1144 | | 1981 | 853 | |
| Wp ratio | 1.59 | 0.98 | 0.63 | 0.86 | 0.94 | 0.89 | 1.24 | 1.20 | | 1.31 | 0.31 | |
| Group ratio | 0.13 | 0.21 | 0.27 | 0.27 | 0.27 | 0.08 | 0.51 | 0.61 | | 0.40 | 0.57 | |
| Unif. delay d1 | 65.0 | 59.7 | 48.5 | 52.3 | 53.9 | 68.3 | 37.0 | 14.5 | | 45.5 | 17.1 | |
| Delay factor k | 0.50 | 0.48 | 0.21 | 0.39 | 0.45 | 0.41 | 0.50 | 0.50 | | 0.50 | 0.11 | |
| Incram. delay d2 | 283.0 | 43.8 | 3.0 | 14.4 | 30.9 | 28.2 | 114.1 | 95.9 | | 144.3 | 0.2 | |
| PF factor | 0.997 | 0.819 | 0.756 | 0.755 | 0.758 | 0.942 | 0.477 | 1.000 | | 0.556 | 1.000 | |
| Control delay | 341.4 | 31.8 | 39.7 | 54.0 | 71.7 | 92.6 | 131.7 | 111.4 | | 169.3 | 17.3 | |
| Lane group LOS | F | F | D | D | E | F | F | F | | F | B | |
| Approch. delay | 228.5 | | | 56.4 | | | 121.9 | | | 155.4 | | |
| Approach LOS | F | | | E | | | F | | | F | | |
| Intersec. delay | 134.1 | | | Intersection LOS | | | | | | F | | |

230
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description: *ALT -3B WITH LA MEDIA PM PEAK HOUR/NO MIT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| | LI | IH | RT | LI | IH | RT | LI | IH | RT | LI | IH | RT |
| Lane group | | L | R | L | L | R | L | L | R | L | L | R |
| int. queue/lane | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | | 389 | 321 | 277 | 408 | 358 | 227 | 2179 | 1388 | 2600 | 265 | |
| Satflow per lane | | 1838 | 1538 | 1641 | 1755 | 1466 | 1719 | 1818 | 1418 | 1818 | 1505 | |
| Capacity/lane | | 245 | 323 | 436 | 475 | 391 | 257 | 1754 | 1144 | 1981 | 853 | |
| Flow ratio | | 0.21 | 0.21 | 0.17 | 0.23 | 0.25 | 0.07 | 0.63 | 0.96 | 0.52 | 0.17 | |
| w/c ratio | | 1.59 | 0.98 | 0.63 | 0.86 | 0.94 | 0.69 | 1.24 | 1.20 | 1.31 | 0.31 | |
| I factor | | 1.000 | 1.005 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 2 | |
| Platoon ratio | | 1.67 | 1.67 | 1.67 | 1.57 | 1.67 | 1.67 | 1.51 | 1.00 | 1.67 | 1.00 | |
| PF factor | | 1.00 | 0.99 | 0.86 | 0.94 | 0.98 | 0.99 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Q1 | | 16.2 | 13.2 | 8.9 | 15.3 | 14.6 | 5.0 | 47.7 | 57.0 | 39.9 | 5.8 | |
| k6 | | 0.4 | 0.5 | 0.6 | 0.6 | 0.5 | 0.3 | 0.9 | 1.0 | 0.8 | 0.9 | |
| Q2 | | 19.5 | 4.0 | 0.9 | 2.7 | 3.7 | 1.3 | 31.9 | 23.2 | 31.3 | 0.4 | |
| Q avg. | | 35.2 | 17.2 | 9.9 | 15.0 | 18.4 | 6.3 | 79.5 | 90.2 | 71.1 | 6.1 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|------|------|------|------|------|------|-----|-----|-----|------|--|
| fsu | | 1.6 | 1.7 | 1.9 | 1.7 | 1.7 | 1.9 | 1.5 | 1.5 | 1.5 | 1.9 | |
| BOQ, Q% | | 55.8 | 29.8 | 18.2 | 30.9 | 31.5 | 12.2 | 120 | 136 | 107 | 11.8 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|------|------|------|------|------|------|------|------|------|--|
| Q spacing | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Avg Roq | | | | | | | | | | | | |
| 95% Roq | | | | | | | | | | | | |

23 P

W

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|----------|-------|------------------|----------|------------------|-----------------------------|-----------|-------|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | SR905 WB RAMPS/LA MEDIA RD. | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | 905WBLAMED30P3BWLMWITHMIT | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 0 | 3 | 1 |
| Lane group | L | | R | L | LT | R | L | T | R | | T | R |
| Volume (vph) | 270 | | 405 | 525 | 125 | 350 | 225 | 2070 | 1540 | | 2470 | 250 |
| % Heavy veh | 5 | | 5 | 10 | 5 | 10 | 5 | 10 | 10 | | 10 | 5 |
| PHF | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | 0.95 |
| Actuated (P/A) | A | | A | A | A | A | A | A | A | | A | A |
| Startup lost time | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 |
| Arrival type | 5 | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 3 |
| Unit Extension | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | | 0 | 10 | | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| Unit Extension | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 |
| Phasing | EB Only | WB Only | 03 | | 04 | | NB Only | Thru & RT | 07 | | 08 | |
| Timing | G = 20.0 | G = 40.0 | G = | G = | G = 12.0 | G = 60.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 284 | | 426 | 277 | 408 | 368 | 237 | 2179 | 1621 | | 2600 | 263 |
| Lane group cap. | 229 | | 328 | 438 | 476 | 391 | 267 | 2510 | 1418 | | 1981 | 853 |
| v/c ratio | 1.24 | | 1.30 | 0.63 | 0.86 | 0.94 | 0.89 | 0.87 | 1.14 | | 1.31 | 0.31 |
| Green ratio | 0.13 | | 0.21 | 0.27 | 0.27 | 0.27 | 0.08 | 0.51 | 1.00 | | 0.40 | 0.57 |
| Unif. delay d1 | 65.0 | | 59.0 | 48.5 | 52.3 | 53.8 | 68.3 | 32.6 | 0.0 | | 45.0 | 17.1 |
| Delay factor k | 0.50 | | 0.50 | 0.21 | 0.39 | 0.45 | 0.41 | 0.40 | 0.50 | | 0.50 | 0.11 |
| Increm. delay d2 | 139.5 | | 155.1 | 3.0 | 14.4 | 30.9 | 28.2 | 3.5 | 73.3 | | 144.3 | 0.2 |
| PF factor | 0.897 | | 0.819 | 0.758 | 0.758 | 0.758 | 0.942 | 0.315 | 0.950 | | 0.556 | 1.000 |
| Control delay | 197.9 | | 203.5 | 39.7 | 54.0 | 71.7 | 92.6 | 13.8 | 73.3 | | 169.3 | 17.3 |
| Lane group LOS | F | | F | D | D | E | F | B | E | | F | B |
| Apprch. delay | 201.2 | | | 56.4 | | | 42.3 | | | 155.4 | | |
| Approach LOS | F | | | E | | | D | | | F | | |
| Intersec. delay | 94.4 | | | Intersection LOS | | | | | | F | | |

23p
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B WITH LA MEDIA PM PEAK HOUR/WITH MIT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | | R | L | LT | R | L | T | R | | T | R |
| Init. queue/lane | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Flow rate/lane | 284 | | 426 | 277 | 408 | 368 | 237 | 2179 | 1621 | | 2600 | 263 |
| Satflow per lane | 1719 | | 1538 | 1641 | 1785 | 1468 | 1719 | 1818 | 1418 | | 1818 | 1505 |
| Capacity/lane | 229 | | 328 | 438 | 476 | 391 | 267 | 2510 | 1418 | | 1981 | 853 |
| Flow ratio | 0.17 | | 0.28 | 0.17 | 0.23 | 0.25 | 0.07 | 0.44 | 1.14 | | 0.52 | 0.17 |
| w/c ratio | 1.24 | | 1.30 | 0.63 | 0.86 | 0.94 | 0.89 | 0.87 | 1.14 | | 1.31 | 0.31 |
| I factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 |
| Arrival type | 5 | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 3 |
| Platoon ratio | 1.67 | | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.00 | | 1.67 | 1.00 |
| PF factor | 1.00 | | 1.00 | 0.88 | 0.94 | 0.98 | 0.99 | 0.66 | | | 1.00 | 1.00 |
| Q1 | 11.8 | | 17.8 | 8.9 | 15.3 | 14.6 | 5.0 | 19.4 | | | 39.8 | 5.8 |
| kB | 0.4 | | 0.5 | 0.6 | 0.6 | 0.5 | 0.3 | 0.9 | 1.2 | | 0.8 | 0.9 |
| Q2 | 8.5 | | 14.1 | 0.9 | 2.7 | 3.7 | 1.3 | 4.5 | 32.6 | | 31.3 | 0.4 |
| Q avg. | 20.3 | | 31.8 | 9.9 | 18.0 | 18.4 | 6.3 | 23.9 | | | 71.1 | 6.1 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|--|------|------|------|------|------|------|--|--|-----|------|
| fB% | 1.7 | | 1.6 | 1.8 | 1.7 | 1.7 | 1.9 | 1.7 | | | 1.5 | 1.9 |
| BOQ, Q% | 34.4 | | 51.0 | 18.2 | 30.9 | 31.5 | 12.2 | 39.6 | | | 107 | 11.8 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|--|------|------|------|------|------|------|------|--|------|------|
| Q spacing | 25.0 | | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | 25.0 | 25.0 |
| Q storage | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq% | | | | | | | | | | | | |

2A1

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| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-------|------------------|----------|------------------------|------------------------------|-------|----|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | SR 905 EB/ LA MEDIA | | | | | |
| Agency or Co | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | 905E/LA/MED/30A/3B/W/L/M/N/O | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALT 3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 0 | 2 | 0 | 0 | 5 | 2 | 3 | 0 | 0 | 2 | 1 |
| Lane group | L | | R | | | | L | T | | | T | R |
| Volume (vph) | 1235 | | 2140 | | | | 600 | 2235 | | | 2610 | 400 |
| % Heavy veh | 10 | | 10 | | | | 10 | 10 | | | 10 | 10 |
| PHF | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | A | | A | | | | A | A | | | A | A |
| Startup lost time | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | 3 | | 3 | | | | 3 | 3 | | | 3 | 3 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | | 0 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | | | | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grace/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/rr | | | | | | | | | | | | |
| Bus stops/hr | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Phase seq | EB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 60.0 | G = | G = | G = | G = 20.0 | G = 52.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 145.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 1300 | | 2253 | | | | 932 | 2353 | | | 2747 | 421 |
| Lane group cap. | 1319 | | 1506 | | | | 440 | 2596 | | | 1242 | 1160 |
| v/c ratio | 0.99 | | 1.50 | | | | 1.44 | 0.91 | | | 2.21 | 0.36 |
| Green ratio | 0.41 | | 0.58 | | | | 0.14 | 0.52 | | | 0.36 | 0.81 |
| Unf. delay d1 | 42.1 | | 30.5 | | | | 62.5 | 31.3 | | | 45.5 | 3.8 |
| Delay factor k | 0.43 | | 6.50 | | | | 0.50 | 6.43 | | | 0.50 | 0.11 |
| Incr. delay d2 | 21.3 | | 225.6 | | | | 209.0 | 5.1 | | | 547.9 | 0.2 |
| Pi factor | 1.000 | | 1.000 | | | | 0.893 | 0.266 | | | 0.669 | 0.253 |
| Control delay | 63.4 | | 257.3 | | | | 254.8 | 13.4 | | | 589.3 | 1.2 |
| Lane group LOS | E | | F | | | | F | B | | | F | A |
| Approch delay | 186.3 | | | | | | 96.7 | | | 511.1 | | |
| Approach LOS | F | | | | | | E | | | F | | |
| Intersection delay | 255.5 | | | Intersection LOS | | | | | | F | | |

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT. 39 WITH LA MEDIA AM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|----|----|----|-------|-------|----|-------|----|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | | R | | | | L | T | | T | | R |
| Init. queue/lane | 0.0 | | 0.0 | | | | 0.0 | 0.0 | | 0.0 | | 0.0 |
| Flow rate/lane | 1290 | | 2253 | | | | 532 | 2353 | | 2747 | | 421 |
| Satflow per lane | 1641 | | 1468 | | | | 1641 | 1919 | | 1616 | | 1437 |
| Capacity/lane | 1219 | | 1505 | | | | 445 | 2596 | | 1242 | | 1150 |
| Flow ratio | 0.41 | | 0.97 | | | | 0.20 | 0.47 | | 0.79 | | 0.29 |
| w/c ratio | 0.99 | | 1.50 | | | | 1.44 | 0.91 | | 2.21 | | 0.26 |
| factor | 1.000 | 1.000 | 1.000 | | | | 1.000 | 1.000 | | 1.000 | | 1.000 |
| Arrival type | 3 | | 3 | | | | 5 | 5 | | 5 | | 5 |
| Platoon ratio | 1.00 | | 1.00 | | | | 1.67 | 1.67 | | 1.26 | | 1.18 |
| PF factor | 1.00 | | 1.00 | | | | 1.00 | 0.67 | | 1.00 | | 0.28 |
| Q ₁ | 25.7 | | 51.2 | | | | 13.1 | 21.0 | | 58.1 | | 1.3 |
| ke | 0.7 | | 0.8 | | | | 0.4 | 0.9 | | 0.7 | | 1.0 |
| Q ₂ | 7.2 | | 55.2 | | | | 13.5 | 5.7 | | 100.0 | | 0.5 |
| Q avg. | 33.9 | | 106.4 | | | | 26.5 | 26.7 | | 158.1 | | 1.9 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|------|--|-----|--|--|--|------|------|--|-----|--|-----|
| Q ₉₅ | 1.6 | | 1.5 | | | | 1.6 | 1.6 | | 1.5 | | 2.0 |
| BOQ, Q ₉₅ | 53.9 | | 160 | | | | 43.5 | 43.7 | | 237 | | 3.8 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|--------------------|------|--|------|--|--|--|------|------|--|------|--|------|
| Q spacing | 24.9 | | 24.9 | | | | 24.9 | 24.9 | | 24.9 | | 24.9 |
| Q storage | 0 | | 0 | | | | 5 | 5 | | 0 | | 0 |
| Avg R _q | | | | | | | | | | | | |
| 95% R _q | | | | | | | | | | | | |

24A
W
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-------|-----|----------|------------------------|--------------------------|-------|----|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | SR-955 EB/ LA MEDIA | | | | | |
| Agency or Co | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | 905E91AMLD30A3BWLMVM | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALT SB WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 1 |
| Lane group | L | | R | | | | L | T | | | T | R |
| Volume (vph) | 1235 | | 2140 | | | | 600 | 2235 | | | 2610 | 400 |
| % Heavy veh | 10 | | 10 | | | | 10 | 15 | | | 10 | 10 |
| PHF | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (PIA) | A | | A | | | | A | A | | | A | A |
| Start-Up lost time | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | 3 | | 3 | | | | 5 | 5 | | | 5 | 5 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | | 0 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | | | | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Phasing | EB Only | 02 | 03 | 04 | NB Only | Trnu & RT | 07 | 08 | | | | |
| Timing | G = 60.0 | G = | G = | G = | G = 20.0 | G = 52.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 145.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Ad. flow rate | 1300 | | 2253 | | | | 632 | 2353 | | | 2747 | 421 |
| Lane group cap. | 1319 | | 1506 | | | | 440 | 2596 | | | 1776 | 1160 |
| svc ratio | 0.99 | | 1.50 | | | | 1.44 | 0.91 | | | 1.55 | 0.36 |
| Green ratio | 0.41 | | 0.58 | | | | 0.14 | 0.52 | | | 0.36 | 0.81 |
| Unit. delay d1 | 42.1 | | 30.5 | | | | 62.5 | 31.3 | | | 46.5 | 3.8 |
| Delay factor k | 0.49 | | 0.50 | | | | 0.50 | 0.43 | | | 0.60 | 0.11 |
| Increment. delay c2 | 21.5 | | 226.8 | | | | 209.0 | 5.1 | | | 248.3 | 0.2 |
| PF factor | 1.000 | | 1.000 | | | | 0.995 | 0.266 | | | 0.627 | 0.259 |
| Control delay | 63.4 | | 257.3 | | | | 264.5 | 13.4 | | | 279.0 | 1.2 |
| Lane group LOS | E | | F | | | | F | B | | | F | A |
| Approch. delay | 186.3 | | | | | | 66.7 | | | 241.2 | | |
| Approach LOS | F | | | | | | E | | | F | | |
| Intersec. delay | 167.4 | | | | | | Intersection LOS | | | F | | |

24A
W
M

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|--|-------|-------|-------|----|----|----|-------|-------|----|----|-------|-------|
| General Information | | | | | | | | | | | | |
| Project Description ALT 38 WITH LA MEDIA AM PEAK HOUR WITH MIT | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | | R | | | | L | T | | | T | R |
| Init. queue/lane | 0.0 | | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Flow rate/lane | 1300 | | 2253 | | | | 632 | 2353 | | | 2747 | 421 |
| Satflow per lane | 1641 | | 1468 | | | | 1641 | 1818 | | | 1818 | 1437 |
| Capacity/lane | 1319 | | 1506 | | | | 440 | 2596 | | | 1779 | 1180 |
| Flow ratio | 0.41 | | 0.87 | | | | 5.20 | 0.47 | | | 0.53 | 0.29 |
| w/c ratio | 0.99 | | 1.50 | | | | 1.44 | 0.91 | | | 1.55 | 0.36 |
| I factor | 1.000 | 1.000 | 1.000 | | | | 1.000 | 1.000 | | | 1.000 | 1.000 |
| Arrival type | 3 | | 3 | | | | 5 | 5 | | | 5 | 5 |
| Platoon ratio | 1.00 | | 1.00 | | | | 1.67 | 1.67 | | | 1.67 | 1.18 |
| PF factor | 1.00 | | 1.00 | | | | 1.00 | 0.67 | | | 1.00 | 0.28 |
| Q1 | 26.7 | | 51.2 | | | | 13.1 | 21.0 | | | 40.6 | 1.3 |
| Q2 | 0.7 | | 0.8 | | | | 0.4 | 0.9 | | | 0.7 | 1.0 |
| Q3 | 7.2 | | 55.2 | | | | 13.5 | 5.7 | | | 46.5 | 0.6 |
| Q avg. | 33.9 | | 106.4 | | | | 26.6 | 28.7 | | | 87.1 | 1.8 |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| Q95 | 1.6 | | 1.5 | | | | 1.6 | 1.6 | | | 1.5 | 2.0 |
| BOQ Q95 | 53.9 | | 160 | | | | 43.5 | 43.7 | | | 131 | 3.8 |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | 24.9 | | 24.9 | | | | 24.9 | 24.9 | | | 24.9 | 24.9 |
| Q storage | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

24P
N
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-------|------------------|----------|------------------------|---------------------------|-------|----|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA/ | | | | | Intersection | SR-905 EB/LA MEDIA | | | | | |
| Agency or Co. | USA/ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 5/3/6/11 | | | | | Jurisdiction | S05EBLAMED3SP3HWLMNM | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALT. 3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Numb. of Lanes | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 2 | 1 |
| Lane group | L | | R | | | | L | T | | | T | R |
| Volume (vph) | 825 | | 1500 | | | | 1300 | 3010 | | | 1430 | 650 |
| % Heavy veh | 10 | | 10 | | | | 10 | 10 | | | 10 | 10 |
| P-I/F | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | A | | A | | | | A | A | | | A | A |
| Start-up loss, time | 2.5 | | 2.5 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. eff. green | 2.5 | | 2.5 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | 3 | | 3 | | | | 5 | 5 | | | 5 | 5 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Ped/Bikes/RTOR Volume | 10 | | 205 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | | | | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Phasing | EB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 37.0 | G = | G = | G = | G = 58.0 | G = 42.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Vol. flow ratio | 868 | | 1368 | | | | 1368 | 3168 | | | 1505 | 604 |
| Lane group cap. | 788 | | 1715 | | | | 1232 | 3434 | | | 969 | 602 |
| v/c ratio | 1.10 | | 0.80 | | | | 1.11 | 0.92 | | | 1.55 | 0.85 |
| Green ratio | 0.25 | | 0.66 | | | | 0.39 | 0.69 | | | 0.28 | 0.56 |
| Unif. delay d1 | 56.5 | | 19.3 | | | | 46.0 | 19.6 | | | 54.0 | 27.8 |
| Delay factor k | 0.55 | | 0.34 | | | | 0.53 | 0.44 | | | 0.65 | 0.39 |
| Incr. delay d2 | 54.6 | | 2.7 | | | | 61.5 | 4.9 | | | 254.5 | 8.8 |
| PFI factor | 1.030 | | 1.050 | | | | 0.580 | 0.163 | | | 0.741 | 0.152 |
| Control delay | 121.1 | | 21.1 | | | | 88.2 | 8.0 | | | 294.0 | 13.1 |
| Lane group LOS | F | | C | | | | F | A | | | F | B |
| Approach delay | 59.9 | | | | | | 32.2 | | | 206.2 | | |
| Approach LOS | E | | | | | | C | | | F | | |
| Intersec. delay | 81.6 | | | Intersection LOS | | | | | | i | | |

248
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT 30 WITH LA MEDIA PM PEAK HOURING MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|----|----|----|-------|-------|----|----|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | | R | | | | L | I | | | I | R |
| In 1 queue lane | 0.0 | | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Flow rate/lane | 859 | | 1368 | | | | 1368 | 3168 | | | 1805 | 684 |
| Satflow per lane | 1641 | | 1458 | | | | 1641 | 1818 | | | 1818 | 1433 |
| Capacity/lane | 786 | | 1715 | | | | 1232 | 3434 | | | 969 | 802 |
| Flow ratio | 0.27 | | 0.53 | | | | 0.43 | 0.64 | | | 0.43 | 0.48 |
| w/c ratio | 1.19 | | 0.80 | | | | 1.11 | 0.92 | | | 1.55 | 0.85 |
| f factor | 1.000 | 1.500 | 1.000 | | | | 1.000 | 1.000 | | | 1.000 | 1.000 |
| Arrival type | 3 | | 3 | | | | 5 | 5 | | | 5 | 5 |
| Platoon ratio | 1.00 | | 1.00 | | | | 1.67 | 1.37 | | | 1.67 | 1.67 |
| PF factor | 1.00 | | 1.00 | | | | 1.00 | 0.47 | | | 1.00 | 0.39 |
| Q1 | 18.6 | | 23.1 | | | | 29.3 | 19.5 | | | 32.9 | 9.3 |
| ks | 0.5 | | 0.9 | | | | 0.7 | 1.1 | | | 0.6 | 0.8 |
| Q2 | 8.7 | | 3.2 | | | | 13.4 | 7.8 | | | 38.9 | 3.8 |
| Q avg. | 27.3 | | 26.3 | | | | 42.8 | 27.3 | | | 69.8 | 13.1 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|--|------|--|--|--|------|------|--|--|-----|------|
| Time | 1.8 | | 1.5 | | | | 1.6 | 1.6 | | | 1.5 | 1.8 |
| BOQ, Q% | 44.6 | | 43.1 | | | | 66.5 | 44.5 | | | 106 | 23.4 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|--|------|--|--|--|------|------|--|--|------|------|
| Q spacing | 24.9 | | 24.9 | | | | 24.9 | 24.9 | | | 24.9 | 24.9 |
| Q storage | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Avg. Rt | | | | | | | | | | | | |
| 95% BOQ | | | | | | | | | | | | |

2AF

W
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-------|-----|----------|------------------------|---------------------------|-------|----|------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | SH-905 EB/LA MEDIA | | | | | |
| Agency or Co | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/05/11 | | | | | Jurisdiction | 905EBLAMED039R3BWLMMW | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030/ALT. 3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 1 |
| Lane group | L | | R | | | | L | T | | | T | R |
| Volume (vph) | 825 | | 1500 | | | | 1300 | 3010 | | | 1430 | 650 |
| % Heavy veh | 10 | | 10 | | | | 10 | 10 | | | 10 | 10 |
| PHF | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | A | | A | | | | A | A | | | A | A |
| Startup lost time | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | 3 | | 3 | | | | 5 | 5 | | | 5 | 5 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Pod/Bike/RTOR Volume | 10 | | 200 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | | | | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/h | | | | | | | | | | | | |
| Bus stops/hr | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Phasing | EB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 37.0 | G = | G = | G = | G = 58.0 | G = 42.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 9.25 | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 668 | | 1368 | | | | 1368 | 3168 | | | 1505 | 694 |
| Lane group cap. | 786 | | 1715 | | | | 1232 | 3434 | | | 1387 | 802 |
| v/c ratio | 1.10 | | 0.80 | | | | 1.11 | 0.92 | | | 1.09 | 0.85 |
| Green ratio | 0.25 | | 0.66 | | | | 0.38 | 0.69 | | | 0.28 | 0.58 |
| Unit. delay d1 | 56.5 | | 18.5 | | | | 40.0 | 19.6 | | | 54.0 | 27.9 |
| Delay factor k | 0.50 | | 0.34 | | | | 0.50 | 0.44 | | | 0.50 | 0.39 |
| Increment. delay d2 | 64.6 | | 2.7 | | | | 61.5 | 4.8 | | | 50.8 | 8.8 |
| PF factor | 1.000 | | 1.000 | | | | 0.580 | 0.163 | | | 0.741 | 0.152 |
| Control delay | 121.1 | | 21.1 | | | | 88.2 | 8.0 | | | 90.8 | 13.1 |
| Lane group LOS | F | | C | | | | F | A | | | F | B |
| Approch. delay | 59.9 | | | | | | 32.2 | | | 65.5 | | |
| Approach LOS | E | | | | | | C | | | E | | |
| Intersec. delay | 47.5 | | | | | | Intersection LOS | | | D | | |

2-AP
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT. 3E WITH LA MEDIA PM PEAK HOUR WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|-------|----|----|----|-------|-------|----|----|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | | R | | | | L | T | | | T | R |
| Init. queue/lane | 0.0 | | 0.0 | | | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Flow rate/lane | 868 | | 1368 | | | | 1368 | 3168 | | | 1505 | 694 |
| Sat flow per lane | 1641 | | 1468 | | | | 1641 | 1818 | | | 1818 | 1433 |
| Capacity/lane | 786 | | 1715 | | | | 1232 | 3434 | | | 1387 | 802 |
| Flow ratio | 0.27 | | 0.53 | | | | 0.43 | 0.64 | | | 0.30 | 0.46 |
| Vol ratio | 1.10 | | 0.80 | | | | 1.11 | 0.92 | | | 1.06 | 0.85 |
| I factor | 1.005 | 1.000 | 1.000 | | | | 1.005 | 1.000 | | | 1.000 | 1.000 |
| Arrival type | 3 | | 5 | | | | 5 | 5 | | | 5 | 5 |
| Patoon ratio | 1.00 | | 1.00 | | | | 1.67 | 1.37 | | | 1.67 | 1.67 |
| PF factor | 1.00 | | 1.50 | | | | 1.00 | 0.47 | | | 1.00 | 0.29 |
| Q1 | 18.6 | | 23.1 | | | | 29.3 | 19.5 | | | 23.0 | 9.7 |
| k _s | 0.5 | | 0.9 | | | | 0.7 | 1.1 | | | 0.6 | 0.8 |
| Q ₂ | 8.7 | | 3.2 | | | | 13.4 | 7.8 | | | 9.8 | 3.8 |
| Q avg. | 27.3 | | 26.3 | | | | 42.8 | 27.3 | | | 32.8 | 13.1 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|------|--|------|--|--|--|------|------|--|--|------|------|
| l ₉₅ | 1.6 | | 1.6 | | | | 1.6 | 1.6 | | | 1.6 | 1.6 |
| BOQ, Q ₉₅ | 44.6 | | 43.1 | | | | 66.5 | 44.5 | | | 52.4 | 23.4 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|--------------------|------|--|------|--|--|--|------|------|--|--|------|------|
| Q spacing | 24.9 | | 24.9 | | | | 24.9 | 24.9 | | | 24.9 | 24.9 |
| Q storage | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Avg R _q | | | | | | | | | | | | |
| 95% R _q | | | | | | | | | | | | |

25A

N
3

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|------------|---|-------|-------|------|-------|-------|------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA | | | | | Intersection LA MEDIA RD/AIRWAY RD | | | | | | | |
| Agency or Co | USAJ | | | | | Area Type All other areas | | | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction LAMEDIAAIR3943DWLMNOMIT | | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year YEAR 2030 ALT.-3B WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 3 | 0 | |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | | |
| Volume (vph) | 700 | 615 | 350 | 350 | 450 | 635 | 250 | 1500 | 150 | 1600 | 1950 | 1200 | |
| % heavy veh | 10 | 10 | 10 | 10 | 10 | 15 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup los: time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Exl. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/R/TOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grade/Farking | N | S | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | Exc. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 17.0 | G = 17.0 | G = | G = | G = 42.0 | G = 55.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TR | | LT | TR | | LT | TR | | LT | TR | | |
| Adj. flow rate | 737 | 1015 | | 388 | 1142 | | 263 | 1737 | | 1684 | 3316 | | |
| Lane group cap | 361 | 365 | | 361 | 349 | | 914 | 1245 | | 914 | 1597 | | |
| v/s ratio | 2.04 | 2.78 | | 1.02 | 3.28 | | 0.29 | 1.39 | | 1.84 | 1.95 | | |
| Green ratio | 0.11 | 0.11 | | 0.11 | 0.11 | | 0.29 | 0.37 | | 0.29 | 0.37 | | |
| Unit delay d1 | 66.5 | 66.5 | | 66.5 | 66.5 | | 41.6 | 47.5 | | 53.5 | 47.5 | | |
| Delay factor k | 0.50 | 0.50 | | 0.50 | 0.50 | | 0.11 | 0.50 | | 0.50 | 0.50 | | |
| Incrom. delay d2 | 478.3 | 809.0 | | 52.4 | 1034 | | 0.2 | 180.8 | | 383.4 | 431.5 | | |
| FF factor | 0.915 | 0.915 | | 0.915 | 0.915 | | 0.722 | 0.614 | | 0.732 | 0.911 | | |
| Control delay | 539.1 | 869.8 | | 173.2 | 1095 | | 30.6 | 219.0 | | 422.5 | 470.0 | | |
| Lane group LOS | F | F | | F | F | | C | F | | F | F | | |
| Approach delay | 730.7 | | | 855.7 | | | 196.4 | | | 454.0 | | | |
| Approach LOS | F | | | F | | | F | | | F | | | |
| Intersec. delay | 508.2 | | | Intersection LOS | | | | | | | | | F |

25A
N/M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT.-3B WITH LA MEDIA AM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | L | TR | RT | L | TR | RT | L | TR | RT | L | TR | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Init. queue/lane | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 737 | 1015 | | 358 | 1142 | | 263 | 1737 | | 1684 | 3316 | |
| Satflow per lane | 1541 | 1690 | | 1641 | 1512 | | 1641 | 1789 | | 1641 | 1699 | |
| Capacity/lane | 361 | 355 | | 361 | 346 | | 914 | 1249 | | 914 | 1697 | |
| Flow ratio | 0.23 | 0.32 | | 0.12 | 0.37 | | 0.08 | 0.51 | | 0.53 | 0.72 | |
| svc ratio | 2.04 | 2.78 | | 1.02 | 3.28 | | 0.29 | 1.39 | | 1.94 | 1.95 | |
| PF factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.33 | |
| PF factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.78 | 1.00 | | 1.00 | 1.00 | |
| Q1 | 15.8 | 22.2 | | 7.9 | 25.0 | | 3.4 | 38.0 | | 35.1 | 50.7 | |
| Q3 | 0.3 | 0.3 | | 0.3 | 0.3 | | 0.6 | 0.7 | | 0.6 | 0.7 | |
| Q2 | 24.9 | 43.3 | | 3.1 | 52.6 | | 5.2 | 34.5 | | 50.9 | 75.8 | |
| Q avg | 40.7 | 65.5 | | 11.0 | 77.5 | | 3.6 | 72.5 | | 87.0 | 126.5 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------|------|------|--|------|-----|--|-----|-----|--|-----|-----|--|
| Q95 | 1.6 | 1.5 | | 1.8 | 1.5 | | 2.0 | 1.5 | | 1.5 | 1.5 | |
| BOQ, Q95 | 63.6 | 99.3 | | 20.0 | 117 | | 7.3 | 110 | | 131 | 190 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. RC | | | | | | | | | | | | |
| 95% RC | | | | | | | | | | | | |

25A
W
M

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|---------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | LA MEDIA RD./AIRWAY RD. | | | | | |
| Agency or Co | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | LAMEDIA/AR30A3BWLMMW | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALL-38 WITH I/M | | | | | |

| Volume and Timing Input | | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------|------|------------------------|------|------------|-----------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | L | T | R | LT | TH | RT | |
| Num. of Lanes | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (vph) | 700 | 615 | 350 | 350 | 450 | 635 | 250 | 1500 | 150 | 1600 | 1350 | 1200 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Start-up lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 |
| Timing | G = 17.0 | G = 17.0 | G = | G = | | | G = 43.0 | | | G = 55.0 | G = | | |
| | Y = 4 | Y = 5 | Y = | Y = | | | Y = 4 | | | Y = 5 | Y = | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 737 | 647 | 368 | 368 | 474 | 668 | 263 | 1579 | 158 | 1684 | 2653 |
| Lane group cap. | 361 | 382 | 511 | 361 | 392 | 1050 | 914 | 1269 | 737 | 914 | 1815 | 1285 |
| w/c ratio | 2.04 | 1.65 | 0.60 | 1.02 | 1.21 | 0.64 | 0.29 | 1.24 | 0.21 | 1.84 | 1.12 | 0.98 |
| Green ratio | 0.11 | 0.11 | 0.43 | 0.11 | 0.11 | 0.43 | 0.29 | 0.37 | 0.51 | 0.29 | 0.37 | 0.51 |
| Unit. delay d1 | 66.5 | 66.5 | 32.6 | 66.5 | 66.5 | 33.2 | 41.6 | 47.5 | 20.9 | 52.5 | 47.5 | 35.9 |
| Delay factor k | 0.50 | 0.50 | 0.19 | 0.50 | 0.50 | 0.22 | 0.11 | 0.50 | 0.11 | 0.50 | 0.50 | 0.49 |
| Increment. delay d2 | 478.3 | 304.0 | 1.7 | 52.4 | 115.7 | 1.3 | 0.2 | 116.7 | 0.1 | 383.4 | 66.3 | 21.9 |
| PF factor | 0.915 | 0.915 | 0.490 | 0.915 | 0.915 | 0.490 | 0.732 | 0.614 | 0.297 | 0.732 | 0.614 | 0.297 |
| Control delay | 536.1 | 364.8 | 17.7 | 113.2 | 176.5 | 17.6 | 30.6 | 145.9 | 5.1 | 472.5 | 95.5 | 31.6 |
| Lane group LOS | F | F | E | F | F | E | C | F | A | F | F | C |
| Approach delay | 365.2 | | | 90.8 | | | 119.7 | | | 189.5 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersec. delay | 191.4 | | | Intersection LOS | | | | | | F | | |

25A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: *AI T-38 WITH I.A. MEDIA AM PEAK HOUR WITH MIT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 737 | 617 | 366 | 268 | 474 | 606 | 263 | 1579 | 158 | 1684 | 2053 | 1283 |
| Satflow per lane | 1641 | 1818 | 1409 | 1641 | 1818 | 1309 | 1641 | 1818 | 1436 | 1641 | 1818 | 1414 |
| Capacity/lane | 361 | 392 | 611 | 361 | 392 | 1053 | 914 | 1259 | 737 | 914 | 1818 | 1295 |
| Flow ratio | 0.23 | 0.19 | 0.26 | 0.12 | 0.14 | 0.28 | 0.08 | 0.46 | 0.11 | 0.53 | 0.41 | 0.50 |
| w/c ratio | 2.04 | 1.65 | 0.60 | 1.02 | 1.21 | 0.64 | 0.29 | 1.24 | 0.21 | 1.84 | 1.13 | 0.98 |
| I factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Platoon ratio | 1.67 | 1.67 | 1.57 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| PF factor | 1.00 | 1.00 | 0.64 | 1.00 | 1.00 | 0.66 | 0.78 | 1.00 | 0.32 | 1.00 | 1.00 | 0.82 |
| Q1 | 15.8 | 14.1 | 7.5 | 7.9 | 10.3 | 8.1 | 3.4 | 34.5 | 1.2 | 36.1 | 31.4 | 26.9 |
| Q5 | 5.3 | 0.4 | 0.7 | 0.3 | 0.4 | 0.7 | 0.6 | 0.7 | 0.8 | 0.6 | 0.7 | 0.8 |
| Q95 | 24.9 | 17.6 | 1.0 | 3.1 | 7.0 | 1.1 | 0.2 | 23.6 | 0.2 | 50.9 | 15.4 | 7.6 |
| Q avg | 43.7 | 31.7 | 8.6 | 11.0 | 17.2 | 9.2 | 3.6 | 58.1 | 1.4 | 87.0 | 46.7 | 34.5 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|------|------|------|------|-----|------|-----|-----|------|------|
| fs% | 1.6 | 1.6 | 1.9 | 1.8 | 1.7 | 1.9 | 2.0 | 1.5 | 2.1 | 1.5 | 1.5 | 1.6 |
| BOQ, Q% | 63.6 | 50.9 | 16.0 | 20.9 | 30.0 | 17.1 | 7.3 | 58.6 | 2.8 | 131 | 72.2 | 54.8 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

25-P
N
M

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|--------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst: | USA1 | | | | | Intersection: | LA MEDIA RD/AIRWAY RD | | | | | |
| Agency or Co.: | USA1 | | | | | Area Type: | All other areas | | | | | |
| Date Performed: | 03/08/11 | | | | | Jurisdiction: | LAMEDIAIR30P3B/ALMNOM/T | | | | | |
| Time Period: | PM PEAK HOUR | | | | | Analysis Year: | YEAR 2030 ALT 3B WITH LM | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 900 | 500 | 550 | 200 | 300 | 700 | 295 | 2710 | 300 | 850 | 1430 | 700 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Post-Bkpt/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 17.0 | G = 17.0 | G = | G = | G = 13.0 | G = 55.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|----------------|-------|------|-------|-------|------|------------------|-------|------|-------|-------|------|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj. flow rate | 947 | 1052 | | 211 | 1053 | | 311 | 3189 | | 842 | 2242 | |
| Lane group cap. | 361 | 354 | | 361 | 340 | | 914 | 1247 | | 914 | 1713 | | |
| v/c ratio | 2.52 | 2.97 | | 0.58 | 3.10 | | 0.34 | 2.54 | | 0.92 | 1.31 | | |
| Green ratio | 0.11 | 0.11 | | 0.11 | 0.11 | | 0.29 | 0.37 | | 0.29 | 0.37 | | |
| Unif. delay d1 | 66.5 | 66.5 | | 63.1 | 66.5 | | 42.3 | 47.6 | | 51.9 | 47.6 | | |
| Delay factor k | 0.50 | 0.50 | | 0.16 | 0.60 | | 0.11 | 0.50 | | 0.44 | 0.50 | | |
| Increment. delay d2 | 738.4 | 894.9 | | 2.4 | 951.4 | | 0.2 | 696.0 | | 14.4 | 143.5 | | |
| PF factor | 0.915 | 0.915 | | 0.915 | 0.915 | | 0.732 | 0.969 | | 0.732 | 0.614 | | |
| Control delay | 799.3 | 955.7 | | 60.2 | 1012 | | 31.2 | 742.9 | | 52.3 | 172.5 | | |
| Lane group LOS | F | F | | E | F | | C | F | | D | F | | |
| Approach delay | 861.6 | | | 853.3 | | | 679.3 | | | 139.7 | | | |
| Approach LOS | I | | | I | | | I | | | I | | | |
| Intersection delay | 573.5 | | | | | | Intersection LOS | | | | | | F |

25-P
N
4

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 3B WITH LA MEDIA PM PEAK HOUR/LA MEDIA AIRWAY/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Init. queue/lane | 0.0 | 0.0 | | 5.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 947 | 1052 | | 211 | 1053 | | 311 | 3169 | | 842 | 2242 | |
| Sat flow per lane | 1641 | 1642 | | 1641 | 1573 | | 1641 | 1786 | | 1641 | 1715 | |
| Capacity/lane | 351 | 354 | | 361 | 340 | | 914 | 1247 | | 914 | 1713 | |
| Flow ratio | 0.30 | 0.34 | | 0.07 | 0.35 | | 0.10 | 0.93 | | 0.26 | 0.48 | |
| v/c ratio | 2.62 | 2.97 | | 0.58 | 3.15 | | 0.34 | 2.54 | | 0.92 | 1.31 | |
| factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.050 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | | 1.57 | 1.67 | | 1.67 | 1.02 | | 1.67 | 1.67 | |
| PF factor | 1.00 | 1.00 | | 0.96 | 1.00 | | 0.79 | 1.00 | | 0.96 | 1.50 | |
| Q1 | 20.3 | 23.0 | | 4.1 | 23.0 | | 4.2 | 69.3 | | 16.8 | 34.3 | |
| Q3 | 0.3 | 0.3 | | 5.3 | 0.3 | | 5.6 | 5.7 | | 0.6 | 0.7 | |
| Q2 | 38.3 | 46.4 | | 0.5 | 47.4 | | 0.3 | 127.4 | | 3.8 | 27.1 | |
| Q avg | 58.6 | 69.4 | | 4.6 | 70.4 | | 4.5 | 196.8 | | 20.6 | 61.4 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|------|-----|--|-----|-----|--|-----|-----|--|------|------|--|
| f ₉₅ | 1.5 | 1.5 | | 2.0 | 1.5 | | 2.0 | 1.5 | | 1.7 | 1.5 | |
| BOQ, Q ₉₅ | 89.2 | 105 | | 9.0 | 156 | | 8.8 | 295 | | 34.9 | 92.3 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q storage | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

25-f
W
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|-------------------|-------------------|------------|------------------|-------------------|--|------------------------|------------|-------|-------|-------|-------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst: USAI | | | | | | Intersection LA MEDIA RD / AIRWAY RD | | | | | | | |
| Agency or Co: USAI | | | | | | Area Type: All other areas | | | | | | | |
| Date Performed: 03/06/11 | | | | | | Jurisdiction: LAMEDIAA/R30P3BWLMMWITHMIT | | | | | | | |
| Time Period: PM PEAK HOUR | | | | | | Analysis Year: YEAR 2030 ALT.-3B WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | L | T | R | L | T | R | L | T | R | L | T | R | |
| Num. of Lanes | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (vph) | 900 | 500 | 500 | 200 | 300 | 700 | 295 | 2710 | 300 | 800 | 1430 | 700 | |
| % Heavy veh. | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuald (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/h: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 17.0 Y = 4 | G = 17.0 Y = 5 | G = Y = | G = Y = | G = 43.0 Y = 4 | G = 55.0 Y = 5 | G = Y = | G = Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | L | T | R | L | T | R | L | T | R | L | T | R | |
| Adj. flow rate | 947 | 526 | 526 | 211 | 316 | 737 | 311 | 2853 | 316 | 842 | 1505 | 737 | |
| Lane group cap. | 361 | 392 | 611 | 361 | 392 | 1050 | 614 | 1269 | 737 | 914 | 1816 | 1285 | |
| v/c ratio | 2.62 | 1.34 | 0.86 | 0.58 | 0.81 | 0.70 | 0.34 | 2.25 | 0.43 | 0.92 | 0.83 | 0.57 | |
| Green ratio | 0.11 | 0.11 | 0.43 | 0.11 | 0.11 | 0.43 | 0.29 | 0.37 | 0.51 | 0.29 | 0.37 | 0.51 | |
| Unf. delay d1 | 66.5 | 66.5 | 39.4 | 63.1 | 64.9 | 34.6 | 42.3 | 47.5 | 22.8 | 51.9 | 43.2 | 25.2 | |
| Delay factor k | 0.50 | 0.50 | 0.39 | 0.18 | 0.35 | 0.27 | 0.11 | 0.53 | 0.11 | 0.44 | 0.37 | 0.17 | |
| Instrm. delay d2 | 738.4 | 170.1 | 12.0 | 7.4 | 11.7 | 2.1 | 0.2 | 564.2 | 0.4 | 14.4 | 3.4 | 0.5 | |
| PF factor | 0.915 | 0.915 | 0.490 | 0.915 | 0.915 | 0.490 | 0.732 | 0.911 | 0.267 | 0.732 | 0.614 | 0.287 | |
| Control delay | 799.3 | 231.0 | 30.6 | 60.2 | 71.1 | 19.1 | 31.2 | 607.5 | 7.2 | 52.3 | 29.9 | 8.1 | |
| Lane group LOS | F | F | C | E | E | B | C | F | A | D | C | A | |
| Approch. delay | 447.5 | | | 39.0 | | | 501.5 | | | 30.8 | | | |
| Approach LOS | F | | | D | | | F | | | C | | | |
| Intersc. delay | 283.3 | | | Intersection LOS | | | | | | | | | F |

BACK-OF-QUEUE WORKSHEET

25
W
M

General Information

Project Description: *ALT -35 WITH LA MEDIA PM PEAK HOUR/ A MEDIA AIRWAY/WITH MIT*

Average Back of Queue

| | ER | | | WB | | | NR | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| In.l. queue/lane | 0.5 | 5.0 | 0.0 | 0.6 | 0.0 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 947 | 526 | 526 | 711 | 316 | 737 | 311 | 2853 | 316 | 942 | 1505 | 727 |
| Satflow per lane | 1641 | 1818 | 1406 | 1641 | 1818 | 1269 | 1641 | 1818 | 1436 | 1641 | 1816 | 1414 |
| Capacity/lane | 361 | 392 | 611 | 361 | 392 | 1050 | 914 | 1269 | 737 | 914 | 1816 | 1285 |
| Flow ratio | 0.30 | 0.15 | 0.37 | 0.07 | 0.05 | 0.30 | 0.10 | 0.82 | 0.22 | 0.26 | 0.30 | 0.29 |
| w/s ratio | 2.62 | 1.34 | 0.85 | 0.58 | 0.51 | 0.70 | 0.34 | 2.25 | 0.43 | 0.92 | 0.83 | 0.57 |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.15 | 1.67 | 1.67 | 1.67 | 1.67 |
| PF factor | 1.00 | 1.00 | 3.81 | 0.95 | 0.98 | 0.69 | 0.79 | 1.00 | 0.37 | 0.95 | 0.87 | 0.41 |
| Q1 | 20.3 | 11.5 | 16.1 | 4.1 | 5.6 | 9.8 | 4.2 | 62.4 | 3.0 | 16.8 | 18.1 | 4.9 |
| kn | 0.5 | 0.4 | 0.7 | 0.3 | 0.4 | 0.7 | 0.6 | 0.7 | 5.8 | 0.6 | 0.7 | 0.8 |
| Q2 | 39.3 | 10.1 | 3.3 | 0.5 | 1.2 | 1.5 | 0.3 | 105.3 | 0.6 | 3.8 | 2.5 | 1.0 |
| Q avg. | 59.6 | 21.6 | 19.4 | 4.6 | 7.8 | 11.3 | 4.5 | 167.7 | 3.6 | 25.6 | 21.1 | 5.9 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|------|-----|------|------|-----|-----|-----|------|------|------|
| PH% | 1.5 | 1.7 | 1.7 | 2.0 | 1.9 | 1.8 | 2.0 | 1.5 | 2.0 | 1.7 | 1.7 | 1.9 |
| BOQ, Q% | 89.2 | 36.3 | 33.1 | 9.0 | 14.7 | 20.5 | 6.8 | 252 | 7.1 | 34.9 | 35.5 | 11.5 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg. R _q | | | | | | | | | | | | |
| 95% R _q | | | | | | | | | | | | |

26A

N
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-----|------------------|----------|------------------------|-------------------------------|-----|----|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | LA MEDIA RD./SIEMPRE VIVA RD. | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 05/13/14 | | | | | Jurisdiction | LMSV30A3BWL MNOMIT | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 3 | 0 |
| Lane group | L | T | | | TR | | | | | L | TR | |
| Volume (vph) | 1020 | 800 | | | 2100 | 980 | | | | 435 | 350 | 1120 |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | 10 | 99 | 10 |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | | | A | A | | | | A | A | A |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | | 5 | | | | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | | | | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 |
| Lane Width | 12.0 | 12.0 | | | 12.0 | | | | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | | N | N | 0 |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | | | | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | 3.0 | |
| Phasing | EB Only | Thru & RT | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 25.0 | G = 57.0 | G = | G = | G = 35.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 1074 | 842 | | | 3243 | | | | | 458 | 1547 | |
| Lane group cap. | 613 | 3277 | | | 2068 | | | | | 858 | 991 | |
| v/c ratio | 1.75 | 0.26 | | | 1.57 | | | | | 0.53 | 1.56 | |
| Green ratio | 0.19 | 0.66 | | | 0.44 | | | | | 0.27 | 0.27 | |
| Unif. delay d1 | 52.5 | 9.0 | | | 36.5 | | | | | 40.5 | 47.5 | |
| Delay factor k | 0.50 | 0.11 | | | 0.50 | | | | | 0.14 | 0.50 | |
| Increm. delay d2 | 345.1 | 0.0 | | | 258.1 | | | | | 0.7 | 257.4 | |
| PF factor | 0.841 | 0.148 | | | 0.702 | | | | | 0.754 | 0.754 | |
| Control delay | 389.3 | 1.4 | | | 283.7 | | | | | 31.2 | 293.3 | |
| Lane group LOS | F | A | | | F | | | | | C | F | |
| Apprch. delay | 218.8 | | | 283.7 | | | | | | 233.4 | | |
| Approach LOS | F | | | F | | | | | | F | | |
| Intersec. delay | 252.3 | | | Intersection LOS | | | | | | F | | |

26A
W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|------------------------------|------------------|--|--|--|
| Analyst | USA1 | Intersection | LA MEDIA RD /SIEMPRF VIVA RD | | | | |
| Agency or Co. | USA1 | Area Type | All other areas | | | | |
| Date Performed | 04/15/11 | Jurisdiction | MSV30A39WLMWTH MIT | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030 ALT.-3B WTH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-------------------|------|-------------------|----|------------|------------------------|------------|----|-------------------|------|------------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 1 | 2 |
| Lane group | L | T | | | TR | R | | | | L | T | R |
| Volume (vph) | 1020 | 800 | | | 2100 | 980 | | | | 435 | 350 | 1120 |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | 10 | 99 | 10 |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | | | A | A | | | | A | A | A |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | 2.0 | 2.0 | 2.0 |
| Ext. ell. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | | | 5 | 5 | | | | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | 10 | | | 10 | | 0 |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/h | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | 3.0 | 3.0 | 3.0 |
| Phasing | EB Only | | Thru & RT | | 03 | | 04 | | SB Only | | 06 | |
| Timing | G = 27.0 Y = 4 | | G = 55.0 Y = 5 | | G = Y = | | G = Y = | | G = 35.0 Y = 4 | | G = Y = | |
| Duration of Analysis (hrs) = 9.75 | | | | | | Cycle length C = 130.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-----|------------------|-------|-------|-----|--|--|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | 1074 | 842 | | | 2345 | 898 | | | | 458 | 366 |
| Lane group cap. | 662 | 3277 | | | 2614 | 1935 | | | | 858 | 271 | 1319 |
| Vol ratio | 1.62 | 0.26 | | | 1.13 | 0.49 | | | | 0.53 | 1.36 | 0.89 |
| Green ratio | 0.21 | 0.65 | | | 0.42 | 0.73 | | | | 0.27 | 0.27 | 0.51 |
| Unit delay d1 | 51.5 | 9.0 | | | 37.5 | 7.3 | | | | 40.5 | 47.5 | 28.8 |
| Delay factor k | 0.50 | 0.11 | | | 0.50 | 0.11 | | | | 0.14 | 0.50 | 0.42 |
| Incremental delay d2 | 287.0 | 0.0 | | | 65.5 | 0.2 | | | | 0.7 | 183.2 | 8.2 |
| PF factor | 0.625 | 0.148 | | | 0.511 | 0.186 | | | | 0.754 | 0.754 | 0.312 |
| Control delay | 329.5 | 1.4 | | | 84.7 | 1.6 | | | | 31.2 | 219.1 | 17.2 |
| Lane group LOS | F | A | | | F | A | | | | C | F | B |
| Approach delay | 180.3 | | | 61.7 | | | | | | 57.5 | | |
| Approach LOS | F | | | E | | | | | | E | | |
| Intersec delay | 93.6 | | | Intersection LOS | | | | | | F | | |

26P
N
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|-------------------------------|--|--|
| Analyst | USAI | | | Intersection | LA MEDIA RD./SIEMPRE VIVA RD. | | |
| Agency or Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 04/10/11 | | | Jurisdiction | LMSV30P3BWLMNOMIT | | |
| Time Period | PM PEAK HOUR | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|----------|------------------------|-----|-----|----|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 3 | 0 |
| Lane group | L | T | | | TR | | | | | L | TR | |
| Volume (vph) | 1120 | 1850 | | | 500 | 760 | | | | 760 | 350 | 1400 |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | 10 | 99 | 10 |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | | | A | A | | | | A | A | A |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | | 5 | | | | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | 10 | | | 10 | | 0 |
| Lane Width | 12.0 | 12.0 | | | 12.0 | | | | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | | | | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | 3.0 | |
| Phasing | EB Only | Thru & RT | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 37.0 | G = 38.0 | G = | G = | G = 42.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|------|----|--|--|-------|-------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 1179 | 1947 | | | 1326 | | | | | 800 | 1842 |
| Lane group cap. | 907 | 3010 | | | 1296 | | | | | 1030 | 1212 | |
| v/c ratio | 1.30 | 0.65 | | | 1.02 | | | | | 0.78 | 1.52 | |
| Green ratio | 0.28 | 0.61 | | | 0.29 | | | | | 0.32 | 0.32 | |
| Unif. delay d1 | 46.5 | 16.5 | | | 46.0 | | | | | 39.8 | 44.0 | |
| Delay factor k | 0.50 | 0.22 | | | 0.50 | | | | | 0.33 | 0.50 | |
| Increm. delay d2 | 143.1 | 0.5 | | | 31.0 | | | | | 3.8 | 238.2 | |
| PF factor | 0.735 | 0.127 | | | 0.725 | | | | | 0.682 | 0.682 | |
| Control delay | 177.2 | 2.6 | | | 64.4 | | | | | 30.9 | 268.2 | |
| Lane group LOS | F | A | | | E | | | | | C | F | |
| Apprch. delay | 68.5 | | | 64.4 | | | | | | 196.3 | | |
| Approach LOS | E | | | E | | | | | | F | | |
| Intersec. delay | 115.3 | | | Intersection LOS | | | | | | F | | |

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|-------------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA! | | | | | Intersection | LA MEDIA RD / SIEMPRE VIVA RD | | | | | |
| Agency or Co | USA! | | | | | Area Type | All other areas | | | | | |
| Date Performed | 04/19/11 | | | | | Jurisdiction | LMSV30P30WL MWITHWIT | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH I.M | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|------|------|----|------|------|----|----|----|----|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 3 | 3 | 3 | 2 | 0 | 0 | 0 | 2 | 1 | 2 |
| Lane group | L | T | | T | H | | | | | L | T | H |
| Volume (vph) | 1120 | 1250 | | 505 | 760 | | | | | 760 | 350 | 1400 |
| % Heavy veh | 15 | 10 | | 10 | 10 | | | | | 10 | 99 | 10 |
| PHF | 0.95 | 0.95 | | 0.95 | 0.95 | | | | | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | | A | A | | | | | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Ext. off green | 2.0 | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | | 5 | 5 | | | | | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | 10 | | | 10 | | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | | | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | | | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | | | | 3.0 | 3.0 | 3.0 |

| Phasing | EB Only | Thru & RT | 03 | 04 | SB Only | 06 | 07 | 08 |
|-----------------------------------|----------|-----------|-----|-----|------------------------|-----|-----|-----|
| Timing | G = 37.0 | G = 38.0 | G = | G = | G = 42.0 | G = | G = | G = |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | Cycle Length C = 130.5 | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-----|----|--|-------|-------|-------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 1179 | 1947 | | 526 | 930 | | | | 800 | 368 | 1474 |
| Lane group cap. | 907 | 3010 | | 1448 | 1632 | | | | 1020 | 525 | 1559 | |
| v/c ratio | 1.30 | 0.65 | | 0.36 | 0.49 | | | | 0.78 | 1.13 | 0.69 | |
| Green ratio | 5.28 | 0.61 | | 0.29 | 0.65 | | | | 5.32 | 0.32 | 0.64 | |
| Unif. delay d1 | 46.5 | 16.5 | | 36.4 | 11.5 | | | | 39.8 | 44.0 | 19.6 | |
| Delay factor k | 0.50 | 0.22 | | 0.11 | 0.11 | | | | 0.33 | 0.50 | 0.41 | |
| Increment. delay d2 | 143.1 | 0.5 | | 0.2 | 0.2 | | | | 3.8 | 90.7 | 6.3 | |
| P-Factor | 0.735 | 0.127 | | 0.725 | 0.144 | | | | 0.682 | 0.682 | 0.138 | |
| Control delay | 177.2 | 2.6 | | 26.5 | 1.9 | | | | 30.9 | 120.7 | 9.1 | |
| Lane group LOS | F | A | | C | A | | | | C | F | A | |
| Approach delay | 58.5 | | | 11.7 | | | | | | 31.2 | | |
| Approach LOS | E | | | B | | | | | | C | | |
| Intersect. delay | 44.0 | | | Intersection LOS | | | | | | D | | |

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|---|--|--|--|
| Analyst | USA1 | | | Intersection LA MEDIA RD./LONESTAR RD | | | |
| Agency or Co. | USA1 | | | Area Type All other areas | | | |
| Date Performed | 03/06/11 | | | Jurisdiction LAMEDLONE30A3BWLMNOMIT | | | |
| Time Per.oo | AM PEAK HOUR | | | Analysis Year YEAR 2030 ALT.-35 WITH LM | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|------|----------|-------------------------|-----|------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 3 | 0 | 2 | 3 | 0 |
| Lane group | | | | L | | R | | TR | | L | T | |
| Volume (vph) | | | | 285 | | 835 | | 1720 | 415 | 1265 | 2585 | |
| % Heavy veh | | | | 19 | | 10 | | 10 | 15 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | | | S | | S | | S | | S | S | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | 10 | 5 | 0 | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | | 0 | 0 | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru. & RT | 07 | 08 | | | | |
| Timing | G = 25.0 | G = | G = | G = | G = 45.0 | G = 40.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length: C = 120.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|--|-------|------------------|-------|-----|-------|------|-------|-------|------|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | | 300 | | 879 | | 2248 | | 1352 | 2721 | |
| Lane group cap. | | | 848 | | 1564 | | 1556 | | 1166 | 3584 | | |
| w/c ratio | | | 0.46 | | 0.55 | | 1.44 | | 1.14 | 0.76 | | |
| Green ratio | | | 0.20 | | 0.60 | | 0.33 | | 0.37 | 0.72 | | |
| Unif. delay d1 | | | 43.1 | | 14.7 | | 41.5 | | 38.0 | 16.4 | | |
| Delay factor k | | | 0.11 | | 0.16 | | 0.50 | | 0.50 | 0.31 | | |
| Increment delay d2 | | | 0.5 | | 0.5 | | 203.8 | | 74.7 | 1.0 | | |
| PF factor | | | 0.630 | | 0.126 | | 0.679 | | 0.615 | 0.161 | | |
| Control delay | | | 36.3 | | 2.3 | | 232.0 | | 98.7 | 2.9 | | |
| Lane group LOS | | | D | | A | | F | | F | A | | |
| Approach delay | | | | 11.0 | | | 232.0 | | | 34.4 | | |
| Approach LOS | | | | B | | | F | | | C | | |
| Intersect. delay | 90.1 | | | Intersection LOS | | | | | | F | | |

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-28
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 3B AM PEAK HOUR WITH LA MEDIA/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|-------|-------|-------|----|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | | R | | TR | | L | T | |
| Init queue/lane | | | | 0.0 | | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | | | 300 | | 879 | | 2248 | | 1332 | 2721 | |
| Satflow per lane | | | | 1641 | | 1468 | | 1755 | | 1641 | 1918 | |
| Capacity/lane | | | | 648 | | 1564 | | 1556 | | 1166 | 2584 | |
| Flow ratio | | | | 0.09 | | 0.34 | | 0.47 | | 0.42 | 0.55 | |
| Vol ratio | | | | 0.45 | | 0.56 | | 1.44 | | 1.14 | 0.76 | |
| PF factor | | | | 1.000 | 1.000 | 1.000 | | 1.000 | | 1.000 | 1.000 | |
| Arrival type | | | | 5 | | 6 | | 5 | | 5 | 5 | |
| Platoon ratio | | | | 1.67 | | 1.56 | | 1.67 | | 1.67 | 1.31 | |
| PF factor | | | | 0.89 | | 0.18 | | 1.00 | | 1.00 | 0.29 | |
| Q ₁ | | | | 4.1 | | 1.9 | | 28.2 | | 23.4 | 6.1 | |
| Q ₀ | | | | 0.4 | | 0.9 | | 0.6 | | 0.6 | 1.0 | |
| Q ₂ | | | | 0.4 | | 1.0 | | 32.6 | | 14.3 | 2.9 | |
| Q avg. | | | | 4.5 | | 2.9 | | 51.8 | | 37.7 | 9.0 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|--|--|--|-----|--|-----|--|------|--|------|------|--|
| Max. | | | | 2.0 | | 2.5 | | 1.5 | | 1.6 | 1.9 | |
| BOQ, Q ₉₅ | | | | 8.8 | | 5.6 | | 93.8 | | 59.3 | 16.8 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|--|--|--|------|--|------|--|------|--|------|------|--|
| Q spacing | | | | 25.0 | | 25.0 | | 25.0 | | 25.0 | 25.0 | |
| Q storage | | | | 0 | | 0 | | 0 | | 0 | 0 | |
| Avg. R _q | | | | | | | | | | | | |
| 95% R _q | | | | | | | | | | | | |

11/26/2011

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Version 4.17

27A

W
P

| SHORT REPORT | | | | | | | | | | | | | |
|--|----------|-----|-----|------------------|----------|--|------|-------|-------|-------|-------|----|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analysis: USAI Agency or Co.: USAI Date Performed: 03/06/11 Time Period: AM PEAK HOUR | | | | | | Intersection LA MEDIA RD/LONE STAR RD Area Type: All other areas Jurisdiction LAMEDLONE30A3BWLW/ITHMIT Analysis Year: YEAR 2030 ALT.-3B WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | ER | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 0 | 5 | 0 | 2 | 5 | 2 | 0 | 3 | 1 | 2 | 3 | 0 | |
| Lane group | | | | L | | R | | T | R | L | T | | |
| Volume (vph) | | | | 285 | | 835 | | 1720 | 415 | 1285 | 2585 | | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | | |
| Startup lost time | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | | | | 5 | | 5 | | 5 | 5 | 5 | 5 | | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | 10 | 5 | 0 | | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grace/Parking | N | | | N | | 0 | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | 0 | 0 | 0 | | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 25.0 | G = | G = | G = | G = 45.0 | G = 40.0 | G = | G = | | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 123.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | ER | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | | | | 300 | | 879 | | 1811 | 437 | 1332 | 2721 | | |
| Lane group cap | | | | 548 | | 1504 | | 1811 | 817 | 1166 | 3584 | | |
| v/c ratio | | | | 0.46 | | 0.56 | | 1.12 | 0.53 | 1.14 | 0.78 | | |
| Green ratio | | | | 0.20 | | 0.60 | | 0.33 | 0.57 | 0.37 | 0.72 | | |
| Unit delay d1 | | | | 43.1 | | 14.7 | | 41.5 | 16.4 | 39.0 | 10.4 | | |
| Delay factor k | | | | 0.11 | | 0.16 | | 0.50 | 0.14 | 0.50 | 0.31 | | |
| Incremental delay d2 | | | | 0.5 | | 0.5 | | 64.6 | 0.7 | 74.7 | 1.0 | | |
| PF factor | | | | 0.630 | | 0.126 | | 0.079 | 0.119 | 0.615 | 0.181 | | |
| Control delay | | | | 36.3 | | 2.3 | | 92.8 | 2.7 | 98.7 | 2.9 | | |
| Lane group LOS | | | | D | | A | | F | A | F | A | | |
| Approch. delay | | | | 11.0 | | | 75.3 | | | 34.4 | | | |
| Approach LOS | | | | D | | | E | | | C | | | |
| Intersec. delay | 43.0 | | | Intersection LOS | | | | | | | | | D |

27A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-3B AM PEAK HOUR WITH LA MEDIA/WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|-------|-------|-------|----|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | | R | | T | R | L | T | |
| Int. queue/lane | | | | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | | | | 300 | | 679 | | 1611 | 437 | 1332 | 2721 | |
| Half pw per lane | | | | 1641 | | 1466 | | 1818 | 1435 | 1841 | 1818 | |
| Capacity/lane | | | | 646 | | 1564 | | 1611 | 817 | 1168 | 3584 | |
| Flow ratio | | | | 0.09 | | 0.34 | | 0.37 | 0.33 | 0.42 | 0.55 | |
| w/o ratio | | | | 0.46 | | 0.56 | | 1.12 | 0.53 | 1.14 | 0.76 | |
| I factor | | | | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | | | | 5 | | 5 | | 5 | 5 | 5 | 5 | |
| Platoon ratio | | | | 1.67 | | 1.58 | | 1.67 | 1.67 | 1.67 | 1.31 | |
| PF factor | | | | 0.89 | | 0.18 | | 1.00 | 0.17 | 1.00 | 0.29 | |
| Q1 | | | | 4.1 | | 1.8 | | 22.7 | 1.6 | 23.4 | 6.1 | |
| ka | | | | 0.4 | | 0.8 | | 0.6 | 0.7 | 0.6 | 1.0 | |
| Q2 | | | | 0.4 | | 1.0 | | 13.9 | 0.8 | 14.3 | 2.9 | |
| Q avg | | | | 4.5 | | 2.9 | | 35.7 | 2.4 | 37.7 | 9.0 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|--|--|--|-----|--|-----|--|------|-----|------|------|--|
| fsq | | | | 2.0 | | 2.0 | | 1.6 | 2.0 | 1.6 | 1.9 | |
| BQQ Q% | | | | 99 | | 99 | | 96.5 | 48 | 99.3 | 16.6 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|--|------|--|------|------|------|------|--|
| Q spacing | | | | 25.0 | | 25.0 | | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | | | | 0 | | 0 | | 0 | 0 | 0 | 0 | |
| Avg. Roq | | | | | | | | | | | | |
| 95% Roq | | | | | | | | | | | | |

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| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----|-----|------------------|----------|---|-------|-------|------|-------|-------|----|--|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA! | | | | | Intersection LA MEDIA RD./LONE STAR RD. | | | | | | | |
| Agency or Co. | USA! | | | | | Area Type All other areas | | | | | | | |
| Date Performed | 03/05/11 | | | | | Jurisdiction LAMEDLONE33P3BIWLMNOMIT | | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year YEAR 2030 ALT. 3B WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 3 | 0 | 2 | 3 | 0 | |
| Lane group | | | | L | | R | | TK | | L | T | | |
| Volume (vph) | | | | 415 | | 1255 | | 2585 | 285 | 835 | 1120 | | |
| % Heavy veh. | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Accreted (P/A) | | | | A | | A | | A | A | A | A | | |
| Start-Up lost time | | | | 2.5 | | 2.0 | | 2.0 | | 2.0 | 2.0 | | |
| Ext. of. green | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | | | | 5 | | 5 | | 5 | | 5 | 5 | | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | 1 | 5 | 0 | | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grader/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | | 0 | 0 | | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 35.0 | G = | G = | G = | G = 30.0 | G = 62.0 | G = | G = | | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | | | | 437 | | 1332 | | 3021 | | 879 | 1811 | | |
| Lane group cap. | | | | 797 | | 1281 | | 2158 | | 683 | 3396 | | |
| wc ratio | | | | 0.55 | | 1.04 | | 1.40 | | 1.29 | 0.53 | | |
| Green ratio | | | | 0.25 | | 0.49 | | 0.44 | | 0.21 | 0.69 | | |
| Unif. delay d1 | | | | 45.6 | | 35.5 | | 39.0 | | 55.0 | 10.9 | | |
| Delay factor k | | | | 0.15 | | 0.50 | | 0.50 | | 0.50 | 0.14 | | |
| Increm. delay d2 | | | | 0.8 | | 36.1 | | 182.8 | | 140.0 | 0.2 | | |
| PF factor | | | | 0.778 | | 0.352 | | 0.577 | | 0.818 | 0.159 | | |
| Control delay | | | | 36.3 | | 48.6 | | 205.4 | | 185.0 | 1.9 | | |
| Lane group LOS | | | | D | | D | | F | | F | A | | |
| Approch. delay | | | | 45.6 | | | 205.4 | | | 61.7 | | | |
| Approach LOS | | | | D | | | F | | | C | | | |
| Intersec. delay | 115.9 | | | Intersection LOS | | | | | | | F | | |

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description: *ALT-3B PM PEAK HOUR WITH LA MEDIA/NO MIT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|-------|-------|-------|----|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | | R | | TH | | L | T | |
| Init. queue/lane | | | | 0.0 | | 0.0 | | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | | | | 437 | | 1332 | | 3021 | | 878 | 1811 | |
| Satflow per lane | | | | 1641 | | 1468 | | 1788 | | 1641 | 1818 | |
| Capacity/lane | | | | 797 | | 1281 | | 2158 | | 683 | 3396 | |
| Flow ratio | | | | 0.14 | | 0.51 | | 0.62 | | 0.28 | 0.37 | |
| Vol ratio | | | | 0.55 | | 1.04 | | 1.40 | | 1.29 | 0.53 | |
| PF factor | | | | 1.000 | 1.000 | 1.000 | | 1.000 | | 1.000 | 1.000 | |
| Arrival type | | | | 5 | | 5 | | 5 | | 5 | 5 | |
| Platoon ratio | | | | 1.57 | | 1.67 | | 1.53 | | 1.67 | 1.39 | |
| PF factor | | | | 0.87 | | 1.00 | | 1.00 | | 1.00 | 0.20 | |
| Q1 | | | | 8.6 | | 28.2 | | 42.1 | | 17.6 | 2.5 | |
| Q5 | | | | 9.5 | | 0.7 | | 0.8 | | 0.5 | 1.0 | |
| Q95 | | | | 0.6 | | 10.4 | | 42.2 | | 14.5 | 1.2 | |
| Q avg. | | | | 7.2 | | 38.6 | | 85.3 | | 32.1 | 3.8 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|--|--|------|--|------|--|-----|--|------|-----|--|
| Q95 | | | | 1.8 | | 1.6 | | 1.5 | | 1.6 | 2.0 | |
| BOQ, Qs | | | | 13.8 | | 62.0 | | 128 | | 51.4 | 7.5 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|--|------|--|------|--|------|------|--|
| Q spacing | | | | 25.0 | | 25.0 | | 25.0 | | 25.0 | 25.0 | |
| Q storage | | | | 0 | | 0 | | 0 | | 0 | 0 | |
| Avg. Roq | | | | | | | | | | | | |
| 95% Roq | | | | | | | | | | | | |

27
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-----|------------------|----------|---|-------|-------|-------|-------|-------|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection LA MEDIA RD / LONESTAR RD | | | | | | |
| Agency or Co | USAJ | | | | | Area Type 4) other areas | | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction (AMED) ONE3073BW/ MW/THMT | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year YEAR 2030 ALT -39 WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 3 | 1 | 2 | 2 | 0 |
| Lane group | | | | L | | R | | T | R | L | T | |
| Volume (vph) | | | | 415 | | 1265 | | 2585 | 285 | 835 | 1720 | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | | | | 2.0 | | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | | | | S | | S | | S | S | S | S | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | | 0 | 1 | 5 | 5 | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | 0 | 0 | 0 | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 35.0 | G = | G = | G = | G = 30.0 | G = 62.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | | | 437 | | 1332 | | 2721 | 305 | 879 | 1811 | |
| Lane group cap. | | | | 797 | | 1281 | | 2193 | 1054 | 663 | 3396 | |
| v/c ratio | | | | 0.55 | | 1.04 | | 1.24 | 0.28 | 1.29 | 0.53 | |
| Green ratio | | | | 0.25 | | 0.49 | | 0.44 | 0.73 | 0.21 | 0.69 | |
| Unit delay d1 | | | | 45.6 | | 35.5 | | 39.0 | 6.5 | 55.0 | 10.9 | |
| Delay factor k | | | | 0.15 | | 0.50 | | 0.50 | 0.11 | 0.50 | 0.14 | |
| Increment delay d2 | | | | 0.8 | | 36.1 | | 112.4 | 0.1 | 149.0 | 0.2 | |
| PF factor | | | | 0.779 | | 0.352 | | 0.470 | 0.184 | 0.618 | 0.159 | |
| Control delay | | | | 36.3 | | 48.6 | | 130.8 | 1.3 | 185.0 | 1.9 | |
| Lane group LOS | | | | D | | D | | F | A | F | A | |
| Approch delay | | | | 45.6 | | | 117.9 | | | 61.7 | | |
| Approach LOS | | | | D | | | F | | | E | | |
| Intersec. delay | 80.6 | | | Intersection LOS | | | | | | F | | |

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BACK-OF-QUEUE WORKSHEET

General Information

Project Description: A1 T-36 PM PEAK HOUR WITH LA MEDIA/WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|----|----|----|-------|-------|-------|----|-------|-------|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | L | | R | | T | R | L | T | |
| Init. queue/lane | | | | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | |
| Flow rate/lane | | | | 437 | | 1332 | | 2721 | 300 | 879 | 1811 | |
| Sat flow per lane | | | | 1641 | | 1468 | | 1818 | 1447 | 1641 | 1818 | |
| Capacity/lane | | | | 797 | | 1281 | | 2193 | 1054 | 683 | 3398 | |
| Flow ratio | | | | 0.14 | | 0.51 | | 0.55 | 0.21 | 0.28 | 0.37 | |
| Vol. ratio | | | | 0.55 | | 1.04 | | 1.24 | 0.28 | 1.29 | 0.53 | |
| Pl factor | | | | 1.000 | 1.000 | 1.500 | | 1.000 | 1.000 | 1.000 | 1.000 | |
| Arrival type | | | | 5 | | 5 | | 5 | 5 | 5 | 5 | |
| Platoon ratio | | | | 1.67 | | 1.67 | | 1.67 | 1.30 | 1.67 | 1.29 | |
| PF factor | | | | 0.87 | | 1.00 | | 1.00 | 0.20 | 1.00 | 0.20 | |
| Q1 | | | | 6.6 | | 29.2 | | 38.8 | 0.8 | 17.8 | 2.6 | |
| Q5 | | | | 5.5 | | 0.7 | | 0.8 | 0.9 | 0.5 | 1.0 | |
| Q25 | | | | 0.6 | | 10.4 | | 27.7 | 0.4 | 14.5 | 1.2 | |
| Q avg. | | | | 7.2 | | 39.6 | | 65.5 | 1.2 | 32.1 | 3.8 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|--|--|------|--|------|--|-----|-----|------|-----|--|
| Row | | | | 1.9 | | 1.5 | | 1.5 | 2.1 | 1.6 | 2.0 | |
| BOQ, D% | | | | 13.8 | | 62.0 | | 101 | 2.4 | 51.4 | 7.5 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|------|--|------|--|------|------|------|------|--|
| Q spacing | | | | 25.0 | | 25.0 | | 25.0 | 25.0 | 25.0 | 25.0 | |
| Q storage | | | | 0 | | 0 | | 0 | 0 | 0 | 0 | |
| Avg Rq | | | | | | | | | | | | |
| 95% Rqs | | | | | | | | | | | | |

DSA
11/11/11

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|---------------------------------|------------------|-----------------|--------------|---------------------------|
| Analyst | USA! | Intersection | SR-125SB OFF-RAMP/LONE STAR RD. | Area Type | All other areas | Jurisdiction | 125SB/LONE STAR BL/MNDMIT |
| Agency or Co. | USA! | Analysis Year | YEAR 2030 ALT-3B WITH LM | Date Performed | 03/06/11 | | |
| Time Period | AM PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|------|-----|-----|----------|--------------------------|-----|-----|----|------|----|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Nu. of Lanes | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Lane group | | T | | | T | | | | | L | | R |
| Volume (vph) | | 1680 | | | 820 | | | | | 1320 | | 300 |
| % Heavy veh | | 10 | | | 10 | | | | | 10 | | 10 |
| PHF | | 0.95 | | | 0.95 | | | | | 0.95 | | 0.95 |
| Actuated (P/A) | | A | | | A | | | | | A | | A |
| Startup lost time | | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Ext. eff. green | | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Arrival type | | 5 | | | 5 | | | | | 3 | | 3 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | | | | | 10 | | 10 | | 0 |
| Lane Width | | 12.0 | | | 12.0 | | | | | 12.0 | | 12.0 |
| Parking/Grade/Parking | N | S | N | N | D | N | N | | N | N | D | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | | 0 | | | | | 0 | | 0 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Phasing | Thru Only | 02 | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 62.0 | G = | G = | G = | G = 60.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length (C) = 130.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-----|----|--|--|-------|------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | 1768 | | | 553 | | | | | 1389 | |
| Lane group cap | | 2362 | | | 2352 | | | | | 1471 | | 1200 |
| wo ratio | | 0.75 | | | 0.37 | | | | | 0.94 | | 0.26 |
| Green ratio | | 0.48 | | | 0.45 | | | | | 0.46 | | 0.46 |
| Unif. delay d1 | | 27.7 | | | 21.5 | | | | | 35.4 | | 21.5 |
| Delay factor k | | 0.30 | | | 0.11 | | | | | 0.45 | | 0.17 |
| Inc'm. delay c2 | | 1.4 | | | 0.1 | | | | | 12.6 | | 0.1 |
| PF factor | | 0.392 | | | 0.392 | | | | | 1.000 | | 1.000 |
| Control delay | | 12.2 | | | 8.5 | | | | | 46.0 | | 21.6 |
| Lane group LOS | | B | | | A | | | | | D | | C |
| Approch. delay | | 12.2 | | | 8.5 | | | | | 41.5 | | |
| Approach LOS | | B | | | A | | | | | D | | |
| Intersco. delay | | 23.0 | | Intersection LOS | | | | | | | C | |

25A
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT -3B WITH LA MEDIA/SR125-SB-LONESTAR/NO MI7

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|-------|----|----|-------|----|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | T | | | T | | | | | L | | R |
| In 1 queue/lane | | 0.0 | | | 0.0 | | | | | 0.0 | | 0.0 |
| Flow rate/lane | | 1768 | | | 863 | | | | | 1389 | | 316 |
| Satflow per lane | | 1818 | | | 1818 | | | | | 1641 | | 1468 |
| Capacity/lane | | 2362 | | | 2362 | | | | | 1471 | | 1200 |
| Flow ratio | | 0.36 | | | 0.17 | | | | | 0.44 | | 0.12 |
| Wq ratio | | 0.75 | | | 0.37 | | | | | 0.34 | | 0.26 |
| Factor | | 1.000 | | | 1.000 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | | 5 | | | 5 | | | | | 3 | | 3 |
| Platoon ratio | | 1.67 | | | 1.67 | | | | | 1.50 | | 1.00 |
| PF factor | | 0.62 | | | 0.46 | | | | | 1.50 | | 1.00 |
| Q1 | | 11.9 | | | 3.3 | | | | | 24.6 | | 3.9 |
| Q0 | | 0.5 | | | 0.8 | | | | | 0.7 | | 0.7 |
| Q2 | | 2.2 | | | 0.4 | | | | | 5.9 | | 0.2 |
| Q avg | | 14.0 | | | 3.7 | | | | | 30.5 | | 4.2 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|--|------|--|--|-----|--|--|--|--|------|--|-----|
| TH% | | 1.8 | | | 2.0 | | | | | 1.6 | | 2.0 |
| BOQ Q% | | 24.9 | | | 7.4 | | | | | 49.1 | | 8.3 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|--|--|------|--|--|--|--|------|--|------|
| Q spacing | | 25.0 | | | 25.0 | | | | | 25.0 | | 25.0 |
| Q storage | | 0 | | | 0 | | | | | 0 | | 0 |
| Avg. RQ | | | | | | | | | | | | |
| 95% Rq% | | | | | | | | | | | | |

MS200411

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Version 4.11

28-2-2

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-------|-----|-----|----------|------------------------|------------------------------|-----|-----|-------|----|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst: | USAJ | | | | | Intersection: | SR-125SB OFF-RAMP/ONESTAR RD | | | | | |
| Agency or Co.: | USAJ | | | | | Area Type: | All other areas | | | | | |
| Date Performed: | 03/06/11 | | | | | Jurisdiction: | 125SB/ONE30P35W/LMNOMI7 | | | | | |
| Time Period: | PM PEAK HOUR | | | | | Analysis Year: | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of lanes | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Lane group | | T | | | T | | | | | L | | R |
| Volume (vph) | | 1120 | | | 1230 | | | | | 980 | | 450 |
| % Heavy veh | | 10 | | | 10 | | | | | 10 | | 10 |
| PIV | | 0.95 | | | 0.95 | | | | | 0.95 | | 0.95 |
| Actuated (P/A) | | A | | | A | | | | | A | | A |
| Startup lost time | | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Ext eff green | | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Arrival type | | 5 | | | 5 | | | | | 3 | | 3 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | | | | 10 | | | 10 | | 150 |
| Lane Width | | 12.0 | | | 12.0 | | | | | 12.0 | | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/h | | | | | | | | | | | | |
| Bus stops/h | | 0 | | | 0 | | | | | 0 | | 0 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Phasing | Thru Only | 02 | 03 | 04 | SB Only | 05 | 06 | 07 | 08 | | | |
| Timing | G = 60.0 | G = | G = | G = | G = 42.0 | G = | G = | G = | G = | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = | Y = | Y = | Y = | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 110.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | 1179 | | | 1295 | | | | | 1011 | | 316 |
| Lane group cap | | 2702 | | | 2702 | | | | | 1717 | | 992 |
| v/c ratio | | 0.44 | | | 0.48 | | | | | 0.83 | | 0.32 |
| Green ratio | | 0.55 | | | 0.55 | | | | | 0.38 | | 0.38 |
| Unit delay d1 | | 14.9 | | | 15.4 | | | | | 30.8 | | 23.9 |
| Delay factor k | | 0.11 | | | 0.11 | | | | | 0.37 | | 0.11 |
| Increment delay d2 | | 0.1 | | | 0.1 | | | | | 5.0 | | 0.2 |
| PF factor | | 5.250 | | | 5.700 | | | | | 1.005 | | 1.005 |
| Control delay | | 3.1 | | | 3.2 | | | | | 35.6 | | 24.1 |
| Lane group LOS | | A | | | A | | | | | D | | C |
| Approach delay | | 3.1 | | | 3.2 | | | | | 33.0 | | |
| Approach LOS | | A | | | A | | | | | C | | |
| Intersec delay | | 13.6 | | | | | Intersection LOS | | | | | B |

23P
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT-3B PM WITH LA MEDIA/SR125-SB-LONESTAR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|--------------------|----|-------|----|----|-------|----|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | T | | | T | | | | | L | | R |
| Init queue/lane | | 0.0 | | | 0.0 | | | | | 0.0 | | 0.0 |
| Flow rate/lane | | 1179 | | | 1295 | | | | | 1011 | | 315 |
| Self flow per lane | | 1818 | | | 1818 | | | | | 1841 | | 1468 |
| Capacity/lane | | 2702 | | | 2752 | | | | | 1217 | | 992 |
| Flow ratio | | 0.24 | | | 0.26 | | | | | 0.32 | | 0.12 |
| Vol ratio | | 0.44 | | | 0.48 | | | | | 0.83 | | 0.32 |
| I factor | | 1.000 | | | 1.000 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | | 5 | | | 5 | | | | | 3 | | 3 |
| Parson ratio | | 1.67 | | | 1.67 | | | | | 1.00 | | 1.00 |
| PF factor | | 0.25 | | | 0.26 | | | | | 1.00 | | 1.00 |
| Q1 | | 2.0 | | | 2.3 | | | | | 14.4 | | 3.6 |
| KB | | 0.8 | | | 0.8 | | | | | 0.6 | | 0.5 |
| Q2 | | 0.6 | | | 0.7 | | | | | 2.4 | | 0.3 |
| Q avg. | | 2.6 | | | 3.0 | | | | | 18.9 | | 4.1 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|-----|--|--|-----|--|--|--|--|------|--|-----|
| frs | | 2.0 | | | 2.0 | | | | | 1.7 | | 2.0 |
| BOQ, Q% | | 5.2 | | | 6.1 | | | | | 29.2 | | 8.1 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|--|--|------|--|--|--|--|------|--|------|
| Q spacing | | 25.0 | | | 25.0 | | | | | 25.0 | | 25.0 |
| Q storage | | 0 | | | 0 | | | | | 0 | | 0 |
| Avg Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

297
N
N

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-----|------------------|-------|-----------------------|-----------------------------------|-----|----|----|----|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA! | | | | | Intersection | SR 125 NB ON- RAMPA ONESTAR RD | | | | | |
| Agency or Co. | USA! | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | 125NBLONE3043BWL M | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane group | L | T | | | T | R | | | | | | |
| Volume (vph) | 300 | 2700 | | | 820 | 780 | | | | | | |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | | | |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | | | |
| Actuated (P/A) | A | A | | | A | A | | | | | | |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | | | |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | | | |
| Arrival type | S | S | | | S | S | | | | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | | | |
| Pod/Bike/RTOR Volume | | | | 10 | | 0 | | | | | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | | | | | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | | | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | | | |
| Phasing | LB Only | Thru & RT | 03 | 04 | 05 | 06 | 07 | 08 | | | | |
| Timing | G = 39.0 | G = 42.0 | G = | G = | G = | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 90.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 316 | 2842 | | | 863 | 821 | | | | | | |
| Lane group cap | 1381 | 4953 | | | 2311 | 1213 | | | | | | |
| w/o ratio | 0.23 | 0.57 | | | 0.37 | 0.69 | | | | | | |
| Green ratio | 0.43 | 1.00 | | | 0.47 | 0.47 | | | | | | |
| Unif. delay d1 | 16.0 | 0.0 | | | 15.5 | 19.7 | | | | | | |
| Delay factor k | 0.11 | 0.17 | | | 0.11 | 0.25 | | | | | | |
| Incrern. delay d2 | 0.1 | 0.2 | | | 0.1 | 1.5 | | | | | | |
| PF factor | 0.493 | 0.953 | | | 0.417 | 0.417 | | | | | | |
| Control delay | 7.9 | 0.2 | | | 6.5 | 9.3 | | | | | | |
| Lane group LOS | A | A | | | A | A | | | | | | |
| Approch. delay | 0.9 | | | 7.9 | | | | | | | | |
| Approach LOS | A | | | A | | | | | | | | |
| Intersec. delay | 3.4 | | | Intersection LOS | | | | | | A | | |

29A
N
SA

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALY.-39 AM WITH LA MEDIA / 125NB-LONESTAR RD.

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|----|----|-------|-------|----|----|----|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | T | R | | | | | | |
| In t. queues/lane | 0.0 | 0.0 | | | 0.0 | 0.0 | | | | | | |
| Flow rate/lane | 316 | 2842 | | | 863 | 821 | | | | | | |
| Satflow per lane | 1641 | 1818 | | | 1818 | 1466 | | | | | | |
| Capacity/lane | 1381 | 4953 | | | 2311 | 1213 | | | | | | |
| Flow ratio | 0.10 | 0.57 | | | 0.17 | 0.32 | | | | | | |
| w/c ratio | 0.23 | 0.57 | | | 0.37 | 0.68 | | | | | | |
| Factor | 1.000 | 1.000 | | | 1.000 | 1.000 | | | | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | | | | | |
| Platoon ratio | 1.67 | 1.00 | | | 1.67 | 1.67 | | | | | | |
| PF factor | 0.53 | | | | 0.48 | 0.60 | | | | | | |
| Q1 | 1.3 | | | | 2.5 | 5.4 | | | | | | |
| ka | 0.6 | 1.3 | | | 0.5 | 0.5 | | | | | | |
| Q2 | 0.2 | 1.3 | | | 0.4 | 1.1 | | | | | | |
| Q avg | 1.5 | | | | 2.9 | 6.5 | | | | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|-----|--|--|--|-----|------|--|--|--|--|--|--|
| fe% | 2.1 | | | | 2.0 | 1.9 | | | | | | |
| BOQ Q% | 3.1 | | | | 5.7 | 12.5 | | | | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|--|------|------|--|--|--|--|--|--|
| Q spacing | 25.0 | 25.0 | | | 25.0 | 25.0 | | | | | | |
| Q storage | 0 | 0 | | | 0 | 0 | | | | | | |
| Avg. Roq | | | | | | | | | | | | |
| 95% Roq | | | | | | | | | | | | |

210
2
A

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-----|------------------|-------|------------------------|---------------------------------|-----|----|----|----|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA1 | | | | | Intersection | SR-125WB ON- RAMBLONESTAR RD | | | | | |
| Agency or Co. | USA1 | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/05/11 | | | | | Jurisdiction | 125NBLONC39P39WLM | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2035 ALT -3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane group | L | T | | | T | R | | | | | | |
| Volume (vph) | 290 | 1800 | | | 1295 | 1750 | | | | | | |
| % Heavy vcn | 10 | 10 | | | 10 | 10 | | | | | | |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | | | |
| Actuated (P/A) | A | A | | | A | A | | | | | | |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | | | |
| Exc. eff green | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | | | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | | | |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | | | | | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | | | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| P.A. stops/hr | 0 | 0 | | | 0 | 0 | | | | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | | | |
| Phasing | EB Only | Thru & RT | 03 | 04 | 05 | 06 | 07 | 08 | | | | |
| Timing | G = 11.0 | G = 190.0 | G = | G = | G = | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 120.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj flow rate | 295 | 1895 | | | 1295 | 1750 | | | | | | |
| Lane group cap | 292 | 4953 | | | 4127 | 2105 | | | | | | |
| w/c ratio | 1.01 | 0.36 | | | 0.31 | 0.84 | | | | | | |
| Green ratio | 0.59 | 1.00 | | | 0.83 | 0.83 | | | | | | |
| Unif. delay d1 | 54.5 | 0.5 | | | 2.3 | 5.5 | | | | | | |
| Delay factor k | 0.50 | 3.11 | | | 0.11 | 0.37 | | | | | | |
| Incrmnt. delay d2 | 55.3 | 0.0 | | | 0.0 | 3.1 | | | | | | |
| Pf factor | 0.933 | 0.950 | | | 0.300 | 0.300 | | | | | | |
| Control delay | 156.1 | 0.5 | | | 0.7 | 4.7 | | | | | | |
| Lane group LOS | C | A | | | A | A | | | | | | |
| Approch. delay | 14.3 | | | 3.0 | | | | | | | | |
| Approach LOS | B | | | A | | | | | | | | |
| Intersac delay | 7.6 | | | Intersection LOS | | | | | | A | | |

298
N
M

| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|--|-------|-------|----|----|-------|-------|----|----|----|----|----|----|
| General information | | | | | | | | | | | | |
| Project Description: ALT.-39 PM WITH LA MEDIA / 125WB-LONESTAR RD. | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | T | R | | | | | | |
| Init queue/lane | 0.0 | 6.0 | | | 0.0 | 0.0 | | | | | | |
| Flow rate/lane | 295 | 1895 | | | 1295 | 1756 | | | | | | |
| Satflow per lane | 1641 | 1818 | | | 1818 | 1427 | | | | | | |
| Capacity/lane | 292 | 4953 | | | 4127 | 2106 | | | | | | |
| Flow ratio | 0.09 | 0.36 | | | 0.26 | 0.70 | | | | | | |
| Wc ratio | 1.01 | 0.38 | | | 0.31 | 0.94 | | | | | | |
| I factor | 1.000 | 1.000 | | | 1.000 | 1.000 | | | | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | | | | | |
| Platoon ratio | 1.67 | 1.05 | | | 1.14 | 1.14 | | | | | | |
| PF factor | 1.05 | | | | 0.32 | 0.44 | | | | | | |
| Q1 | 5.0 | | | | 1.1 | 8.0 | | | | | | |
| KS | 0.3 | 1.2 | | | 1.1 | 0.9 | | | | | | |
| Q2 | 2.3 | 0.1 | | | 0.5 | 4.0 | | | | | | |
| Q avg. | 7.3 | | | | 1.6 | 12.0 | | | | | | |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| fas | 1.9 | | | | 2.0 | 1.8 | | | | | | |
| BOQ, Qs | 13.9 | | | | 3.3 | 21.7 | | | | | | |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | 25.0 | 25.0 | | | 25.0 | 25.0 | | | | | | |
| Q storage | 0 | 0 | | | 0 | 0 | | | | | | |
| Avg. RQ | | | | | | | | | | | | |
| 95% Rqs | | | | | | | | | | | | |

30A

22

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|------------------------------|------------------|--|--|--|
| Analyst | USAJ | Intersection | LOWESTAR RD./PIPER RANCH RD. | | | | |
| Agency or Co. | USAJ | Area Type | All other areas | | | | |
| Date Performed | 03/06/11 | Jurisdiction | LOWEPIPER30A3BWLMNOMIT | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030 4L1-3B WITH 1M | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|------|------|----------|--------------------------|------|-----|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of lanes | 0 | 3 | 0 | 2 | 3 | 0 | 2 | 0 | 1 | 0 | 0 | 0 |
| Lane Group | | TR | | L | T | | L | | R | | | |
| Volume (vph) | | 2465 | 240 | 245 | 1545 | | 60 | | 50 | | | |
| % Heavy veh | | 10 | 10 | 10 | 10 | | 10 | | 10 | | | |
| PIF | | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | | | |
| Actuated (P/A) | | A | A | A | A | | A | | A | | | |
| Startup lost time | | 2.0 | | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Ext. off green | | 2.0 | | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Arrival type | | S | | S | S | | S | | S | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | | | | 10 | 5 | 0 | 10 | | |
| Lane Width | | 12.0 | | 12.0 | 12.0 | | 12.0 | | 12.0 | | | |
| Parking/Grader Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | 0 | 0 | | 0 | | 0 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Phasing | WB Only | Thru & RT | 03 | 04 | NB Only | 06 | 07 | 08 | | | | |
| Timing | G = 17.0 | G = 70.0 | G = | G = | G = 10.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle length (s) = 110.0 | | | | | | |

Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | |
|----------------------|----|-------|----|-------|-------|----|------------------|----|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj flow rate | | 2642 | | 253 | 1621 | | 63 | | 53 | | | |
| Lane group cap. | | 3105 | | 492 | 4097 | | 250 | | 126 | | | |
| v/c ratio | | 0.82 | | 0.51 | 0.40 | | 0.22 | | 0.50 | | | |
| Green ratio | | 0.54 | | 0.15 | 0.83 | | 0.09 | | 0.09 | | | |
| Unit delay (s) | | 17.4 | | 42.7 | 2.4 | | 46.4 | | 47.6 | | | |
| Delay factor (k) | | 0.43 | | 0.12 | 0.11 | | 0.11 | | 0.11 | | | |
| Increment. delay (s) | | 4.6 | | 5.9 | 0.1 | | 6.4 | | 3.1 | | | |
| PF factor | | 0.136 | | 0.875 | 0.289 | | 0.933 | | 0.933 | | | |
| Control delay | | 7.2 | | 38.4 | 0.6 | | 43.7 | | 47.5 | | | |
| Lane group LOS | | A | | D | A | | C | | D | | | |
| Approch. delay | | 7.2 | | 5.9 | | | 45.6 | | | | | |
| Approach LOS | | A | | A | | | D | | | | | |
| Intersec. delay | | 7.7 | | | | | Intersection LOS | | | | | A |

3/2/21

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: /LT-3B WITH LA MEDIA AM LONESTAR/PIPER RD./NO MIT

Average Back of Queue

| | FB | | | WB | | | NB | | | SB | | |
|-------------------|----|-------|----|-------|-------|----|-------|-------|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | TR | | L | T | | L | | R | | | |
| In-l queue/lane | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | | | |
| Flow rate/lane | | 2842 | | 253 | 1621 | | 63 | | 63 | | | |
| Sat flow per lane | | 1768 | | 1641 | 1816 | | 1641 | | 1386 | | | |
| Capacity/lane | | 3107 | | 254 | 4597 | | 290 | | 126 | | | |
| Flow ratio | | 0.58 | | 0.15 | 0.33 | | 0.02 | | 0.05 | | | |
| w/c ratio | | 0.92 | | 1.00 | 0.40 | | 0.22 | | 0.50 | | | |
| l factor | | 1.500 | | 1.000 | 1.000 | | 1.500 | 1.000 | 1.000 | | | |
| Arrival type | | 5 | | 5 | 5 | | 5 | | 5 | | | |
| Platoon ratio | | 1.49 | | 1.67 | 1.15 | | 1.67 | | 1.57 | | | |
| PF factor | | 0.44 | | 1.00 | 0.31 | | 0.95 | | 0.95 | | | |
| Q1 | | 12.3 | | 7.7 | 1.5 | | 0.9 | | 1.9 | | | |
| Q5 | | 6.8 | | 0.3 | 1.0 | | 0.2 | | 0.2 | | | |
| Q9 | | 6.1 | | 3.2 | 0.6 | | 0.1 | | 0.2 | | | |
| Q avg. | | 18.4 | | 10.9 | 2.1 | | 0.9 | | 2.0 | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|------|--|------|-----|--|-----|--|-----|--|--|--|
| Time | | 1.7 | | 1.8 | 2.0 | | 2.1 | | 2.0 | | | |
| BOQ: Q% | | 31.5 | | 20.0 | 4.3 | | 1.9 | | 4.0 | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|--|------|------|--|------|--|------|--|--|--|
| Q spacing | | 25.0 | | 25.0 | 25.0 | | 25.0 | | 25.0 | | | |
| Q storage | | 0 | | 0 | 0 | | 0 | | 0 | | | |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq% | | | | | | | | | | | | |

2017
23

| SHORT REPORT | | | | | | | | | | | | |
|---|-------------------|-------------------|------------|------------------|-------------------|------------------|------------------------------|------------|------------|------------|----|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | LONESTAR RD / PIPER RANCH RD | | | | | |
| Agency or Co. | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | LONEPIPER30P3BWL MNOMIT | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 3 | 0 | 2 | 3 | 0 | 2 | 0 | 1 | 0 | 0 | 0 |
| Lane group | | TR | | L | T | | L | | R | | | |
| Volume (vph) | | 1740 | 60 | 60 | 2660 | | 240 | | 240 | | | |
| % Heavy veh. | | 10 | 10 | 10 | 10 | | 10 | | 10 | | | |
| PHF | | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | | | |
| Actuals (P/A) | | A | A | A | A | | A | | A | | | |
| Startup lost time | | 2.0 | | 2.5 | 2.0 | | 2.5 | | 2.0 | | | |
| Ext. eff. green | | 2.0 | | 2.5 | 2.0 | | 2.5 | | 2.5 | | | |
| Arrival type | | S | | S | S | | S | | S | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Peak/Off-peak/RTOR Volume | 10 | 5 | 0 | | | | 10 | 5 | 0 | 10 | | |
| Lane Width | | 12.0 | | 12.0 | 12.0 | | 12.0 | | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | 0 | 0 | | 0 | | 0 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Phasing | WB Only | Thru & RT | 03 | | | 04 | NB Only | 05 | 07 | 08 | | |
| Timing | G = 17.0 Y = 4 | G = 10.0 Y = 5 | G = Y = | G = Y = | G = 25.0 Y = 4 | G = Y = | G = Y = | G = Y = | G = Y = | G = Y = | | |
| Duration of Analysis (hrs) | = 0.25 | | | | | | Cycle Length (s) = 125.0 | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | 1895 | | 63 | 2609 | | 253 | | 253 | | | |
| Lane group cap. | | 2758 | | 433 | 3606 | | 637 | | 267 | | | |
| Util. ratio | | 0.69 | | 0.15 | 0.72 | | 0.40 | | 0.95 | | | |
| Green ratio | | 0.56 | | 0.14 | 0.73 | | 0.20 | | 0.20 | | | |
| Unit delay d1 | | 19.7 | | 47.6 | 10.6 | | 43.5 | | 49.4 | | | |
| Delay factor k | | 0.26 | | 0.11 | 0.33 | | 0.11 | | 0.46 | | | |
| Incr. delay d2 | | 0.7 | | 0.2 | 1.1 | | 0.4 | | 40.9 | | | |
| P1 factor | | 0.152 | | 0.896 | 0.184 | | 0.833 | | 0.823 | | | |
| Control delay | | 3.7 | | 42.8 | 3.1 | | 36.6 | | 82.0 | | | |
| Lane group LOS | | A | | D | A | | D | | F | | | |
| Approach delay | 3.7 | | | 3.9 | | | 59.3 | | | | | |
| Approach LOS | A | | | A | | | E | | | | | |
| Intersec. delay | 9.2 | | | Intersection LOS | | | | | | A | | |

3 ER
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 3B WITH LA MEDIA PM LONESTAR/PIPER RD AND MIT

Average Back of Queue

| | EB | | | WB | | | NE | | | SB | | |
|-----------------------|----|-------|----|-------|-------|----|-------|-------|----|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | TR | | L | T | | L | R | | | | |
| Init. queue/lane | | 5.0 | | 5.0 | 0.0 | | 0.0 | 0.0 | | | | |
| Flow rate/lane | | 1895 | | 83 | 2830 | | 252 | 252 | | | | |
| Sat flow per lane | | 1807 | | 1641 | 1818 | | 1641 | 1421 | | | | |
| Capacity/lane | | 2757 | | 223 | 3606 | | 328 | 284 | | | | |
| Flow ratio | | 0.38 | | 0.04 | 0.56 | | 0.15 | 0.18 | | | | |
| w/c ratio | | 0.69 | | 0.28 | 0.78 | | 0.77 | 0.83 | | | | |
| λ factor | | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | | | |
| Arrival type | | 5 | | 5 | 5 | | 5 | 5 | | | | |
| Platoon ratio | | 1.67 | | 1.67 | 1.30 | | 1.67 | 1.67 | | | | |
| P ² factor | | 0.26 | | 0.92 | 0.30 | | 0.95 | 0.97 | | | | |
| Q ² | | 4.5 | | 1.8 | 5.8 | | 7.9 | 8.3 | | | | |
| K ₂ | | 5.8 | | 0.3 | 1.0 | | 0.4 | 0.4 | | | | |
| Q ² | | 1.8 | | 0.1 | 3.2 | | 1.3 | 2.1 | | | | |
| Q avg | | 6.3 | | 1.9 | 10.0 | | 9.2 | 10.4 | | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|--|------|--|-----|------|--|------|------|--|--|--|--|
| 15% | | 1.9 | | 2.0 | 1.8 | | 1.9 | 1.8 | | | | |
| BOQ. Q ₉₅ | | 12.0 | | 4.0 | 18.4 | | 17.0 | 19.1 | | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|--|------|--|------|------|--|------|------|--|--|--|--|
| Q spacing | | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | | | |
| Q storage | | 0 | | 0 | 0 | | 0 | 0 | | | | |
| Avg. R _c | | | | | | | | | | | | |
| 95% R _c | | | | | | | | | | | | |

21A
23

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|-------------------------------|--|--|
| Analyst | USAi | | | Intersection | OTAY MESA RD./PIPER RANCH RD. | | |
| Agency or Co. | USAi | | | Area Type | All other areas | | |
| Date Performed | 03/25/11 | | | Jurisdiction | CMP/PER30A3BWLMNOMIT | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YFAR 2030 AT T-38 WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 600 | 2150 | 325 | 185 | 1605 | 330 | 160 | 50 | 90 | 215 | 160 | 400 |
| % Heavy veh | 10 | 10 | 5 | 5 | 10 | 10 | 5 | 5 | 5 | 10 | 5 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Start-up red time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 3 | 3 | | 3 | 3 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 30.0 | G = 55.0 | G = | G = | G = 22.0 | G = 15.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 145.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|------|------------------|-------|------|-------|-------|-----|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | 632 | 2605 | | 195 | 2036 | | 168 | 146 | | 226 | 526 |
| Lane group cap. | 683 | 1913 | | 715 | 1883 | | 270 | 340 | | 258 | 316 | |
| v/c ratio | 0.93 | 1.36 | | 0.27 | 1.08 | | 0.62 | 0.44 | | 0.88 | 1.56 | |
| Green ratio | 0.21 | 0.39 | | 0.21 | 0.39 | | 0.16 | 0.11 | | 0.16 | 0.11 | |
| Ln f delay d1 | 53.9 | 42.5 | | 45.9 | 42.5 | | 55.1 | 58.5 | | 57.7 | 62.5 | |
| Delay factor k | 0.44 | 0.50 | | 0.11 | 0.50 | | 0.21 | 0.11 | | 0.40 | 0.50 | |
| Increment delay d2 | 18.6 | 168.2 | | 0.2 | 45.2 | | 4.4 | 0.9 | | 26.8 | 312.7 | |
| PI factor | 0.818 | 0.569 | | 0.818 | 0.569 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Control delay | 62.7 | 190.4 | | 37.9 | 69.4 | | 59.5 | 59.4 | | 84.5 | 375.2 | |
| Lane group LOS | E | F | | D | E | | E | E | | F | F | |
| Approach delay | 165.5 | | | 66.6 | | | 59.5 | | | 287.8 | | |
| Approach LOS | F | | | E | | | E | | | F | | |
| Intersection delay | 140.7 | | | Intersection LOS | | | | | | F | | |

Z/A
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-3B AM WITH LA MEDIA OTAY MESA/PIPER RANCH RD/NO
MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Init. queue/veh | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/veh | 832 | 2605 | | 185 | 2036 | | 158 | 148 | | 226 | 525 | |
| Sat flow per lane | 1641 | 1787 | | 1715 | 1755 | | 1719 | 1567 | | 1641 | 1550 | |
| Capacity/veh | 683 | 1913 | | 715 | 1869 | | 270 | 340 | | 258 | 516 | |
| Flow ratio | 0.20 | 0.53 | | 0.06 | 0.47 | | 0.10 | 0.65 | | 0.14 | 0.18 | |
| W/O ratio | 0.93 | 1.36 | | 0.27 | 1.08 | | 0.82 | 0.44 | | 0.88 | 1.96 | |
| l factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.050 | 1.050 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 3 | 3 | | 3 | 3 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| PF factor | 0.98 | 1.00 | | 0.85 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Q1 | 12.1 | 37.2 | | 2.8 | 29.0 | | 5.1 | 2.9 | | 8.6 | 10.7 | |
| ks | 0.5 | 0.7 | | 0.5 | 0.7 | | 0.4 | 0.3 | | 0.4 | 0.3 | |
| Q2 | 3.1 | 34.3 | | 5.2 | 12.3 | | 5.6 | 0.2 | | 1.9 | 14.6 | |
| Q avg. | 16.2 | 71.5 | | 3.5 | 41.3 | | 5.7 | 3.5 | | 10.5 | 25.3 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|------|-----|--|-----|------|--|------|-----|--|------|------|--|
| lax | 1.8 | 1.5 | | 2.0 | 1.6 | | 1.9 | 2.5 | | 1.8 | 1.9 | |
| BOQ Qs | 26.7 | 108 | | 5.9 | 64.5 | | 12.9 | 6.1 | | 19.3 | 41.7 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg Rc | | | | | | | | | | | | |
| 95% Row | | | | | | | | | | | | |

31A

W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|--------------------------------|--|--|
| Analyst | USA1 | | | Intersector | OTAY MESA RD / PIPER RANCH RD. | | |
| Agency or Co. | USA1 | | | Area Type | All other areas | | |
| Date Performed | 03/06/11 | | | Jurisdiction | OMP/PIPER30A3BW/MW/TH/MT | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YEAR 2030 A/T -3B WITH I/M | | |

| Volume and Timing Input | | | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|------|------|------------------------|------|-----------|-----------|------|------|-----|--|
| | EB | | | WB | | | NB | | | SB | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| Num. of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | | |
| Volume (vph) | 600 | 2150 | 325 | 185 | 1605 | 330 | 160 | 50 | 90 | 215 | 100 | 400 | | |
| % Heavy veh. | 10 | 10 | 5 | 5 | 10 | 10 | 5 | 5 | 5 | 10 | 5 | 10 | | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. off. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | | |
| Parking/h: | | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl Left | Thru & RT | 03 | | | 04 | | | Excl Left | Thru & RT | 07 | | 08 | |
| Timing | G = 30.0 | G = 55.0 | G = | | | G = | | | G = 22.0 | G = 15.0 | G = | | G = | |
| | Y = 4 | Y = 5 | Y = | | | Y = | | | Y = 4 | Y = 5 | Y = | | Y = | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 632 | 2263 | 342 | 195 | 1669 | 347 | 168 | 53 | 95 | 226 | 105 |
| Lane group cap. | 683 | 1946 | 881 | 715 | 1946 | 842 | 525 | 204 | 528 | 501 | 204 | 869 |
| w/c ratio | 0.93 | 1.16 | 0.39 | 0.27 | 0.87 | 0.41 | 0.32 | 0.26 | 0.18 | 0.45 | 0.51 | 0.47 |
| Green ratio | 0.21 | 0.39 | 0.59 | 0.21 | 0.39 | 0.59 | 0.16 | 0.11 | 0.36 | 0.16 | 0.11 | 0.36 |
| Unif. delay d1 | 53.9 | 42.5 | 15.5 | 45.9 | 29.2 | 15.8 | 52.4 | 57.4 | 30.9 | 52.5 | 59.1 | 34.8 |
| Delay factor k | 0.44 | 0.59 | 0.11 | 0.11 | 0.40 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.12 | 0.11 |
| Incremental delay d2 | 18.6 | 79.4 | 0.3 | 0.2 | 4.5 | 0.3 | 0.4 | 0.7 | 0.2 | 0.6 | 2.3 | 0.4 |
| PF factor | 0.818 | 0.559 | 0.121 | 0.818 | 0.569 | 0.121 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Control delay | 62.7 | 103.6 | 2.2 | 37.5 | 26.8 | 2.2 | 52.7 | 58.1 | 31.1 | 54.2 | 61.3 | 35.2 |
| Lane group LOS | E | F | A | D | C | A | D | E | C | D | E | D |
| Approach delay | 84.9 | | | 23.9 | | | 47.1 | | | 44.5 | | |
| Approach LOS | F | | | C | | | D | | | D | | |
| Intersec. delay | 57.6 | | | Intersection LOS | | | | | | F | | |

31A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: **ALT.-33 AM WITH LA MEDIA CTAY MESA/PIPER RANCH**
 RD/WITHMIT

Average Back of Queue

| | CB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Inil. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 532 | 2253 | 342 | 135 | 1888 | 347 | 168 | 53 | 95 | 226 | 105 | 421 |
| Satlow per lane | 1641 | 1818 | 1505 | 1719 | 1818 | 1437 | 1719 | 1995 | 1473 | 1641 | 1995 | 1408 |
| Capacity/lane | 683 | 1948 | 681 | 715 | 1948 | 842 | 525 | 204 | 526 | 551 | 204 | 889 |
| Flow ratio | 0.20 | 0.46 | 0.23 | 0.56 | 0.34 | 0.24 | 0.05 | 0.03 | 0.08 | 0.07 | 0.06 | 0.17 |
| wo ratio | 0.93 | 1.16 | 0.99 | 0.27 | 0.87 | 0.41 | 0.32 | 0.26 | 0.19 | 0.45 | 0.51 | 0.47 |
| Factor | 1.000 | 1.000 | 1.500 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 |
| Platoon ratio | 1.67 | 1.67 | 1.52 | 1.67 | 1.67 | 1.62 | 1.50 | 1.00 | 1.05 | 1.05 | 1.05 | 1.00 |
| PF factor | 0.98 | 1.00 | 0.15 | 0.85 | 0.87 | 0.15 | 1.50 | 1.00 | 1.05 | 1.00 | 1.05 | 1.50 |
| Q ₁ | 12.1 | 32.3 | 1.1 | 2.9 | 19.3 | 1.1 | 3.0 | 1.9 | 2.5 | 4.1 | 3.9 | 7.1 |
| ka | 0.5 | 0.7 | 0.8 | 0.5 | 0.7 | 0.8 | 0.4 | 0.3 | 0.6 | 0.4 | 0.3 | 0.6 |
| Q ₂ | 3.1 | 19.6 | 0.5 | 3.2 | 3.7 | 0.6 | 0.2 | 0.1 | 0.1 | 0.3 | 0.4 | 0.5 |
| Q avg. | 15.2 | 50.9 | 1.6 | 3.0 | 23.5 | 1.7 | 3.2 | 2.0 | 2.7 | 4.4 | 4.2 | 7.7 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|-----|-----|------|-----|-----|-----|-----|-----|-----|------|
| fe% | 1.8 | 1.5 | 2.0 | 2.0 | 1.7 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 |
| BOQ, Qs | 26.7 | 78.1 | 3.2 | 5.9 | 38.3 | 3.4 | 6.3 | 4.1 | 5.4 | 6.7 | 8.3 | 14.5 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

31P
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|-----------------------------|------------------|--|--|--|
| Analyst | USA! | Intersection | OTAY MESA RD/PIPER RANCH RD | | | | |
| Agency or Co | USA! | Area Type | All other areas | | | | |
| Date Performed | 03/25/11 | Jurisdiction | CM/PIPER30P3B/ALMNOMIT | | | | |
| Time Period | PM PFAK HOUR | Analysis Year | YEAR 2030 ALT. 3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------------------------|------------|-----------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 1 | 2 | 0 | 2 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 650 | 1430 | 550 | 290 | 1800 | 215 | 689 | 200 | 350 | 336 | 180 | 600 |
| % Heavy veh | 10 | 10 | 5 | 5 | 10 | 10 | 5 | 5 | 5 | 10 | 5 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Start-up lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | F | F | | F | F | | F | F | | F | F | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bike stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = 45.0 | G = | G = | G = 32.0 | G = 25.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | Cycle Length C = 140.0 | | | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|------|-------|-------|-----|-------|-------|-----|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj. flow rate | 624 | 2094 | | 305 | 2121 | | 695 | 590 | | 347 | 821 | |
| Lane group cap | 455 | 1534 | | 477 | 1552 | | 393 | 572 | | 375 | 538 | | |
| w/c ratio | 1.50 | 1.36 | | 0.64 | 1.26 | | 1.77 | 1.03 | | 0.93 | 1.53 | | |
| Green ratio | 0.14 | 0.32 | | 0.14 | 0.32 | | 0.23 | 0.18 | | 0.23 | 0.18 | | |
| Unit. delay d' | 63.0 | 47.5 | | 56.6 | 41.5 | | 54.0 | 57.5 | | 52.9 | 57.5 | | |
| Delay factor k | 0.50 | 0.50 | | 0.22 | 0.50 | | 0.50 | 0.50 | | 0.44 | 0.50 | | |
| Incr. n. delay d2 | 237.7 | 165.7 | | 2.9 | 165.3 | | 356.5 | 45.9 | | 25.5 | 246.0 | | |
| PF factor | 0.889 | 0.684 | | 0.869 | 0.684 | | 1.005 | 1.000 | | 1.006 | 1.005 | | |
| Control delay | 291.1 | 198.2 | | 53.2 | 197.8 | | 410.5 | 153.4 | | 81.3 | 303.5 | | |
| Lane group LOS | F | F | | D | F | | F | F | | F | F | | |
| Approch. delay | 221.1 | | | 179.6 | | | 269.3 | | | 237.5 | | | |
| Approach LOS | F | | | F | | | F | | | F | | | |
| Intersec. delay | 219.6 | | | Intersection LOS | | | | | | | | | F |

31-23

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT. 3b PM WITH LA MEDIA OTAY MESAPIPER RANCH RD./NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Intr. queue/lane | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 684 | 2084 | | 305 | 2121 | | 595 | 590 | | 347 | 821 | |
| Satflow per lane | 1641 | 1752 | | 1719 | 1784 | | 1719 | 1683 | | 1641 | 1581 | |
| Capacity/lane | 455 | 1534 | | 477 | 1562 | | 393 | 572 | | 375 | 536 | |
| Flow ratio | 0.21 | 0.44 | | 0.05 | 0.44 | | 0.40 | 0.18 | | 0.21 | 0.27 | |
| v/c ratio | 1.50 | 1.36 | | 0.84 | 1.36 | | 1.77 | 1.03 | | 0.93 | 1.53 | |
| f factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 3 | 3 | | 3 | 3 | |
| Platoon ratio | 1.57 | 1.57 | | 1.57 | 1.67 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| PF factor | 1.00 | 1.00 | | 0.95 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Qs | 13.7 | 29.8 | | 5.5 | 30.3 | | 27.0 | 12.0 | | 13.2 | 16.8 | |
| ks | 0.4 | 0.5 | | 0.4 | 0.6 | | 0.5 | 0.4 | | 0.5 | 0.4 | |
| Qz | 15.8 | 27.5 | | 0.7 | 27.9 | | 38.9 | 4.7 | | 3.2 | 19.8 | |
| Q avg. | 29.5 | 57.2 | | 6.1 | 58.1 | | 65.9 | 16.7 | | 16.4 | 36.5 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|--|------|------|--|------|------|--|------|------|--|
| l/s | 1.5 | 1.5 | | 1.9 | 1.5 | | 1.5 | 1.7 | | 1.7 | 1.5 | |
| BOQ, Qs | 47.7 | 87.3 | | 11.8 | 98.6 | | 39.9 | 29.1 | | 26.8 | 57.7 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. Rq | | | | | | | | | | | | |
| 95% Row | | | | | | | | | | | | |

318
W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|---------------|--------------|------------------|-----------------------------|--|--|
| Analyst | USAJ | Agency or Co. | USAJ | Intersection | OTAY MESA RD/PIPER RANCH RD | | |
| Date Performed | 03/06/11 | Time Period | PM PEAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | OMP/PIPER30P39W1MWITHMIT | | |
| | | | | Analysis Year | YEAR 2030 ALT -30 WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|----------|----------|------------------------|-----------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 1 | 1 | 2 | 1 | 2 |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Volume (vph) | 650 | 1430 | 550 | 290 | 1800 | 215 | 650 | 200 | 350 | 330 | 190 | 600 |
| % Heavy Veh | 10 | 10 | 5 | 5 | 10 | 10 | 5 | 5 | 5 | 10 | 5 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrive type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 2.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grader/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl Left | Thru & RT | 05 | | 34 | | Excl Left | Thru & RT | 07 | | 38 | |
| Timing | G = 25.0 | G = 45.0 | G = | G = | G = 32.0 | G = 25.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 684 | 1505 | 579 | 305 | 1895 | 220 | 695 | 211 | 379 | 347 | 199 |
| Lane group cap. | 455 | 1592 | 985 | 477 | 1592 | 849 | 763 | 340 | 532 | 728 | 340 | 899 |
| W/C ratio | 1.50 | 0.95 | 0.66 | 0.64 | 1.19 | 0.27 | 0.91 | 0.62 | 0.71 | 0.48 | 0.56 | 0.70 |
| Green ratio | 0.14 | 0.32 | 0.59 | 0.14 | 0.32 | 0.59 | 0.23 | 0.18 | 0.36 | 0.23 | 0.18 | 0.36 |
| Unit delay d1 | 60.0 | 46.3 | 19.5 | 56.6 | 47.5 | 14.3 | 52.6 | 53.1 | 38.0 | 46.0 | 52.4 | 38.6 |
| Delay factor k | 0.50 | 0.46 | 0.23 | 0.72 | 0.50 | 0.11 | 0.43 | 0.76 | 0.28 | 0.11 | 0.15 | 0.27 |
| Increment delay d2 | 237.7 | 12.0 | 1.8 | 2.9 | 92.2 | 0.2 | 15.1 | 3.5 | 4.5 | 0.5 | 2.0 | 2.5 |
| PF factor | 0.889 | 0.684 | 0.121 | 0.889 | 0.684 | 0.121 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Control delay | 291.1 | 43.7 | 4.2 | 52.2 | 124.7 | 1.9 | 67.7 | 58.6 | 43.3 | 47.2 | 54.5 | 41.1 |
| Lane group LOS | F | D | A | D | F | A | F | E | D | D | D | D |
| Approach delay | 95.6 | | | 104.3 | | | 58.7 | | | 45.1 | | |
| Approach LOS | F | | | F | | | E | | | D | | |
| Intersec. delay | 84.8 | | | Intersection LOS | | | | | | F | | |

31P
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT.-3B PM WITH LA MEDIA UTAY MESA/PIPER RANCH HO. WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 684 | 1505 | 579 | 305 | 1595 | 226 | 695 | 211 | 379 | 347 | 199 | 632 |
| Satflow per lane | 1641 | 1818 | 1503 | 1719 | 1918 | 1434 | 1719 | 1905 | 1495 | 1641 | 1905 | 1422 |
| Capacity/lane | 455 | 1592 | 660 | 477 | 1592 | 640 | 763 | 340 | 532 | 728 | 340 | 699 |
| Flow ratio | 0.21 | 0.30 | 0.39 | 0.09 | 0.38 | 0.16 | 0.21 | 0.11 | 0.25 | 0.11 | 0.10 | 0.25 |
| Wc ratio | 1.50 | 0.95 | 0.66 | 0.64 | 1.19 | 0.27 | 0.91 | 0.62 | 0.71 | 0.49 | 0.56 | 0.70 |
| Factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 |
| Platoon ratio | 1.57 | 1.67 | 1.62 | 1.67 | 1.67 | 1.62 | 1.00 | 1.50 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF factor | 1.00 | 0.96 | 0.20 | 0.95 | 1.00 | 0.14 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q1 | 13.7 | 20.2 | 3.0 | 5.5 | 27.0 | 0.6 | 13.5 | 7.5 | 12.7 | 6.0 | 6.7 | 11.9 |
| Q2 | 0.4 | 0.7 | 0.8 | 0.4 | 0.7 | 0.8 | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.6 |
| Q3 | 15.6 | 5.0 | 1.5 | 0.7 | 17.2 | 0.3 | 3.1 | 0.7 | 1.4 | 0.4 | 0.6 | 1.3 |
| Q avg. | 29.5 | 25.2 | 4.5 | 6.1 | 44.2 | 0.9 | 16.6 | 8.2 | 14.1 | 6.4 | 7.3 | 13.3 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|------|------|-----|------|------|-----|------|------|------|------|------|------|
| lb ₉₅ | 1.6 | 1.8 | 2.0 | 1.9 | 1.8 | 2.1 | 1.7 | 1.9 | 1.8 | 1.9 | 1.9 | 1.8 |
| BOQ, Q ₉₅ | 47.7 | 41.5 | 8.9 | 11.8 | 58.6 | 1.8 | 26.9 | 15.6 | 25.1 | 12.4 | 13.8 | 23.7 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro ₉₅ | | | | | | | | | | | | |

32A

N
3A

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|--------------------------------|--|--|
| Analyst | USAI | | | Intersection | SR-125SB OFF-RAMP/OTAY MESA RD | | |
| Agency or Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 03/06/11 | | | Jurisdiction | 125SB CM30A3BWL MNDMIT | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|----|------|----|----|------|----|----|----|----|------|----|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| Lane group | | T | | | T | | | | | L | | R |
| Volume (veh) | | 2455 | | | 1240 | | | | | 910 | | 880 |
| % Heavy veh | | 10 | | | 10 | | | | | 10 | | 10 |
| PHF | | 0.95 | | | 0.95 | | | | | 0.95 | | 0.95 |
| Actuated (P/A) | | A | | | A | | | | | A | | A |
| Startup lost time | | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Ext. eff green | | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Arrival type | | 5 | | | 5 | | | | | 3 | | 3 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | | | | 10 | | | 10 | | 300 |
| Lane Width | | 12.0 | | | 12.0 | | | | | 12.0 | | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | | 0 | | | | | 0 | | 0 |
| Unit Extension | | 3.0 | | | 2.0 | | | | | 3.0 | | 3.0 |

| Phasing | Thru Only | 02 | 03 | 04 | SB On y | 06 | 07 | 08 |
|-----------------------------------|-----------|-----|-----|-----|------------------------|-----|-----|-----|
| Timing | G = 92.0 | G = | G = | G = | G = 40.0 | G = | G = | G = |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = | Y = | Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | Cycle Length C = 140.0 | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | |
|---|---------------|------|------------------|------|----|--|-------|-------|
| | EB | | WB | | NB | | SB | |
| | Adj flow rate | 2584 | | 1305 | | | | 956 |
| Lane group cap. | 3255 | | 3255 | | | | 911 | 419 |
| w/c ratio | 0.79 | | 0.40 | | | | 1.05 | 1.46 |
| Green ratio | 0.66 | | 0.66 | | | | 0.29 | 0.29 |
| Unif. delay d1 | 17.2 | | 11.2 | | | | 50.0 | 50.0 |
| Delay factor k | 0.34 | | 0.11 | | | | 0.50 | 0.50 |
| Incram delay d2 | 1.1 | | 0.1 | | | | 44.3 | 219.1 |
| P-factor | 0.145 | | 0.145 | | | | 1.050 | 1.000 |
| Control delay | 3.9 | | 1.7 | | | | 94.3 | 269.1 |
| Lane group LOS | A | | A | | | | F | F |
| Approch. delay | 3.9 | | 1.7 | | | | 162.4 | |
| Approach LOS | A | | A | | | | F | |
| Intersec. delay | 46.9 | | Intersection LOS | | | | D | |

2/26

N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT-3B AM WITH LA MEDIA DAY MESA RD (125SB OFF-RAMP)NO MIT

Average Back of Queue

| | FB | | | WB | | | NB | | | SB | | |
|------------------|----|-------|----|----|-------|----|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | F | | | T | | | | | L | | R |
| Infl. queue/lane | | 0.0 | | | 0.0 | | | | | 0.0 | | 0.0 |
| Flow rate/lane | | 2584 | | | 1305 | | | | | 958 | | 611 |
| Satflow per lane | | 1818 | | | 1818 | | | | | 1641 | | 1468 |
| Capacity/lane | | 3255 | | | 3255 | | | | | 311 | | 419 |
| Flow ratio | | 5.52 | | | 6.26 | | | | | 0.30 | | 0.42 |
| w/c ratio | | 0.79 | | | 0.40 | | | | | 1.05 | | 1.46 |
| f factor | | 1.000 | | | 1.000 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | | 5 | | | 5 | | | | | 3 | | 3 |
| Platoon ratio | | 1.45 | | | 1.45 | | | | | 1.00 | | 1.00 |
| PF factor | | 0.29 | | | 0.17 | | | | | 1.00 | | 1.50 |
| Q1 | | 7.5 | | | 1.5 | | | | | 19.2 | | 23.6 |
| kh | | 1.0 | | | 1.0 | | | | | 0.5 | | 0.5 |
| Q2 | | 3.5 | | | 0.7 | | | | | 7.6 | | 25.6 |
| Q avg. | | 11.0 | | | 2.2 | | | | | 26.8 | | 49.4 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|------|--|--|-----|--|--|--|--|------|--|------|
| fbw. | | 1.8 | | | 2.0 | | | | | 1.6 | | 1.5 |
| BOQ, Qs | | 20.8 | | | 4.4 | | | | | 43.9 | | 75.9 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|--|--|------|--|--|--|--|------|--|------|
| Q spacing | | 25.0 | | | 25.0 | | | | | 25.0 | | 25.0 |
| Q storage | | 0 | | | 0 | | | | | 0 | | 0 |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

2/2 A

SHORT REPORT

| General Information | | | Site Information | | |
|---------------------|--------------|--|------------------|---------------------------------|--|
| Analyst | USAJ | | Intersection | SR-125 SB OFF RAMP/OTAY MESA RD | |
| Agency or Co. | USAJ | | Area Type | All other areas | |
| Date Performed | 5/3/2011 | | Jurisdiction | 125SBQM35A3BW MWITHMIT | |
| Time Period | AM PEAK HOUR | | Analysis Year | YEAR 2030 ALT.-SB WITH I.M. | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|------|-----|-----|----------|------------------------|-----|-----|----|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| Lane group | | T | | | T | | | | | L | LR | R |
| Volume (vph) | | 2455 | | | 1240 | | | | | 910 | | 880 |
| % Heavy Veh. | | 10 | | | 10 | | | | | 10 | | 10 |
| PHF | | 0.95 | | | 0.95 | | | | | 0.95 | | 0.95 |
| Actuated (PIA) | | A | | | A | | | | | A | | A |
| Startup lost time | | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Arrival type | | S | | | S | | | | | 3 | S | 3 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | 2.0 | 3.0 |
| Ped/Bike/RTOR Volume | | | | | | | | 10 | | 10 | | 300 |
| Lane Width | | 12.0 | | | 12.0 | | | | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | 3.0 | 3.0 |
| Phasing | Thru Only | 02 | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 92.0 | G = | G = | G = | G = 40.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|----------------|-------|------|----|-------|------|----|--|--|------------------|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj. flow rate | | 2584 | | | 1305 | | | | | 814 | 419 | 336 |
| Lane group cap | | 3255 | | | 3255 | | | | | 911 | 461 | 419 | |
| W/C ratio | | 0.79 | | | 0.40 | | | | | 0.89 | 0.91 | 0.80 | |
| Green ratio | | 0.66 | | | 0.96 | | | | | 0.25 | 0.29 | 0.29 | |
| Unit. delay d1 | | 17.2 | | | 11.2 | | | | | 48.0 | 46.2 | 46.3 | |
| Delay factor x | | 0.34 | | | 0.11 | | | | | 0.42 | 0.43 | 0.35 | |
| Incorr. delay d2 | | 1.4 | | | 0.1 | | | | | 11.2 | 21.8 | 10.7 | |
| PF factor | | 0.140 | | | 0.140 | | | | | 1.050 | 0.793 | 1.000 | |
| Control delay | | 3.9 | | | 1.7 | | | | | 59.2 | 57.2 | 57.1 | |
| Lane group LOS | | A | | | A | | | | | E | E | E | |
| Approch. delay | | 3.9 | | | 1.7 | | | | | 58.2 | | | |
| Approach LOS | | A | | | A | | | | | F | | | |
| Intersec. delay | | 19.0 | | | | | | | | | | | |
| | | | | | | | | | | Intersection LOS | | | D |

32A

w/m

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: -39 AM WITH LA MEDIA OTAY MESA RD./1253B OFF-RAMP WITH MT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|-------|----|----|-------|----|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | 7 | | | 7 | | | | | L | LR | R |
| Init. queue/lane | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | | 2584 | | | 1305 | | | | | 814 | 415 | 336 |
| Satflow per lane | | 1818 | | | 1518 | | | | | 1641 | 1612 | 1468 |
| Capacity/lane | | 3255 | | | 3255 | | | | | 911 | 461 | 419 |
| Flow ratio | | 0.52 | | | 0.26 | | | | | 0.26 | 0.26 | 0.23 |
| v/c ratio | | 0.79 | | | 0.40 | | | | | 0.89 | 0.31 | 0.60 |
| I factor | | 1.000 | | | 1.000 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | | 5 | | | 5 | | | | | 3 | 5 | 3 |
| Platoon ratio | | 1.45 | | | 1.45 | | | | | 1.00 | 1.67 | 1.00 |
| PF factor | | 0.28 | | | 0.17 | | | | | 1.00 | 0.96 | 1.00 |
| Q1 | | 7.5 | | | 1.5 | | | | | 15.8 | 15.1 | 12.1 |
| ks | | 1.0 | | | 1.0 | | | | | 0.6 | 0.6 | 0.5 |
| Q2 | | 3.5 | | | 0.7 | | | | | 3.2 | 3.4 | 1.8 |
| Q avg | | 11.0 | | | 2.2 | | | | | 19.8 | 18.5 | 13.9 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|------|--|--|-----|--|--|--|--|------|------|------|
| ft: | | 1.5 | | | 2.0 | | | | | 1.7 | 1.7 | 1.9 |
| BOQ, Q% | | 20.0 | | | 4.4 | | | | | 32.2 | 31.7 | 24.8 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|--|--|------|--|--|--|--|------|------|------|
| Q spacing | | 25.0 | | | 25.0 | | | | | 25.0 | 25.0 | 25.0 |
| Q storage | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Avg R: | | | | | | | | | | | | |
| 95% Row | | | | | | | | | | | | |

09/20/2011

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Version 1.14

22P
42

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|---------------------------|------------------|--|--|--|
| Analyst | USAI | Intersection | SR-125SB OFF-RAMP/OTAY | | | | |
| Agency or Co | USAI | | MESA RD | | | | |
| Date Performed | 03/06/11 | Area Type | All other areas | | | | |
| Time Period | PM PEAK HOUR | Jurisdiction | 125SBGM35P3BWLMMNOMIT | | | | |
| | | Analysis Year | YEAR 2030 ALT. 3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|------|-----|-----|----------|------------------------|-----|-----|----|------|----|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| Lane group | | T | | | T | | | | | L | | R |
| Volume (vph) | | 2120 | | | 1735 | | | | | 210 | | 570 |
| % heavy veh | | 10 | | | 10 | | | | | 10 | | 10 |
| PHF | | 0.95 | | | 0.95 | | | | | 0.95 | | 0.95 |
| Actuated (P/A) | | A | | | A | | | | | A | | A |
| Startup lost time | | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Ext. eff. green | | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Arrival type | | 5 | | | 5 | | | | | 3 | | 3 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | | | | | 10 | | 10 | | 300 |
| Lane Width | | 12.0 | | | 12.0 | | | | | 12.0 | | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | | 0 | | | | | 0 | | 0 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Phase no | Tru Only | 02 | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 32.5 | G = | G = | G = | G = 40.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|----|-------|------|----|--|--|-------|-----|------------------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | 2232 | | | 1826 | | | | | 221 | |
| Lane group cap | | 3255 | | | 3255 | | | | | 911 | | 419 |
| vc ratio | | 0.69 | | | 0.56 | | | | | 0.24 | | 0.56 |
| Green ratio | | 0.66 | | | 0.66 | | | | | 0.29 | | 0.29 |
| Unif. delay d' | | 15.0 | | | 13.0 | | | | | 38.4 | | 44.3 |
| Delay factor k | | 0.25 | | | 0.16 | | | | | 0.11 | | 0.25 |
| Incram. delay c2 | | 0.6 | | | 0.2 | | | | | 0.1 | | 0.4 |
| P-Factor | | 0.146 | | | 0.146 | | | | | 1.000 | | 1.000 |
| Control delay | | 2.8 | | | 2.1 | | | | | 38.5 | | 48.7 |
| Lane group LOS | | A | | | A | | | | | D | | D |
| Approch. delay | | 2.8 | | | 2.1 | | | | | 44.2 | | |
| Approch. LOS | | A | | | A | | | | | D | | |
| Intersec. delay | | 7.1 | | | | | | | | | | A |
| | | | | | | | | | | | | Intersection LOS |

328
N
B

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT. 35 PM WITH LA MEDIA OTAY MESA RD / 255B OFF-RAMP AND MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|-------|----|----|-------|----|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | T | | | T | | | | | L | | R |
| init. queue/lane | | 0.0 | | | 0.0 | | | | | 0.0 | | 0.0 |
| Flow rate/lane | | 2237 | | | 1826 | | | | | 227 | | 284 |
| Satflow per lane | | 1818 | | | 1818 | | | | | 1641 | | 1468 |
| Capacity/lane | | 3255 | | | 3255 | | | | | 911 | | 419 |
| Flow ratio | | 0.45 | | | 0.37 | | | | | 0.07 | | 0.19 |
| w/o ratio | | 0.69 | | | 0.56 | | | | | 0.24 | | 0.55 |
| I factor | | 1.000 | | | 1.000 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | | 5 | | | 5 | | | | | 3 | | 3 |
| P.atoon ratio | | 1.45 | | | 1.45 | | | | | 1.00 | | 1.00 |
| PF factor | | 0.23 | | | 0.23 | | | | | 1.00 | | 1.00 |
| Q1 | | 4.6 | | | 2.8 | | | | | 3.4 | | 9.6 |
| ks | | 1.0 | | | 1.0 | | | | | 0.6 | | 0.5 |
| Q2 | | 2.1 | | | 1.3 | | | | | 6.2 | | 1.1 |
| Q avg. | | 6.7 | | | 4.0 | | | | | 3.6 | | 10.8 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|--|------|--|--|-----|--|--|--|--|-----|--|------|
| Rv | | 1.9 | | | 2.0 | | | | | 2.0 | | 1.8 |
| BOQ Q% | | 12.8 | | | 8.0 | | | | | 7.1 | | 19.8 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|--|--|------|--|--|--|--|------|--|------|
| Q spacing | | 25.0 | | | 25.0 | | | | | 25.0 | | 25.0 |
| Q storage | | 0 | | | 0 | | | | | 0 | | 0 |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

228
W
pi

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|----------------------------|------------------|--|--|--|
| Analyst | USA1 | Intersection | SR-125SB OFF-RAMP/OTAY | | | | |
| Agency or Co. | USA1 | | MESA RD | | | | |
| Date Performed | 03/05/11 | Area Type | All other areas | | | | |
| Time Period | PM PEAK HOUR | Jurisdiction | 125SBOM30P3BWI.MWITHTMIT | | | | |
| | | Analysis Year | YEAR 2035 ALT - 3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|------|-----|-----|----------|-----|------------------------|-----|----|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| Lane group | | T | | | T | | | | | L | LR | R |
| Volume (vph) | | 2126 | | | 1735 | | | | | 216 | | 570 |
| % Heavy veh. | | 10 | | | 10 | | | | | 10 | | 10 |
| PHF | | 0.95 | | | 0.95 | | | | | 0.95 | | 0.95 |
| Actuated (P/A) | | A | | | A | | | | | A | | A |
| Start-up lost time | | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | | 2.0 | | | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Arrival type | | 5 | | | 5 | | | | | 3 | 5 | 3 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | | | | | | | 10 | | | 10 | | 300 |
| Lane Width | | 12.0 | | | 12.0 | | | | | 12.0 | 12.0 | 12.0 |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | | N | N | 5 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | | 0 | | | | | 5 | 0 | 0 |
| Unit Extension | | 3.0 | | | 3.0 | | | | | 3.0 | 3.0 | 3.0 |
| Phasing | Thru Only | 02 | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 32.0 | G = | G = | G = | G = 40.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|----|------------------|------|----|--|--|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | 2232 | | | 1925 | | | | | 168 | 161 |
| Lane group cap. | | 3255 | | | 3255 | | | | | 911 | 453 | 419 |
| v/c ratio | | 0.69 | | | 0.56 | | | | | 0.21 | 0.36 | 0.37 |
| Green ratio | | 0.56 | | | 0.56 | | | | | 0.29 | 0.29 | 0.29 |
| Unif. delay d1 | | 15.0 | | | 13.0 | | | | | 38.0 | 39.8 | 40.0 |
| Delay factor k | | 0.25 | | | 0.16 | | | | | 0.11 | 0.11 | 0.11 |
| Increment delay c2 | | 0.6 | | | 0.2 | | | | | 0.1 | 0.5 | 0.6 |
| PF factor | | 0.146 | | | 0.146 | | | | | 1.000 | 0.733 | 1.500 |
| Control delay | | 2.8 | | | 2.1 | | | | | 38.1 | 29.6 | 45.5 |
| Lane group LOS | | A | | | A | | | | | D | C | D |
| Approach delay | | 2.8 | | | 2.1 | | | | | 36.1 | | |
| Approach LOS | | A | | | A | | | | | D | | |
| Intersec. delay | | 6.2 | | | Intersection LOS | | | | | A | | |

31.0
w
1A

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: 3B PM WITH LA MEDIA OTAY MESA RD./25SB OFF RAMP/WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|----|-------|----|----|-------|----|----|----|----|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | T | | | T | | | | | L | LR | R |
| In-l queue/lane | | 0.0 | | | 0.0 | | | | | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | | 2232 | | | 1829 | | | | | 168 | 161 | 156 |
| Sat flow per lane | | 1818 | | | 1818 | | | | | 1641 | 1585 | 1468 |
| Capacity/lane | | 3255 | | | 3255 | | | | | 911 | 453 | 419 |
| Flow ratio | | 0.45 | | | 0.37 | | | | | 0.06 | 0.10 | 0.11 |
| w/c ratio | | 0.69 | | | 0.58 | | | | | 0.21 | 0.36 | 0.37 |
| I factor | | 1.000 | | | 1.000 | | | | | 1.000 | 1.000 | 1.000 |
| Arrival type | | 5 | | | 5 | | | | | 3 | 5 | 3 |
| Platoon ratio | | 1.45 | | | 1.45 | | | | | 1.00 | 1.67 | 1.00 |
| PF factor | | 0.23 | | | 0.20 | | | | | 1.00 | 0.19 | 1.00 |
| Q1 | | 4.6 | | | 2.8 | | | | | 2.8 | 3.9 | 4.8 |
| KH | | 1.0 | | | 1.0 | | | | | 0.6 | 0.6 | 0.5 |
| Q2 | | 2.1 | | | 1.3 | | | | | 0.1 | 0.3 | 0.3 |
| Q avg | | 5.7 | | | 4.0 | | | | | 3.0 | 4.3 | 5.2 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|------|--|--|-----|--|--|--|--|-----|-----|------|
| idx | | 1.8 | | | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| BOQ, Qx | | 12.8 | | | 8.0 | | | | | 6.0 | 8.4 | 10.1 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|------|--|--|------|--|--|--|--|------|------|------|
| Q spacing | | 25.0 | | | 25.0 | | | | | 25.0 | 25.0 | 25.0 |
| Q storage | | 0 | | | 0 | | | | | 0 | 0 | 0 |
| Avg Ro | | | | | | | | | | | | |
| 95% Ro | | | | | | | | | | | | |

33A
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M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|--------------------------------|--|--|
| Analyst | USAI | | | Intersection | SR-125NB ON-RAMP/OTAY MESA RD. | | |
| Agency or Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 05/13/12 | | | Jurisdiction | 125NBOTAY30A3BWLM | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|------|-----------------------|-----|-----|----|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane group | L | T | | | T | R | | | | | | |
| Volume (vph) | 450 | 2915 | | | 1240 | 250 | | | | | | |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | | | |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | | | |
| Actuated (P/A) | A | A | | | A | A | | | | | | |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | | | |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | | | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | | | |
| Ped/Bike/RTOR Volume | | | | 10 | | 0 | | | | | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | | | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | | | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | | | |
| Phasing | EB Only | Thru & RT | 03 | 04 | 05 | 06 | 07 | 08 | | | | |
| Timing | G = 39.0 | G = 42.0 | G = | G = | G = | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 90.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-----|----|--|--|----|--|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 474 | 3068 | | 1305 | 263 | | | | | | |
| Lane group cap. | 1381 | 4953 | | 2311 | 1213 | | | | | | | |
| v/c ratio | 0.34 | 0.62 | | 0.56 | 0.22 | | | | | | | |
| Green ratio | 0.43 | 1.00 | | 0.47 | 0.47 | | | | | | | |
| Unif. delay d1 | 17.0 | 0.0 | | 17.4 | 14.2 | | | | | | | |
| Delay factor k | 0.11 | 0.20 | | 0.16 | 0.11 | | | | | | | |
| Increm. delay d2 | 0.1 | 0.2 | | 0.3 | 0.1 | | | | | | | |
| PF factor | 0.490 | 0.950 | | 0.417 | 0.417 | | | | | | | |
| Control delay | 8.5 | 0.2 | | 7.6 | 6.0 | | | | | | | |
| Lane group LOS | A | A | | A | A | | | | | | | |
| Apprch. delay | 1.3 | | | 7.3 | | | | | | | | |
| Approach LOS | A | | | A | | | | | | | | |
| Intersec. delay | 3.2 | | | Intersection LOS | | | | | | A | | |

33A
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BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM 3B WITH LA MEDIA -125NBON RAMP/OTAY MESA RD.*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|--------------|--------------|----|----|--------------|--------------|----|----|----|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | <i>L</i> | <i>T</i> | | | <i>T</i> | <i>R</i> | | | | | | |
| Init. queue/lane | <i>0.0</i> | <i>0.0</i> | | | <i>0.0</i> | <i>0.0</i> | | | | | | |
| Flow rate/lane | <i>474</i> | <i>3068</i> | | | <i>1305</i> | <i>263</i> | | | | | | |
| Satflow per lane | <i>1641</i> | <i>1818</i> | | | <i>1818</i> | <i>1468</i> | | | | | | |
| Capacity/lane | <i>1381</i> | <i>4953</i> | | | <i>2311</i> | <i>1213</i> | | | | | | |
| Flow ratio | <i>0.15</i> | <i>0.62</i> | | | <i>0.26</i> | <i>0.10</i> | | | | | | |
| v/c ratio | <i>0.34</i> | <i>0.62</i> | | | <i>0.56</i> | <i>0.22</i> | | | | | | |
| I factor | <i>1.000</i> | <i>1.000</i> | | | <i>1.000</i> | <i>1.000</i> | | | | | | |
| Arrival type | <i>5</i> | <i>5</i> | | | <i>5</i> | <i>5</i> | | | | | | |
| Platoon ratio | <i>1.67</i> | <i>1.00</i> | | | <i>1.67</i> | <i>1.67</i> | | | | | | |
| PF factor | <i>0.55</i> | | | | <i>0.55</i> | <i>0.45</i> | | | | | | |
| Q1 | <i>2.3</i> | | | | <i>4.7</i> | <i>1.0</i> | | | | | | |
| k _B | <i>0.6</i> | <i>1.0</i> | | | <i>0.6</i> | <i>0.5</i> | | | | | | |
| Q2 | <i>0.3</i> | <i>1.6</i> | | | <i>0.8</i> | <i>0.2</i> | | | | | | |
| Q avg. | <i>2.5</i> | | | | <i>5.5</i> | <i>1.1</i> | | | | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------------|--|--|--|-------------|------------|--|--|--|--|--|--|
| fe% | <i>2.0</i> | | | | <i>1.9</i> | <i>2.1</i> | | | | | | |
| BOQ, Q% | <i>5.1</i> | | | | <i>10.8</i> | <i>2.4</i> | | | | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|-------------|-------------|--|--|-------------|-------------|--|--|--|--|--|--|
| Q spacing | <i>25.0</i> | <i>25.0</i> | | | <i>25.0</i> | <i>25.0</i> | | | | | | |
| Q storage | <i>0</i> | <i>0</i> | | | <i>0</i> | <i>0</i> | | | | | | |
| Avg. R _q | | | | | | | | | | | | |
| 95% R _{q%} | | | | | | | | | | | | |

338
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M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|--------------------------------|--|--|
| Analyst | USAI | | | Intersection | SR-125NB ON-RAMP/OTAY MESA RD. | | |
| Agency or Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 05/13/14 | | | Jurisdiction | 125NBOTAY30P3BWLM | | |
| Time Period | PM PEAK HOUR | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|------|-----------------------|-----|-----|----|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane group | L | T | | | T | R | | | | | | |
| Volume (vph) | 845 | 1485 | | | 1735 | 915 | | | | | | |
| % Heavy veh | 10 | 10 | | | 10 | 10 | | | | | | |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | | | |
| Actuated (P/A) | A | A | | | A | A | | | | | | |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | | | |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | | | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | | | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | | | |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | | | | | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | | | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | | | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | | | | | |
| Phasing | EB Only | Thru & RT | 03 | 04 | 05 | 06 | 07 | 08 | | | | |
| Timing | G = 39.0 | G = 42.0 | G = | G = | G = | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 90.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-------|-----|--|--|----|--|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 889 | 1563 | | | 1826 | 963 | | | | | |
| Lane group cap. | 1381 | 4953 | | | 2311 | 1171 | | | | | | |
| v/c ratio | 0.64 | 0.32 | | | 0.79 | 0.82 | | | | | | |
| Green ratio | 0.43 | 1.00 | | | 0.47 | 0.47 | | | | | | |
| Unif. delay d1 | 20.0 | 0.0 | | | 20.3 | 20.8 | | | | | | |
| Delay factor k | 0.22 | 0.11 | | | 0.34 | 0.36 | | | | | | |
| Increm. delay d2 | 1.0 | 0.0 | | | 1.9 | 4.9 | | | | | | |
| PF factor | 0.490 | 0.950 | | | 0.417 | 0.417 | | | | | | |
| Control delay | 10.9 | 0.0 | | | 10.4 | 13.5 | | | | | | |
| Lane group LOS | B | A | | | B | B | | | | | | |
| Apprch. delay | 4.0 | | | 11.5 | | | | | | | | |
| Approach LOS | A | | | B | | | | | | | | |
| Intersec. delay | 8.0 | | | Intersection LOS | | | | | | A | | |

33P
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| BACK-OF-QUEUE WORKSHEET | | | | | | | | | | | | |
|--|--------------|--------------|----|----|--------------|--------------|----|----|----|----|----|----|
| General Information | | | | | | | | | | | | |
| Project Description <i>ALT.-3B PM 3B WITH LA MEDIA -125NBON RAMP/OTAY MESA RD.</i> | | | | | | | | | | | | |
| Average Back of Queue | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | <i>L</i> | <i>T</i> | | | <i>T</i> | <i>R</i> | | | | | | |
| Init. queue/lane | <i>0.0</i> | <i>0.0</i> | | | <i>0.0</i> | <i>0.0</i> | | | | | | |
| Flow rate/lane | <i>889</i> | <i>1563</i> | | | <i>1826</i> | <i>963</i> | | | | | | |
| Satflow per lane | <i>1641</i> | <i>1818</i> | | | <i>1818</i> | <i>1418</i> | | | | | | |
| Capacity/lane | <i>1381</i> | <i>4953</i> | | | <i>2311</i> | <i>1171</i> | | | | | | |
| Flow ratio | <i>0.28</i> | <i>0.32</i> | | | <i>0.37</i> | <i>0.38</i> | | | | | | |
| v/c ratio | <i>0.64</i> | <i>0.32</i> | | | <i>0.79</i> | <i>0.82</i> | | | | | | |
| I factor | <i>1.000</i> | <i>1.000</i> | | | <i>1.000</i> | <i>1.000</i> | | | | | | |
| Arrival type | <i>5</i> | <i>5</i> | | | <i>5</i> | <i>5</i> | | | | | | |
| Platoon ratio | <i>1.67</i> | <i>1.00</i> | | | <i>1.67</i> | <i>1.67</i> | | | | | | |
| PF factor | <i>0.66</i> | | | | <i>0.68</i> | <i>0.71</i> | | | | | | |
| Q1 | <i>5.9</i> | | | | <i>9.7</i> | <i>8.4</i> | | | | | | |
| k _B | <i>0.6</i> | <i>1.0</i> | | | <i>0.6</i> | <i>0.5</i> | | | | | | |
| Q2 | <i>1.0</i> | <i>0.5</i> | | | <i>2.1</i> | <i>2.2</i> | | | | | | |
| Q avg. | <i>6.9</i> | | | | <i>11.8</i> | <i>10.6</i> | | | | | | |
| Percentile Back of Queue (95th percentile) | | | | | | | | | | | | |
| f _{95%} | <i>1.9</i> | | | | <i>1.8</i> | <i>1.8</i> | | | | | | |
| BOQ, Q% | <i>13.2</i> | | | | <i>21.4</i> | <i>19.4</i> | | | | | | |
| Queue Storage Ratio | | | | | | | | | | | | |
| Q spacing | <i>25.0</i> | <i>25.0</i> | | | <i>25.0</i> | <i>25.0</i> | | | | | | |
| Q storage | <i>0</i> | <i>0</i> | | | <i>0</i> | <i>0</i> | | | | | | |
| Avg. R ₀ | | | | | | | | | | | | |
| 95% R _{0%} | | | | | | | | | | | | |

34A

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|------------|--|-------|-------|------|-------|-------|------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAi | | | | | Intersection: OTAY MESA RD/HARVEST RD. | | | | | | | |
| Agency or Co. | USAi | | | | | Area Type: All other areas | | | | | | | |
| Date Performed | 03/25/11 | | | | | Jurisdiction: OTAYHARV30A3BW/LMNOMIT | | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year: YEAR 2030 AT T-35 WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | | |
| Volume (vph) | 95 | 2205 | 515 | 50 | 1195 | 5 | 275 | 5 | 25 | 5 | 5 | 25 | |
| % Heavy Vch | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| P.H.F. | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | S | S | | S | S | | S | S | | S | S | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 10 | 0 | 10 | 10 | 0 | 10 | 10 | 0 | 10 | 10 | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 15.0 | G = 82.0 | G = | G = | G = 15.0 | G = 10.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 100 | 2968 | | 53 | 1258 | | 289 | 31 | | 5 | 31 | | |
| Lane group cap | 178 | 2785 | | 178 | 2999 | | 178 | 106 | | 178 | 106 | | |
| v/c ratio | 0.57 | 1.07 | | 0.30 | 0.43 | | 1.64 | 0.29 | | 0.03 | 0.23 | | |
| Green ratio | 0.11 | 0.59 | | 0.11 | 0.59 | | 0.11 | 0.07 | | 0.11 | 0.07 | | |
| Unif. delay d1 | 59.4 | 23.0 | | 57.7 | 15.1 | | 52.5 | 61.6 | | 56.0 | 61.6 | | |
| Delay factor k | 0.16 | 0.50 | | 0.11 | 0.11 | | 0.50 | 0.11 | | 0.11 | 0.11 | | |
| Incrnt. delay d2 | 4.3 | 37.6 | | 1.0 | 0.1 | | 313.1 | 1.5 | | 0.1 | 1.5 | | |
| PF factor | 0.970 | 0.252 | | 0.970 | 0.121 | | 1.000 | 1.000 | | 1.050 | 1.000 | | |
| Control delay | 59.0 | 45.4 | | 54.5 | 2.0 | | 375.6 | 63.2 | | 56.0 | 63.2 | | |
| Lane group LOS | E | D | | D | A | | F | E | | E | E | | |
| Approch. delay | 45.8 | | | 4.1 | | | 346.3 | | | 52.2 | | | |
| Approach LOS | D | | | A | | | F | | | F | | | |
| Intersec. delay | 54.6 | | | Intersection LOS | | | | | | | | | D |

2/2/11

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT -3B AM WITH LA MEDIA OTAYMESA RD./HARVEST RD /NC MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Init. queue/size | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 100 | 2969 | | 53 | 1258 | | 289 | 31 | | 5 | 31 | |
| Satflow per lane | 1641 | 1745 | | 1641 | 1816 | | 1641 | 1480 | | 1641 | 1480 | |
| Capacity/lane | 176 | 2785 | | 175 | 2893 | | 176 | 106 | | 176 | 106 | |
| Flow ratio | 0.06 | 0.52 | | 0.03 | 0.25 | | 0.18 | 0.02 | | 0.03 | 0.02 | |
| Wc ratio | 0.57 | 1.07 | | 0.30 | 0.43 | | 1.64 | 0.29 | | 0.03 | 0.29 | |
| Factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 3 | 3 | | 3 | 3 | |
| Platoon ratio | 1.67 | 1.52 | | 1.67 | 1.62 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| PF factor | 0.96 | 1.00 | | 0.94 | 0.15 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Qi | 3.6 | 42.3 | | 1.8 | 1.5 | | 11.2 | 1.1 | | 0.2 | 1.1 | |
| Kb | 0.3 | 0.9 | | 0.3 | 0.9 | | 0.3 | 0.2 | | 0.3 | 0.2 | |
| Qz | 0.4 | 16.1 | | 0.1 | 0.7 | | 14.9 | 0.1 | | 0.0 | 0.1 | |
| Q avg | 4.0 | 58.4 | | 1.9 | 2.2 | | 25.1 | 1.2 | | 0.2 | 1.2 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|------|--|-----|-----|--|------|-----|--|-----|-----|--|
| TR% | 2.0 | 1.5 | | 2.0 | 2.0 | | 1.6 | 2.1 | | 2.1 | 2.1 | |
| BOQ, Q% | 7.6 | 89.0 | | 3.9 | 4.5 | | 42.9 | 2.6 | | 0.4 | 2.6 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. Roq | | | | | | | | | | | | |
| 95% Roq | | | | | | | | | | | | |

34A
W
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-------|---|------------------------|----------|------------|-----------|-------|------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAI | | | | | Intersection OTAY MESA RD./HARVEST RD. | | | | | | | |
| Agency or Co. | USAI | | | | | Area Type All other areas | | | | | | | |
| Date Performed | 03/25/11 | | | | | Jurisdiction OTAYHARV30A3BWLMWITHMIT | | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year YEAR 2030 ALT.-3B WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 1 | 3 | 1 | 1 | 3 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | | |
| Volume (vph) | 95 | 2205 | 615 | 50 | 1190 | 5 | 275 | 5 | 25 | 5 | 5 | 25 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | | 3 | 3 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 10 | 0 | 10 | 10 | 0 | 10 | 10 | 0 | 10 | 10 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 |
| Timing | G = 15.0 | G = 82.0 | G = | G = | | | G = 15.0 | G = 10.0 | G = | | G = | | |
| | Y = 4 | Y = 5 | Y = | Y = | | | Y = 4 | Y = 5 | Y = | | Y = | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 100 | 2321 | 647 | 53 | 1253 | 5 | 289 | 31 | | 5 | 31 | | |
| Lane group cap. | 176 | 2901 | 1034 | 176 | 2901 | 830 | 341 | 106 | | 176 | 106 | | |
| v/c ratio | 0.57 | 0.80 | 0.63 | 0.30 | 0.43 | 0.01 | 0.85 | 0.29 | | 0.03 | 0.29 | | |
| Green ratio | 0.11 | 0.59 | 0.73 | 0.11 | 0.59 | 0.59 | 0.11 | 0.07 | | 0.11 | 0.07 | | |
| Unif. delay d1 | 59.4 | 22.6 | 9.5 | 57.7 | 16.1 | 12.1 | 61.4 | 61.6 | | 56.0 | 61.6 | | |
| Delay factor k | 0.16 | 0.34 | 0.21 | 0.11 | 0.11 | 0.11 | 0.38 | 0.11 | | 0.11 | 0.11 | | |
| Increm. delay d2 | 4.3 | 1.7 | 1.2 | 1.0 | 0.1 | 0.0 | 17.8 | 1.5 | | 0.1 | 1.5 | | |
| PF factor | 0.920 | 0.121 | 0.184 | 0.920 | 0.121 | 0.121 | 1.000 | 1.000 | | 1.000 | 1.000 | | |
| Control delay | 59.0 | 4.4 | 2.9 | 54.0 | 2.0 | 1.5 | 79.1 | 63.2 | | 56.0 | 63.2 | | |
| Lane group LOS | E | A | A | D | A | A | E | E | | E | E | | |
| Apprch. delay | 5.9 | | | 4.1 | | | 77.6 | | | 62.2 | | | |
| Approach LOS | A | | | A | | | E | | | E | | | |
| Intersec. delay | 10.7 | | | Intersection LOS | | | | | | B | | | |

ZAA
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B AM WITH LA MEDIA OTAYMESA RD./HARVEST RD./WITH MIT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----------|----------|----------|----------|----------|----------|----------|-----------|----|----------|-----------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>TR</i> | | <i>L</i> | <i>TR</i> | |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 100 | 2321 | 647 | 53 | 1253 | 5 | 289 | 31 | | 5 | 31 | |
| Satflow per lane | 1641 | 1818 | 1419 | 1641 | 1818 | 1417 | 1641 | 1480 | | 1641 | 1480 | |
| Capacity/lane | 176 | 2901 | 1034 | 176 | 2901 | 830 | 341 | 106 | | 176 | 106 | |
| Flow ratio | 0.06 | 0.47 | 0.46 | 0.03 | 0.25 | 0.00 | 0.09 | 0.02 | | 0.00 | 0.02 | |
| v/c ratio | 0.57 | 0.80 | 0.63 | 0.30 | 0.43 | 0.01 | 0.85 | 0.29 | | 0.03 | 0.29 | |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | | 3 | 3 | |
| Platoon ratio | 1.67 | 1.62 | 1.30 | 1.67 | 1.62 | 1.62 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| PF factor | 0.96 | 0.27 | 0.25 | 0.94 | 0.15 | 0.12 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Q1 | 3.6 | 6.9 | 3.1 | 1.8 | 1.5 | 0.0 | 5.7 | 1.1 | | 0.2 | 1.1 | |
| kB | 0.3 | 0.9 | 0.9 | 0.3 | 0.9 | 0.8 | 0.3 | 0.2 | | 0.3 | 0.2 | |
| Q2 | 0.4 | 3.3 | 1.5 | 0.1 | 0.7 | 0.0 | 1.3 | 0.1 | | 0.0 | 0.1 | |
| Q avg. | 4.0 | 10.2 | 4.6 | 1.9 | 2.2 | 0.0 | 6.9 | 1.2 | | 0.2 | 1.2 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|------|-----|-----|-----|-----|------|-----|--|-----|-----|--|
| fb% | 2.0 | 1.8 | 2.0 | 2.0 | 2.0 | 2.1 | 1.9 | 2.1 | | 2.1 | 2.1 | |
| BOQ, Q% | 7.8 | 18.8 | 9.0 | 3.9 | 4.5 | 0.0 | 13.2 | 2.6 | | 0.4 | 2.6 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq% | | | | | | | | | | | | |

3A
3-N P

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|----------------------------|------------------|-----------------|--------------|---------------------|
| Analyst | USAI | Intersection | OTAY MESA RD/HARVEST RD. | Area Type | All other areas | Jurisdiction | OTAYHARV30P3BWLMMNO |
| Agency or Co | USAI | Analysis Year | YEAR 2030 AL.T.-3B WITH LM | | | | |
| Date Performed | 03/25/11 | | | | | | |
| Time Period | PM PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-------------------|-------------------|------------|------------|-------------------|-------------------|------------------------|------------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (veh) | 26 | 1185 | 275 | 20 | 1940 | 20 | 615 | 20 | 50 | 20 | 26 | 26 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Excl. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | S | S | | S | S | | S | S | | S | S | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 10 | 0 | 10 | 10 | 0 | 10 | 10 | 0 | 10 | 10 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/h | | | | | | | | | | | | |
| Bus stops/h | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 10.0 Y = 4 | G = 77.0 Y = 5 | G = Y = | G = Y = | G = 20.0 Y = 4 | G = 15.0 Y = 5 | G = Y = | G = Y = | | | | |
| Duration of Analysis (hrs) = 5.25 | | | | | | | Cycle Length C = 140.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|------|-------|-------|----|-------|-------|
| | EB | | | WB | | | NB | | | SB | |
| | Adj. flow rate | 26 | 1536 | | 21 | 2063 | | 647 | 73 | | 21 |
| Lane group cap | 117 | 2630 | | 117 | 2719 | | 234 | 166 | | 234 | 162 |
| Vol ratio | 0.22 | 0.58 | | 0.18 | 0.76 | | 2.76 | 0.44 | | 0.09 | 0.75 |
| Green ratio | 0.07 | 0.55 | | 0.07 | 0.55 | | 0.14 | 0.11 | | 0.14 | 0.11 |
| Unit. delay d1 | 51.3 | 20.9 | | 61.1 | 24.3 | | 60.0 | 58.6 | | 52.1 | 60.7 |
| Delay factor k | 0.11 | 0.18 | | 0.11 | 0.31 | | 0.55 | 0.11 | | 0.11 | 0.30 |
| Incrim. delay d2 | 1.0 | 0.3 | | 0.7 | 1.3 | | 806.1 | 1.9 | | 0.2 | 17.2 |
| PF factor | 0.949 | 0.185 | | 0.949 | 0.185 | | 1.000 | 1.000 | | 1.000 | 1.000 |
| Control delay | 59.1 | 4.2 | | 58.7 | 5.8 | | 866.1 | 60.4 | | 52.3 | 77.9 |
| Lane group LOS | E | A | | C | A | | F | E | | D | E |
| Approch. delay | 5.1 | | | 6.3 | | | 794.4 | | | 74.1 | |
| Approach LOS | A | | | A | | | F | | | F | |
| Intersec. delay | 132.3 | | | Intersection LOS | | | | | | F | |

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-3B PM WITH LA MEDIA OTAYMESA RD./HARVEST RD./NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Init queue/lane | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 29 | 1536 | | 21 | 2063 | | 647 | 73 | | 21 | 121 | |
| Satflow per lane | 1641 | 1755 | | 1641 | 1814 | | 1641 | 1551 | | 1641 | 1515 | |
| Capacity/lane | 117 | 2630 | | 117 | 2719 | | 234 | 166 | | 234 | 162 | |
| Flow ratio | 0.02 | 0.32 | | 0.01 | 0.42 | | 0.39 | 5.05 | | 0.01 | 0.08 | |
| w/c ratio | 0.22 | 0.58 | | 0.18 | 0.76 | | 2.76 | 0.44 | | 0.09 | 0.75 | |
| l factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 3 | 3 | | 3 | 3 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| PF factor | 0.96 | 0.27 | | 0.36 | 0.35 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Q ₁ | 0.9 | 3.9 | | 0.7 | 8.1 | | 25.2 | 2.7 | | 0.7 | 4.6 | |
| ks | 0.2 | 0.9 | | 0.2 | 0.9 | | 0.4 | 0.3 | | 0.4 | 0.3 | |
| Q ₂ | 0.1 | 1.2 | | 0.1 | 2.6 | | 52.2 | 0.2 | | 0.0 | 0.8 | |
| Q avg | 1.0 | 5.1 | | 0.8 | 10.7 | | 77.4 | 2.9 | | 0.7 | 5.3 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|-----|------|--|-----|------|--|-----|-----|--|-----|------|--|
| f ₉₅ | 2.1 | 2.0 | | 2.1 | 1.8 | | 1.5 | 2.0 | | 2.1 | 1.9 | |
| BOQ, Q ₉₅ | 2.0 | 10.0 | | 1.6 | 19.5 | | 117 | 5.8 | | 1.5 | 10.4 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. R ₀ | | | | | | | | | | | | |
| 95% R ₀ | | | | | | | | | | | | |

engr30011

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Version 1.0

3AP
3E

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-------|------------------|---------------------------|-------|------------|-----------|-------|------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAI | | | | | Intersection | OTAY MESA RD./HARVEST RD. | | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/25/11 | | | | | Jurisdiction | OTAYHARV30P3BWLMMITMIT | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 1 | 3 | 1 | 1 | 3 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | | |
| Volume (vph) | 25 | 1185 | 275 | 20 | 1940 | 20 | 615 | 20 | 50 | 20 | 20 | 95 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | | 3 | 3 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 10 | 0 | 10 | 10 | 0 | 10 | 10 | 0 | 10 | 10 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 |
| Timing | G = 10.0 | G = 60.0 | G = | G = | | | G = 32.0 | | | G = 20.0 | G = | | |
| | Y = 4 | Y = 5 | Y = | Y = | | | Y = 4 | | | Y = 5 | Y = | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 26 | 1247 | 289 | 21 | 2042 | 21 | 647 | 73 | | 21 | 121 | | |
| Lane group cap. | 117 | 2123 | 980 | 117 | 2097 | 604 | 728 | 223 | | 375 | 219 | | |
| v/c ratio | 0.22 | 0.59 | 0.29 | 0.18 | 0.97 | 0.03 | 0.89 | 0.33 | | 0.06 | 0.55 | | |
| Green ratio | 0.07 | 0.43 | 0.69 | 0.07 | 0.43 | 0.43 | 0.23 | 0.14 | | 0.23 | 0.14 | | |
| Unif. delay d1 | 61.3 | 30.5 | 8.3 | 61.1 | 39.2 | 23.2 | 52.3 | 54.0 | | 42.2 | 55.8 | | |
| Delay factor k | 0.11 | 0.18 | 0.11 | 0.11 | 0.48 | 0.11 | 0.41 | 0.11 | | 0.11 | 0.15 | | |
| Increm. delay d2 | 1.0 | 0.4 | 0.2 | 0.7 | 14.0 | 0.0 | 13.0 | 0.9 | | 0.1 | 3.0 | | |
| PF factor | 0.949 | 0.500 | 0.163 | 0.949 | 0.500 | 0.500 | 1.000 | 1.000 | | 1.000 | 1.000 | | |
| Control delay | 59.1 | 15.7 | 1.5 | 58.7 | 33.6 | 11.6 | 65.2 | 54.8 | | 42.3 | 58.9 | | |
| Lane group LOS | E | B | A | E | C | B | E | D | | D | E | | |
| Approch. delay | 13.8 | | | 33.6 | | | 64.2 | | | 56.4 | | | |
| Approach LOS | B | | | C | | | E | | | E | | | |
| Intersec. delay | 32.4 | | | Intersection LOS | | | | | | C | | | |

34P
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B PM WITH LA MEDIA OTAYMESA RD./HARVEST RD./WITH MIT*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----------|----------|----------|----------|----------|----------|----------|-----------|----|----------|-----------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>TR</i> | | <i>L</i> | <i>TR</i> | |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 26 | 1247 | 289 | 21 | 2042 | 21 | 647 | 73 | | 21 | 121 | |
| Satflow per lane | 1641 | 1818 | 1415 | 1641 | 1795 | 1410 | 1641 | 1564 | | 1641 | 1530 | |
| Capacity/lane | 117 | 2123 | 980 | 117 | 2097 | 604 | 728 | 223 | | 375 | 219 | |
| Flow ratio | 0.02 | 0.25 | 0.20 | 0.01 | 0.42 | 0.01 | 0.20 | 0.05 | | 0.01 | 0.08 | |
| v/c ratio | 0.22 | 0.59 | 0.29 | 0.18 | 0.97 | 0.03 | 0.89 | 0.33 | | 0.06 | 0.55 | |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | | 3 | 3 | |
| Platoon ratio | 1.67 | 1.67 | 1.37 | 1.67 | 1.67 | 1.67 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| PF factor | 0.96 | 0.64 | 0.18 | 0.96 | 0.96 | 0.51 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Q1 | 0.9 | 8.7 | 0.8 | 0.7 | 27.3 | 0.2 | 12.5 | 2.6 | | 0.6 | 4.4 | |
| kB | 0.2 | 0.8 | 0.9 | 0.2 | 0.8 | 0.7 | 0.5 | 0.4 | | 0.5 | 0.4 | |
| Q2 | 0.1 | 1.1 | 0.4 | 0.1 | 7.3 | 0.0 | 2.7 | 0.2 | | 0.0 | 0.4 | |
| Q avg. | 1.0 | 9.8 | 1.2 | 0.8 | 34.7 | 0.3 | 15.2 | 2.7 | | 0.7 | 4.8 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|------|-----|-----|------|-----|------|-----|--|-----|-----|--|
| fb% | 2.1 | 1.8 | 2.1 | 2.1 | 1.6 | 2.1 | 1.8 | 2.0 | | 2.1 | 2.0 | |
| BOQ, Q% | 2.0 | 18.1 | 2.4 | 1.6 | 55.0 | 0.6 | 26.7 | 5.5 | | 1.4 | 9.4 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro% | | | | | | | | | | | | |

35A
N
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|--------------------------------|------------------|--|--|--|
| Analyst | USAJ | Intersection | SIEMPRE VIVA RD./OTAY CENTER D | | | | |
| Agency or Co | USAJ | Area Type | All other areas | | | | |
| Date Performed | 03/15/11 | Jurisdiction | SICMOTOR30A3BWLMNOMIT | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030 ALT -3B WIT LA | | | | |
| | | | MEDIA | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|-----------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 1 | 1 | 0 | 1 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 535 | 1150 | 150 | 255 | 2900 | 575 | 55 | 30 | 120 | 200 | 90 | 100 |
| % Heavy Veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup los, time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Exc. of green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | S | S | | S | S | | S | S | | S | S | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stop/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = 74.0 | G = | G = | G = 14.0 | G = 14.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|------|-------|-------|-----|-------|-------|-----|
| | EB | | | WB | | | NR | | | SB | | |
| | Adj. flow rate | 532 | 1347 | | 311 | 4111 | | 59 | 156 | | 211 | 200 |
| Lane group cap | 234 | 2503 | | 234 | 2505 | | 164 | 153 | | 164 | 319 | |
| V/c ratio | 2.27 | 0.52 | | 1.33 | 1.64 | | 0.36 | 1.03 | | 1.20 | 0.65 | |
| Green ratio | 0.14 | 0.53 | | 0.14 | 0.53 | | 0.10 | 0.10 | | 0.10 | 0.10 | |
| Unit delay d1 | 60.0 | 21.5 | | 60.0 | 33.0 | | 58.9 | 63.0 | | 63.0 | 60.6 | |
| Delay factor k | 0.50 | 0.13 | | 0.50 | 0.50 | | 0.11 | 0.50 | | 0.50 | 0.22 | |
| Increment delay d2 | 586.5 | 0.2 | | 174.4 | 250.3 | | 1.3 | 91.7 | | 167.0 | 4.5 | |
| PF factor | 0.589 | 0.252 | | 0.889 | 0.493 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Control delay | 639.8 | 5.6 | | 227.9 | 319.9 | | 60.1 | 144.7 | | 230.0 | 65.2 | |
| Lane group LOS | F | A | | F | F | | E | F | | F | E | |
| Approach delay | 195.2 | | | 313.3 | | | 122.0 | | | 149.8 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersect delay | 252.0 | | | Intersection LOS | | | | | | F | | |

35A

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109

BACK-OF-QUEUE WORKSHEET

General Information

Project Descriptor ALI - 38-WITH LA MEDIA/AM PLAK/NO MI

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Int. queue/line | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/line | 532 | 1347 | | 311 | 4111 | | 58 | 158 | | 211 | 200 | |
| Satflow per lane | 1641 | 1782 | | 1641 | 1740 | | 1641 | 1534 | | 1641 | 1629 | |
| Capacity/line | 234 | 2566 | | 234 | 2505 | | 164 | 153 | | 164 | 310 | |
| Flow ratio | 0.32 | 0.28 | | 0.19 | 0.87 | | 0.04 | 0.10 | | 0.13 | 0.56 | |
| v/c ratio | 2.27 | 5.52 | | 1.23 | 1.54 | | 0.35 | 1.02 | | 1.29 | 0.65 | |
| l factor | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 3 | 3 | | 3 | 3 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.10 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| PF factor | 1.00 | 0.34 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Q1 | 29.7 | 4.3 | | 12.1 | 56.7 | | 2.1 | 6.1 | | 6.2 | 2.9 | |
| Q3 | 0.4 | 0.9 | | 0.4 | 0.9 | | 0.3 | 0.3 | | 0.3 | 0.3 | |
| Qz | 37.5 | 0.9 | | 11.0 | 75.9 | | 5.2 | 2.7 | | 7.0 | 0.5 | |
| Q avg. | 58.6 | 5.2 | | 23.1 | 134.6 | | 2.3 | 8.3 | | 15.2 | 4.4 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|--|------|-----|--|-----|------|--|------|-----|--|
| fe% | 1.5 | 1.9 | | 1.7 | 1.5 | | 2.0 | 1.9 | | 1.8 | 2.0 | |
| BOQ, Qz | 89.3 | 10.1 | | 38.4 | 202 | | 4.6 | 16.6 | | 26.8 | 9.8 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. Ru | | | | | | | | | | | | |
| 95% Row | | | | | | | | | | | | |

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|-----------------------------|------------------|--|--|--|
| Analyst | USAI | Intersection | SIEMPRE VIVA RE/DOTAY | | | | |
| Agency or Co. | USAI | Area Type | CENTER D All other areas | | | | |
| Date Performed | 03/15/11 | Jurisdiction | SIEMOTCH35439WLMWTHHMI | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030 ALT -38 WITH LA | | | | |
| | | Year | MEDI | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|-----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Volume (vph) | 505 | 1130 | 150 | 295 | 2980 | 975 | 55 | 30 | 120 | 200 | 90 | 100 |
| % Heavy van | 10 | 10 | 10 | 10 | 10 | 15 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 50 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = 74.0 | G = | G = | G = 14.0 | G = 14.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 532 | 1169 | 158 | 311 | 3137 | 974 | 58 | 32 | 126 | 211 | 95 |
| Lane group cap | 455 | 2618 | 357 | 455 | 2619 | 957 | 164 | 182 | 391 | 319 | 182 | 391 |
| v/c ratio | 1.17 | 0.45 | 0.17 | 0.98 | 1.20 | 1.02 | 0.35 | 0.18 | 0.37 | 0.88 | 0.52 | 0.27 |
| Green ratio | 0.14 | 0.53 | 0.66 | 0.14 | 0.53 | 0.66 | 0.10 | 0.10 | 0.28 | 0.10 | 0.10 | 0.28 |
| Unif. delay d1 | 60.0 | 20.5 | 9.9 | 57.0 | 23.0 | 23.5 | 58.8 | 57.7 | 40.0 | 60.7 | 59.8 | 39.4 |
| Delay factor k | 0.50 | 0.11 | 0.11 | 0.25 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.24 | 0.13 | 0.11 |
| Incr. delay d2 | 97.5 | 0.1 | 0.1 | 4.2 | 92.2 | 33.6 | 1.3 | 0.5 | 0.5 | 5.0 | 2.7 | 0.4 |
| PF factor | 0.889 | 0.253 | 0.149 | 0.889 | 0.439 | 0.250 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Control delay | 150.8 | 5.3 | 1.4 | 54.9 | 107.7 | 36.3 | 60.1 | 58.2 | 40.5 | 65.8 | 62.5 | 39.7 |
| Lane group LOS | F | A | A | C | F | D | E | E | D | E | E | D |
| Approach delay | 46.2 | | | 88.7 | | | 48.4 | | | 58.4 | | |
| Approach LOS | D | | | F | | | D | | | E | | |
| Intersec delay | 74.1 | | | Intersection LOS | | | | | | F | | |

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-36-WITH LA MEDIA/AM PEAK/WITH MIT

Average Back of Queue

| | CB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Init queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 532 | 1199 | 158 | 311 | 3137 | 974 | 58 | 32 | 128 | 211 | 95 | 105 |
| Satflow per lane | 1641 | 1818 | 1440 | 1641 | 1818 | 1440 | 1641 | 1818 | 1402 | 1641 | 1818 | 1402 |
| Capacity/lane | 455 | 2618 | 957 | 455 | 2618 | 957 | 154 | 192 | 291 | 319 | 182 | 391 |
| Flow ratio | 0.17 | 0.24 | 0.11 | 0.10 | 0.63 | 0.68 | 0.04 | 0.02 | 0.09 | 0.57 | 0.05 | 0.07 |
| Vol ratio | 1.17 | 0.45 | 0.17 | 0.68 | 1.20 | 1.02 | 0.35 | 0.18 | 0.32 | 0.66 | 0.52 | 0.27 |
| Pl factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 |
| Platoon ratio | 1.67 | 1.67 | 1.43 | 1.67 | 1.50 | 1.45 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF factor | 1.00 | 0.32 | 0.16 | 0.96 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Q ₀ | 10.6 | 3.4 | 0.4 | 5.7 | 44.9 | 37.9 | 2.1 | 1.1 | 3.9 | 4.0 | 3.5 | 3.2 |
| Q ₁ | 0.4 | 0.9 | 0.9 | 0.4 | 0.9 | 0.9 | 0.3 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 |
| Q ₂ | 6.8 | 0.7 | 0.2 | 0.9 | 28.2 | 11.4 | 0.2 | 0.1 | 0.2 | 0.5 | 0.3 | 0.2 |
| Q _{avg} | 17.4 | 4.1 | 0.5 | 6.4 | 73.0 | 49.3 | 2.3 | 1.2 | 4.1 | 4.6 | 3.9 | 3.4 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|------|-----|-----|------|-----|------|-----|-----|-----|-----|-----|-----|
| F ₉₅ | 1.7 | 2.0 | 2.1 | 1.9 | 1.5 | 1.5 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 |
| BOQ, Q ₉₅ | 30.1 | 9.1 | 1.1 | 12.3 | 110 | 75.9 | 4.6 | 2.5 | 8.2 | 9.0 | 7.6 | 6.7 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg. R ₀ | | | | | | | | | | | | |
| 95% R ₀ | | | | | | | | | | | | |

35 P

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MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|----------|------------------------|--------------------------------|-----------|------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst: | USA! | | | | | Intersection | SIEMPRE VIVA RD./OTAY CENTER D | | | | | |
| Agency or Co: | USA! | | | | | Area Type | All other areas | | | | | |
| Date Performed: | 03/15/11 | | | | | Jurisdiction | SIEMD UC35P3BWLMNOMIT | | | | | |
| Time Period: | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT -3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Nbr. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 1 | 1 | 0 | 1 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 95 | 1920 | 135 | 268 | 1155 | 180 | 210 | 130 | 415 | 945 | 85 | 490 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PIF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 3 | 3 | | 3 | 3 | |
| Ur t Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/R TOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Ur t Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | 04 | | Excl. Left | Thru & RT | 07 | | 08 | |
| Timing | G = 20.5 | G = 52.0 | G = | G = | G = 40.0 | G = 15.0 | G = | G = | G = | G = | G = | G = |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | Y = | Y = | Y = | Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 145.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TR | RT | LT | TR | RT | LT | TR | RT | LT | TR | RT |
| Adj flow rate | 95 | 2153 | | 279 | 1405 | | 221 | 574 | | 995 | 605 | |
| Lane group cap | 226 | 1756 | | 226 | 1731 | | 453 | 100 | | 453 | 299 | |
| Vol ratio | 0.42 | 1.23 | | 1.23 | 0.81 | | 0.49 | 3.59 | | 2.20 | 2.92 | |
| Green ratio | 0.14 | 0.36 | | 0.14 | 0.36 | | 0.28 | 0.10 | | 0.28 | 0.10 | |
| Unf. delay d1 | 57.2 | 46.5 | | 62.5 | 42.1 | | 43.9 | 55.0 | | 52.5 | 55.0 | |
| Delay factor k | 0.11 | 0.55 | | 0.50 | 0.35 | | 0.11 | 0.55 | | 0.50 | 0.50 | |
| Incom. delay d2 | 1.3 | 108.5 | | 137.7 | 3.1 | | 0.8 | 1150 | | 545.6 | 172.1 | |
| PF factor | 0.893 | 0.627 | | 0.893 | 0.627 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Control delay | 52.4 | 138.7 | | 193.5 | 29.4 | | 44.9 | 1245 | | 598.1 | 537.1 | |
| Lane group LOS | D | F | | F | C | | D | F | | F | F | |
| Approch. delay | 135.0 | | | 56.8 | | | 911.2 | | | 575.1 | | |
| Approach LOS | F | | | E | | | F | | | F | | |
| Intersect. delay | 322.7 | | | Intersection LOS | | | | | | F | | |

R. SF
N
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-39-WITH LA MEDIA-PM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|-------|-------|----|-------|-------|----|-------|-------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| In.L. queue/lane | 0.5 | 0.0 | | 0.5 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/ lane | 95 | 2163 | | 279 | 1405 | | 221 | 574 | | 955 | 605 | |
| Satflow per lane | 1641 | 1797 | | 1641 | 1772 | | 1641 | 1549 | | 1641 | 1517 | |
| Capacity/ lane | 226 | 1756 | | 226 | 1731 | | 453 | 160 | | 453 | 299 | |
| Flow ratio | 0.06 | 0.44 | | 0.17 | 0.29 | | 0.13 | 0.37 | | 0.51 | 0.21 | |
| w/c ratio | 0.42 | 1.23 | | 1.23 | 0.81 | | 0.49 | 3.59 | | 2.20 | 2.02 | |
| PF factor | 1.000 | 1.000 | | 1.000 | 1.050 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 3 | 3 | | 3 | 3 | |
| Platoon ratio | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| PF factor | 0.93 | 1.00 | | 1.00 | 0.86 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Q ₁ | 3.3 | 32.0 | | 11.2 | 16.2 | | 7.4 | 23.1 | | 40.1 | 12.8 | |
| Q ₅ | 0.4 | 0.7 | | 0.4 | 0.7 | | 0.6 | 0.3 | | 0.6 | 0.3 | |
| Q ₉ | 0.3 | 21.9 | | 8.2 | 2.6 | | 0.5 | 52.2 | | 68.8 | 20.6 | |
| Q avg. | 3.5 | 53.9 | | 19.5 | 18.8 | | 8.0 | 75.3 | | 108.9 | 33.4 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------------------|-----|------|--|------|------|--|------|-----|--|-----|------|--|
| Q ₉₅ | 2.0 | 1.5 | | 1.7 | 1.7 | | 1.9 | 1.5 | | 1.5 | 1.6 | |
| BOQ Q ₉₅ | 1.0 | 82.5 | | 33.2 | 32.1 | | 15.0 | 114 | | 163 | 63.2 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Rep. | | | | | | | | | | | | |

35-10

W
MT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-------|------------------|-------------------------------|-----------|-------|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | SIEMPRE VIVA RD/UTAY CENTER D | | | | | |
| Agency or Co | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/15/11 | | | | | Junction | SIEMOTC30P3BVLMMWTHMIT | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of lanes | 2 | 3 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Volume (vph) | 90 | 1920 | 135 | 265 | 1155 | 185 | 210 | 130 | 415 | 945 | 85 | 490 |
| % heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Start-up lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl Left | Thru & RT | 03 | | 04 | | Excl Left | Thru & RT | 07 | | 08 | |
| Timing | G = 20.0 | G = 52.0 | G = | | G = | | G = 40.0 | G = 15.0 | G = | | G = | |
| | Y = 4 | Y = 5 | Y = | | Y = | | Y = 4 | Y = 5 | Y = | | Y = | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 145.0 | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 95 | 2021 | 142 | 279 | 1218 | 169 | 221 | 137 | 437 | 995 | 89 | 516 |
| Lane group cap. | 440 | 1776 | 961 | 440 | 1776 | 961 | 453 | 198 | 597 | 879 | 198 | 387 |
| v/c ratio | 0.22 | 1.14 | 0.15 | 0.53 | 0.68 | 0.20 | 0.49 | 0.73 | 1.13 | 1.13 | 0.47 | 1.33 |
| Green ratio | 0.14 | 0.36 | 0.67 | 0.14 | 0.36 | 0.67 | 0.28 | 0.10 | 0.28 | 0.28 | 0.10 | 0.28 |
| Unif. delay d1 | 55.5 | 45.5 | 8.8 | 59.0 | 39.5 | 9.1 | 43.9 | 62.0 | 52.5 | 52.5 | 91.3 | 52.5 |
| Delay factor k | 0.11 | 0.56 | 0.11 | 0.21 | 0.25 | 0.11 | 0.11 | 0.29 | 0.50 | 0.50 | 0.11 | 0.56 |
| Instrum. delay d2 | 0.2 | 69.5 | 0.1 | 3.0 | 1.1 | 0.1 | 0.8 | 13.4 | 85.7 | 73.6 | 1.9 | 165.7 |
| PF factor | 0.893 | 0.627 | 0.151 | 0.893 | 0.627 | 0.151 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Control delay | 49.9 | 98.7 | 1.4 | 55.7 | 25.9 | 1.5 | 44.5 | 78.4 | 138.2 | 125.1 | 63.2 | 219.2 |
| Lane group LOS | D | F | A | E | C | A | D | E | F | F | E | F |
| Approach delay | 50.5 | | | 28.1 | | | 101.6 | | | 152.6 | | |
| Approach LOS | F | | | C | | | F | | | F | | |
| Intersec. delay | 31.0 | | | Intersection LOS | | | | | | F | | |

35-P
w
MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: A/T-38 WITH 1 A MEDIA-PM PEAK HOUR WITH MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 95 | 2021 | 142 | 279 | 1216 | 185 | 221 | 127 | 437 | 995 | 89 | 516 |
| Satflow per lane | 1641 | 1818 | 1437 | 1641 | 1818 | 1437 | 1641 | 1818 | 1404 | 1641 | 1818 | 1404 |
| Capacity/lane | 440 | 1776 | 961 | 440 | 1776 | 961 | 453 | 188 | 387 | 879 | 188 | 387 |
| Flow ratio | 0.53 | 0.41 | 0.10 | 0.09 | 0.25 | 0.13 | 0.13 | 5.08 | 0.31 | 0.31 | 0.05 | 0.37 |
| v/c ratio | 0.22 | 1.14 | 0.15 | 0.63 | 0.68 | 0.20 | 0.49 | 0.73 | 1.13 | 1.13 | 0.47 | 1.33 |
| I factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.500 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 |
| Platoon ratio | 1.67 | 1.67 | 1.42 | 1.67 | 1.67 | 1.42 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PF factor | 0.91 | 1.00 | 0.16 | 0.95 | 0.80 | 0.16 | 1.00 | 1.00 | 1.50 | 1.00 | 1.00 | 1.00 |
| Q1 | 1.6 | 29.6 | 0.3 | 5.2 | 12.2 | 0.5 | 7.4 | 5.4 | 17.6 | 20.6 | 3.4 | 20.8 |
| RS | 0.4 | 0.7 | 0.9 | 0.4 | 0.7 | 0.9 | 0.6 | 0.3 | 0.5 | 0.6 | 0.3 | 0.5 |
| Q2 | 0.1 | 15.5 | 0.2 | 0.6 | 1.5 | 0.2 | 0.5 | 0.6 | 9.3 | 10.9 | 0.3 | 18.0 |
| Q avg. | 1.7 | 45.3 | 0.5 | 5.8 | 13.7 | 0.7 | 8.0 | 6.2 | 26.9 | 31.5 | 3.7 | 38.8 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------|-----|------|-----|------|------|-----|------|------|------|------|-----|------|
| P95 | 2.0 | 1.5 | 2.1 | 1.9 | 1.8 | 2.1 | 1.9 | 1.9 | 1.6 | 1.6 | 2.0 | 1.6 |
| BOQ, Q95 | 3.4 | 70.2 | 1.0 | 11.2 | 24.4 | 1.4 | 15.0 | 11.9 | 44.0 | 50.5 | 7.3 | 60.9 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq95 | | | | | | | | | | | | |

36A
N
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|-----------------------------------|------------------|--|--|--|
| Analyst | USAI | Intersection | SIEMPRE VIVA RD./SR-905 | | | | |
| Agency or Co. | USAI | SB OFF | | | | | |
| Date Performed | 05/13/12 | Area Type | All other areas | | | | |
| Time Period | AM PEAK HOUR | Jurisdiction | SR905SBSIEM30AWLM | | | | |
| | | Analysis Year | YEAR 2030 ALT.-3B WITH LA MEDI | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|----------|-----------|------|------|------------------------|-----|-----|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 3 | 0 | 2 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Lane group | | TR | | L | T | | | | R | | | |
| Volume (vph) | | 1100 | 350 | 400 | 4250 | | | | 1630 | | | |
| % Heavy veh | | 10 | 10 | 10 | 5 | | | | 10 | | | |
| PHF | | 0.95 | 0.95 | 0.95 | 0.95 | | | | 0.95 | | | |
| Actuated (P/A) | | A | A | A | A | | | | | | | |
| Startup lost time | | 2.0 | | 2.0 | 2.0 | | | | 2.0 | | | |
| Ext. eff. green | | 2.0 | | 2.0 | 2.0 | | | | 2.0 | | | |
| Arrival type | | 5 | | 5 | 5 | | | | 3 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | | | 3.0 | | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | | | | 10 | | 0 | | | |
| Lane Width | | 12.0 | | 12.0 | 12.0 | | | | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | 0 | 0 | | | | 0 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | | | 3.0 | | | |
| Phasing | WB Only | WB Only | Thru & RT | 04 | 05 | 06 | 07 | 08 | | | | |
| Timing | G = 32.0 | G = 35.0 | G = 37.0 | G = | G = | G = | G = | G = | | | | |
| | Y = 4 | Y = 4 | Y = 5 | Y = | Y = | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 117.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|------|----|------|-------|------|---|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | 1526 | | 421 | 4474 | | | | 1716 | | |
| Lane group cap. | | 1501 | | 872 | 5189 | | | | 1577 | | | |
| v/c ratio | | 1.02 | | 0.48 | 0.86 | | | | 1.09 | | | |
| Green ratio | | 0.32 | | 0.27 | 1.00 | | | | 0.61 | | | |
| Unif. delay d1 | | 40.0 | | 35.6 | 0.0 | | | | 23.0 | | | |
| Delay factor k | | 0.50 | | 0.11 | 0.39 | | | | 0.50 | | | |
| Increm. delay d2 | | 27.5 | | 0.4 | 1.7 | | | | 50.7 | | | |
| PF factor | | 0.692 | | 0.749 | 0.950 | | | | 1.000 | | | |
| Control delay | | 55.1 | | 27.1 | 1.7 | | | | 73.7 | | | |
| Lane group LOS | | E | | C | A | | | | E | | | |
| Apprch. delay | | 55.1 | | 3.8 | | | | 73.7 | | | | |
| Approach LOS | | E | | A | | | | E | | | | |
| Intersec. delay | | 28.2 | | Intersection LOS | | | | | | | C | |

36A
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-WITH LA MEDIA AM PEAK HOUR*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|--------------|----|--------------|--------------|----|----|--------------|--------------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | <i>TR</i> | | <i>L</i> | <i>T</i> | | | | <i>R</i> | | | |
| Init. queue/lane | | <i>0.0</i> | | <i>0.0</i> | <i>0.0</i> | | | | <i>0.0</i> | | | |
| Flow rate/lane | | <i>1526</i> | | <i>421</i> | <i>4474</i> | | | | <i>1716</i> | | | |
| Satflow per lane | | <i>1741</i> | | <i>1641</i> | <i>1904</i> | | | | <i>1468</i> | | | |
| Capacity/lane | | <i>1501</i> | | <i>872</i> | <i>5189</i> | | | | <i>1577</i> | | | |
| Flow ratio | | <i>0.32</i> | | <i>0.13</i> | <i>0.86</i> | | | | <i>0.66</i> | | | |
| v/c ratio | | <i>1.02</i> | | <i>0.48</i> | <i>0.86</i> | | | | <i>1.09</i> | | | |
| l factor | | <i>1.000</i> | | <i>1.000</i> | <i>1.000</i> | | | <i>1.000</i> | <i>1.000</i> | | | |
| Arrival type | | <i>5</i> | | <i>5</i> | <i>5</i> | | | | <i>3</i> | | | |
| Platoon ratio | | <i>1.67</i> | | <i>1.67</i> | <i>1.00</i> | | | | <i>1.00</i> | | | |
| PF factor | | <i>1.00</i> | | <i>0.83</i> | | | | | <i>1.00</i> | | | |
| Q1 | | <i>18.2</i> | | <i>4.9</i> | | | | | <i>31.5</i> | | | |
| k _B | | <i>0.6</i> | | <i>0.5</i> | <i>1.2</i> | | | | <i>0.8</i> | | | |
| Q2 | | <i>6.9</i> | | <i>0.5</i> | <i>6.3</i> | | | | <i>15.7</i> | | | |
| Q avg. | | <i>25.1</i> | | <i>5.3</i> | | | | | <i>47.2</i> | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|------------------|--|-------------|--|-------------|--|--|--|--|-------------|--|--|--|
| f _{95%} | | <i>1.6</i> | | <i>1.9</i> | | | | | <i>1.5</i> | | | |
| BOQ, Q% | | <i>41.3</i> | | <i>10.4</i> | | | | | <i>72.8</i> | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|--|-------------|--|-------------|-------------|--|--|--|-------------|--|--|--|
| Q spacing | | <i>25.0</i> | | <i>25.0</i> | <i>25.0</i> | | | | <i>25.0</i> | | | |
| Q storage | | <i>0</i> | | <i>0</i> | <i>0</i> | | | | <i>0</i> | | | |
| Avg. R ₀ | | | | | | | | | | | | |
| 95% R _{0%} | | | | | | | | | | | | |

36P
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|----------|-----------|------------------|-------|------------------------|---------------------------|------|-------|----|----|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | SIEMPRE VIVA RD./SR-905 | | | | | |
| Agency or Co. | USAI | | | | | Area Type | SB OFF | | | | | |
| Date Performed | 05/13/12 | | | | | Jurisdiction | All other areas | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | SAN DIEGO | | | | | |
| | | | | | | | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 3 | 0 | 2 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Lane group | | TR | | L | T | | | | R | | | |
| Volume (vph) | | 2620 | 660 | 1000 | 1600 | | | | 350 | | | |
| % Heavy veh | | 10 | 10 | 10 | 5 | | | | 10 | | | |
| PHF | | 0.95 | 0.95 | 0.95 | 0.95 | | | | 0.95 | | | |
| Actuated (P/A) | | A | A | A | A | | | | | | | |
| Startup lost time | | 2.0 | | 2.0 | 2.0 | | | | 2.0 | | | |
| Ext. eff. green | | 2.0 | | 2.0 | 2.0 | | | | 2.0 | | | |
| Arrival type | | 5 | | 5 | 5 | | | | 3 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | | | 3.0 | | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | | | | 10 | | 0 | | | |
| Lane Width | | 12.0 | | 12.0 | 12.0 | | | | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | 0 | 0 | | | | 0 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | | | 3.0 | | | |
| Phasing | WB Only | WB Only | Thru & RT | 04 | 05 | 06 | 07 | 08 | | | | |
| Timing | G = 30.0 | G = 15.0 | G = 62.0 | G = | G = | G = | G = | G = | | | | |
| | Y = 4 | Y = 4 | Y = 5 | Y = | Y = | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 120.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | 3453 | | 1053 | 1684 | | | | 368 | | | |
| Lane group cap. | | 2472 | | 797 | 5189 | | | | 1061 | | | |
| v/c ratio | | 1.40 | | 1.32 | 0.32 | | | | 0.35 | | | |
| Green ratio | | 0.52 | | 0.25 | 1.00 | | | | 0.41 | | | |
| Unif. delay d1 | | 29.0 | | 45.0 | 0.0 | | | | 24.5 | | | |
| Delay factor k | | 0.50 | | 0.50 | 0.11 | | | | 0.11 | | | |
| Increm. delay d2 | | 181.1 | | 153.3 | 0.0 | | | | 0.2 | | | |
| PF factor | | 0.662 | | 0.778 | 0.950 | | | | 1.000 | | | |
| Control delay | | 200.3 | | 188.3 | 0.0 | | | | 24.7 | | | |
| Lane group LOS | | F | | F | A | | | | C | | | |
| Approch. delay | | 200.3 | | 72.5 | | | | 24.7 | | | | |
| Approach LOS | | F | | E | | | | C | | | | |
| Intersec. delay | | 137.1 | | Intersection LOS | | | | | | | F | |

36P
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B-WITH LA MEDIA PM PEAK HOUR*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|-------|----|-------|-------|----|----|-------|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | TR | | L | T | | | | R | | | |
| Init. queue/lane | | 0.0 | | 0.0 | 0.0 | | | | 0.0 | | | |
| Flow rate/lane | | 3453 | | 1053 | 1684 | | | | 368 | | | |
| Satflow per lane | | 1756 | | 1641 | 1904 | | | | 1468 | | | |
| Capacity/lane | | 2472 | | 797 | 5189 | | | | 1061 | | | |
| Flow ratio | | 0.72 | | 0.33 | 0.32 | | | | 0.14 | | | |
| w/c ratio | | 1.40 | | 1.32 | 0.32 | | | | 0.35 | | | |
| l factor | | 1.000 | | 1.000 | 1.000 | | | 1.000 | 1.000 | | | |
| Arrival type | | 5 | | 5 | 5 | | | | 3 | | | |
| Platoon ratio | | 1.32 | | 1.67 | 1.00 | | | | 1.00 | | | |
| PF factor | | 1.00 | | 1.00 | | | | | 1.00 | | | |
| Q1 | | 42.2 | | 18.1 | | | | | 4.8 | | | |
| k _B | | 0.8 | | 0.5 | 1.2 | | | | 0.6 | | | |
| Q2 | | 47.6 | | 18.3 | 0.6 | | | | 0.3 | | | |
| Q avg. | | 89.8 | | 36.3 | | | | | 5.1 | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|--|-----|--|------|--|--|--|--|-----|--|--|--|
| fb% | | 1.5 | | 1.6 | | | | | 2.0 | | | |
| BOQ, Q% | | 135 | | 57.4 | | | | | 9.9 | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|----------------------|--|------|--|------|------|--|--|--|------|--|--|--|
| Q spacing | | 25.0 | | 25.0 | 25.0 | | | | 25.0 | | | |
| Q storage | | 0 | | 0 | 0 | | | | 0 | | | |
| Avg. R ₀ | | | | | | | | | | | | |
| 95% R ₀ % | | | | | | | | | | | | |

36(A)
AM
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| TWO-WAY STOP CONTROL SUMMARY | | | | | | | | |
|--|--------------|------|--|--------------------------------|------|------------|----|--------|
| General Information | | | Site Information | | | | | |
| Analyst | USAI | | Intersection | SR-905 SB TO WB OFF-RAMP/SIEMP | | | | |
| Agency/Co. | USAI | | Jurisdiction | 905SBSIEMPAM3BWLM | | | | |
| Date Performed | 05/14/12 | | Analysis Year | 2030 3B WITH LA MEDIA /NO MIT. | | | | |
| Analysis Time Period | AM PEAK HOUR | | | | | | | |
| Project Description 3B WITH LA MEDIA/ NO MIT. | | | | | | | | |
| East/West Street: SIEMPRE VIVA RD. | | | North/South Street: SR-905 SB TO WB OFF RAMP | | | | | |
| Intersection Orientation: East-West | | | Study Period (hrs): 0.25 | | | | | |
| Vehicle Volumes and Adjustments | | | | | | | | |
| Major Street | Eastbound | | | Westbound | | | | |
| Movement | 1 | 2 | 3 | 4 | 5 | 6 | | |
| | L | T | R | L | T | R | | |
| Volume (veh/h) | 0 | 0 | 0 | 0 | 1100 | 0 | | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Hourly Flow Rate (veh/h) | 0 | 0 | 0 | 0 | 1157 | 0 | | |
| Proportion of heavy vehicles, P _{HV} | 10 | -- | -- | 10 | -- | -- | | |
| Median type | Raised curb | | | | | | | |
| RT Channelized? | | | 0 | | | 0 | | |
| Lanes | 0 | 0 | 0 | 0 | 2 | 0 | | |
| Configuration | | | | | T | | | |
| Upstream Signal | | 0 | | | 0 | | | |
| Minor Street | Northbound | | | Southbound | | | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 | | |
| | L | T | R | L | T | R | | |
| Volume (veh/h) | 0 | 0 | 0 | 0 | 0 | 3000 | | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Hourly Flow Rate (veh/h) | 0 | 0 | 0 | 0 | 0 | 3157 | | |
| Proportion of heavy vehicles, P _{HV} | 10 | 10 | 0 | 10 | 10 | 10 | | |
| Percent grade (%) | 0 | | | 0 | | | | |
| Flared approach | | N | | | N | | | |
| Storage | | 0 | | | 0 | | | |
| RT Channelized? | | | 0 | | | 0 | | |
| Lanes | 0 | 0 | 0 | 0 | 0 | 1 | | |
| Configuration | | | | | | R | | |
| Control Delay, Queue Length, Level of Service | | | | | | | | |
| Approach | EB | WB | Northbound | | | Southbound | | |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | | | | | | | | R |
| Volume, v (vph) | | | | | | | | 3157 |
| Capacity, c _m (vph) | | | | | | | | 480 |
| v/c ratio | | | | | | | | 6.58 |
| Queue length (95%) | | | | | | | | 338.13 |

36(A)
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| | | | | | | | | |
|------------------------|---|---|--|--|--|--|------|------|
| Control Delay (s/veh) | | | | | | | | 2531 |
| LOS | | | | | | | | F |
| Approach delay (s/veh) | - | - | | | | | 2531 | |
| Approach LOS | - | - | | | | | F | |

36(A)
AM
W/M/T

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|---------------------------|------------------|--|--|--|
| Analyst | USA: | Intersection | SR-905 SB TO WB OFF- | | | | |
| Agency or Co. | USA: | Area Type | RAMP/SIEMP | | | | |
| Date Performed | 07/26/11 | Jurisdiction | All other areas | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030 ALT. 3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|-----|----------|------------------------|-----|-----|----|----|----|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TII | RI | LT | TII | RT | LT | TII | RT | LT | TH | RT |
| Num. of lanes | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Lane group | | | | | T | | | | | | | R |
| Volume (vph) | | | | | 1650 | | | | | | | 3050 |
| % Heavy veh | | | | | 10 | | | | | | | 10 |
| PHF | | | | | 0.95 | | | | | | | 0.95 |
| Acc. Latency (P/A) | | | | | A | | | | | | | A |
| Startup lost time | | | | | 2.0 | | | | | | | 2.0 |
| Ext. eff. green | | | | | 2.0 | | | | | | | 2.0 |
| Arrival type | | | | | 5 | | | | | | | 5 |
| Unit Extension | | | | | 3.0 | | | | | | | 3.0 |
| Ped/Bike/RTOR Volume | | | | | | | | | | 10 | | 265 |
| Lane Width | | | | | 12.0 | | | | | | | 12.0 |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | | 0 | | | | | | | 0 |
| Unit Extension | | | | | 3.0 | | | | | | | 3.0 |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 60.0 | G = | G = | G = | G = 70.0 | G = | G = | G = | | | | |
| | Y = 5 | Y = | Y = | Y = | Y = 5 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|--|--|------------------|-------|------|----|--|--|-------|--|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | | | | | 1737 | | | | | | |
| Lane group cap | | | | | 2123 | | | | | | | 1300 |
| w/c ratio | | | | | 0.82 | | | | | | | 2.20 |
| Green ratio | | | | | 0.43 | | | | | | | 0.50 |
| Unif. delay d1 | | | | | 35.2 | | | | | | | 35.0 |
| Delay factor k | | | | | 0.36 | | | | | | | 0.50 |
| Increment. delay d2 | | | | | 2.6 | | | | | | | 541.6 |
| P/F factor | | | | | 0.500 | | | | | | | 1.000 |
| Control delay | | | | | 26.2 | | | | | | | 576.8 |
| Lane group LOS | | | | | C | | | | | | | F |
| Approach delay | | | | 20.2 | | | | | | 576.8 | | |
| Approach LOS | | | | C | | | | | | F | | |
| Intersec. delay | 366.4 | | | Intersection LOS | | | | | | F | | |

36(4)
AM
W/M/T

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT.-SB AM WITH LA MEDIA / SR-305 SB TO WB OFF-RAMP

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----|----|----|----|-------|----|----|----|----|----|-------|-------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | | 7 | | | | | | | R |
| Init. queue/lane | | | | | 0.0 | | | | | | | 0.0 |
| Flow rate/lane | | | | | 1737 | | | | | | | 2858 |
| Satflow per lane | | | | | 1818 | | | | | | | 1468 |
| Capacity/lane | | | | | 2123 | | | | | | | 1300 |
| Flow ratio | | | | | 0.35 | | | | | | | 1.10 |
| Vol ratio | | | | | 0.82 | | | | | | | 2.26 |
| I factor | | | | | 1.000 | | | | | | 1.000 | 1.000 |
| Arrival type | | | | | 5 | | | | | | | 3 |
| Platoon ratio | | | | | 1.67 | | | | | | | 1.05 |
| PF factor | | | | | 0.76 | | | | | | | 1.00 |
| Q1 | | | | | 17.0 | | | | | | | 62.8 |
| K0 | | | | | 0.8 | | | | | | | 0.7 |
| Q2 | | | | | 3.0 | | | | | | | 111.4 |
| Q avg. | | | | | 20.0 | | | | | | | 174.1 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|--------|--|--|--|--|------|--|--|--|--|--|--|-----|
| lens | | | | | 1.7 | | | | | | | 1.5 |
| BOQ Q% | | | | | 33.9 | | | | | | | 261 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|--|--|--|--|------|--|--|--|--|--|--|------|
| Q spacing | | | | | 25.0 | | | | | | | 25.0 |
| Q storage | | | | | 0 | | | | | | | 0 |
| Avg Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

36(A)
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| TWO-WAY STOP CONTROL SUMMARY | | | | | | | | |
|---|--------------|------|--|--------------------------------|------|------------|----|-------|
| General Information | | | Site Information | | | | | |
| Analyst | USAI | | Intersection | SR-905 SB TO WB OFF-RAMP/SIEMP | | | | |
| Agency/Co. | USAI | | Jurisdiction | 905SBSIEMPPM3BWLW | | | | |
| Date Performed | 05/14/12 | | Analysis Year | 2030 3B WITH LA MEDIA /NO MIT. | | | | |
| Analysis Time Period | PM PEAK HOUR | | | | | | | |
| Project Description 3B WITH LA MEDIA/ NO MIT. | | | | | | | | |
| East/West Street: SIEMPRE VIVA RD. | | | North/South Street: SR-905 SB TO WB OFF RAMP | | | | | |
| Intersection Orientation: East-West | | | Study Period (hrs): 0.25 | | | | | |
| Vehicle Volumes and Adjustments | | | | | | | | |
| Major Street | Eastbound | | | Westbound | | | | |
| Movement | 1 | 2 | 3 | 4 | 5 | 6 | | |
| | L | T | R | L | T | R | | |
| Volume (veh/h) | 0 | 0 | 0 | 0 | 1400 | 0 | | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Hourly Flow Rate (veh/h) | 0 | 0 | 0 | 0 | 1473 | 0 | | |
| Proportion of heavy vehicles, P _{HV} | 10 | -- | -- | 10 | -- | -- | | |
| Median type | Raised curb | | | | | | | |
| RT Channelized? | | | 0 | | | 0 | | |
| Lanes | 0 | 0 | 0 | 0 | 2 | 0 | | |
| Configuration | | | | | T | | | |
| Upstream Signal | | 0 | | | 0 | | | |
| Minor Street | Northbound | | | Southbound | | | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 | | |
| | L | T | R | L | T | R | | |
| Volume (veh/h) | 0 | 0 | 0 | 0 | 0 | 500 | | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Hourly Flow Rate (veh/h) | 0 | 0 | 0 | 0 | 0 | 526 | | |
| Proportion of heavy vehicles, P _{HV} | 10 | 10 | 0 | 10 | 10 | 10 | | |
| Percent grade (%) | 0 | | | 0 | | | | |
| Flared approach | | N | | | N | | | |
| Storage | | 0 | | | 0 | | | |
| RT Channelized? | | | 0 | | | 0 | | |
| Lanes | 0 | 0 | 0 | 0 | 0 | 1 | | |
| Configuration | | | | | | R | | |
| Control Delay, Queue Length, Level of Service | | | | | | | | |
| Approach | EB | WB | Northbound | | | Southbound | | |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | | | | | | | | R |
| Volume, v (vph) | | | | | | | | 526 |
| Capacity, c _m (vph) | | | | | | | | 388 |
| v/c ratio | | | | | | | | 1.36 |
| Queue length (95%) | | | | | | | | 25.11 |

| | | | | | | | | |
|------------------------|----|----|--|--|--|--|-------|-------|
| Control Delay (s/veh) | | | | | | | | 204.1 |
| LOS | | | | | | | | F |
| Approach delay (s/veh) | -- | -- | | | | | 204.1 | |
| Approach LOS | -- | -- | | | | | F | |

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Version 4.11

36(A)
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3:01 PM
w/ MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|------------------------------------|------------------|-----------------|--------------|-----------------|
| Analyst | USAI | Intersection | SR-905 SB TO WB OFF- RAMP/STEMP | Area Type | All other areas | Jurisdiction | SR905SBWBPM3BWL |
| Agency or Co | USAI | Analysis Year | YEAR 2030 SB-WITH LA MEDIA | | | | |
| Date Performed | 07/26/11 | | | | | | |
| Time Period | PM PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|-----|----------|------------------------|-----|-----|----|----|----|------|
| | FB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Lane group | | | | | T | | | | | | | R |
| Volume (vph) | | | | | 2100 | | | | | | | 550 |
| % Heavy veh | | | | | 10 | | | | | | | 10 |
| PHF | | | | | 0.95 | | | | | | | 0.95 |
| Actuated (P/A) | | | | | A | | | | | | | A |
| Startup lost time | | | | | 2.0 | | | | | | | 2.0 |
| Ext. eff. green | | | | | 2.0 | | | | | | | 2.0 |
| Arrival type | | | | | 5 | | | | | | | 3 |
| Unit Extension | | | | | 3.0 | | | | | | | 3.0 |
| Ped/Bike/RTROR Volume | | | | | | | | | | 10 | | 250 |
| Lane Width | | | | | 12.0 | | | | | | | 12.0 |
| Parking/Grader/Parking | N | | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | | 0 | | | | | | | 0 |
| Unit Extension | | | | | 3.0 | | | | | | | 3.0 |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | 06 | 07 | 08 | | | | |
| Timing | G = 70.0 | G = | G = | G = | G = 60.0 | G = | G = | G = | | | | |
| | Y = 5 | Y = | Y = | Y = | Y = 5 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.5 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|--|--|------------------|------|--|----|--|--|------|--|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | | | 2211 | | | | | | | |
| Lane group cap. | | | | 2477 | | | | | | | | 1114 |
| w/c ratio | | | | 0.89 | | | | | | | | 0.24 |
| Green ratio | | | | 0.50 | | | | | | | | 0.43 |
| Unit delay d1 | | | | 31.6 | | | | | | | | 25.4 |
| Delay factor k | | | | 0.42 | | | | | | | | 0.19 |
| Incremental delay d2 | | | | 4.6 | | | | | | | | 0.1 |
| PF factor | | | | 0.003 | | | | | | | | 1.000 |
| Control delay | | | | 15.1 | | | | | | | | 25.5 |
| Lane group LOS | | | | B | | | | | | | | C |
| Approach delay | | | | 15.1 | | | | | | 25.5 | | |
| Approach LOS | | | | B | | | | | | C | | |
| Intersac. delay | 16.2 | | | Intersection LOS | | | | | | B | | |

36(A)
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MIT

BACK-OF-QUEUE WORKSHEET

General Information

Project Description 30 W/TH LA MEDIA / SR-905 SB TO WB OFF-RAMP

Average Back of Queue

| | FB | | | WB | | | NB | | | SB | | |
|-------------------|----|----|----|----|-------|----|----|----|----|-------|-------|------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | | | | | T | | | | | | | R |
| Init queue/lane | | | | | 0.0 | | | | | | | 0.0 |
| Flow rate/lane | | | | | 2211 | | | | | | | 263 |
| Sat flow per lane | | | | | 1818 | | | | | | | 1468 |
| Capacity/lane | | | | | 2477 | | | | | | | 1114 |
| Flow ratio | | | | | 0.45 | | | | | | | 0.19 |
| w/c ratio | | | | | 0.89 | | | | | | | 0.24 |
| I factor | | | | | 1.000 | | | | | 1.000 | 1.000 | |
| Arrival type | | | | | 5 | | | | | | | 3 |
| Platoon ratio | | | | | 1.67 | | | | | | | 1.00 |
| PF factor | | | | | 0.72 | | | | | | | 1.00 |
| Q | | | | | 29.5 | | | | | | | 3.7 |
| ks | | | | | 0.8 | | | | | | | 0.7 |
| Qs | | | | | 5.0 | | | | | | | 0.2 |
| Q avg | | | | | 25.5 | | | | | | | 3.9 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------------------|--|--|--|--|------|--|--|--|--|--|--|-----|
| f ₉₅ | | | | | 1.6 | | | | | | | 2.0 |
| BOQ, Q _s | | | | | 41.9 | | | | | | | 7.7 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|--|--|--|--|------|--|--|--|--|--|--|------|
| Q spacing | | | | | 25.0 | | | | | | | 25.0 |
| Q storage | | | | | 0 | | | | | | | 0 |
| Avg. R _q | | | | | | | | | | | | |
| 95% R _q | | | | | | | | | | | | |

Worksheet

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Version 6.01

37A
N
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SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|------------------------------|--|--|
| Analyst: | USA/ | | | Intersection: | SR905 NB RAMP/SIEMPRE VIVA R | | |
| Agency or Co: | USA/ | | | Area Type: | All other areas | | |
| Date Performed: | 03/05/11 | | | Jurisdiction: | SAN DIEGO/NO MITIGATION | | |
| Time Period: | AM PEAK HOUR | | | Analysis Year: | YEAR 2035 ALT-36-WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|----------|------------------------|------|------|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of lanes | 2 | 3 | 0 | 0 | 3 | 1 | 0 | 1 | 2 | 0 | 0 | 0 |
| Lane group | L | T | | | TR | R | | LT | R | | | |
| Volume (vph) | 570 | 2180 | | | 1080 | 610 | 570 | 1 | 1000 | | | |
| % Heavy veh | 10 | 10 | | | 10 | 10 | 10 | 10 | 10 | | | |
| PFF | 0.95 | 0.95 | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Actuated (P/A) | A | A | | | A | A | A | A | A | | | |
| Start-up lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Exc. eff. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Arrivo type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Rad/Bike/RTOR Volume | | | | 10 | 5 | 0 | 10 | 5 | 0 | 10 | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | 12.0 | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Phasing | I-H Only | Thru & RT | 03 | 04 | NB Only | 06 | 07 | 08 | | | | |
| Timing | G = 26.0 | G = 51.0 | G = | G = | G = 52.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 142.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-------|------|-------|-------|------|--|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 500 | 2274 | | | 1201 | 578 | | 501 | 1053 | | |
| Lane group cap | 584 | 2925 | | | 1761 | 507 | | 634 | 930 | | | |
| w/c ratio | 1.03 | 0.80 | | | 0.68 | 1.14 | | 0.95 | 1.13 | | | |
| Green ratio | 0.18 | 0.57 | | | 0.35 | 0.35 | | 0.37 | 0.37 | | | |
| Unit delay d1 | 58.0 | 24.2 | | | 38.6 | 45.5 | | 43.7 | 45.0 | | | |
| Delay factor x | 0.50 | 0.35 | | | 0.25 | 0.50 | | 0.48 | 0.50 | | | |
| Inprem. delay d2 | 44.4 | 1.8 | | | 1.1 | 84.6 | | 23.6 | 73.0 | | | |
| PF factor | 0.651 | 0.116 | | | 0.626 | 0.626 | | 0.615 | 0.615 | | | |
| Control delay | 92.7 | 4.6 | | | 25.3 | 113.1 | | 50.5 | 100.7 | | | |
| Lane group LOS | F | A | | | C | F | | D | F | | | |
| Approch delay | 23.2 | | | 53.8 | | | 82.5 | | | | | |
| Approach LOS | D | | | D | | | F | | | | | |
| Intersec delay | 47.4 | | | Intersection LOS | | | | | | D | | |

37A

J
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALY-3D WITH LA MEDIA AM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|-------------------|-------|-------|----|----|-------|-------|----|-------|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | TR | R | | LT | R | | | |
| Init queue/lane | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | |
| Flow rate/lane | 600 | 2274 | | | 1201 | 578 | | 601 | 1053 | | | |
| Sat flow per lane | 1641 | 1818 | | | 1799 | 1412 | | 1732 | 1434 | | | |
| Capacity/lane | 564 | 2825 | | | 1761 | 507 | | 634 | 930 | | | |
| Flow ratio | 0.19 | 0.46 | | | 0.24 | 0.41 | | 0.35 | 0.41 | | | |
| w/c ratio | 1.03 | 0.80 | | | 0.68 | 1.14 | | 0.95 | 1.13 | | | |
| PF factor | 1.000 | 1.000 | | | 1.000 | 1.000 | | 1.000 | 1.000 | | | |
| Arrival type | S | S | | | S | S | | S | S | | | |
| Platoon ratio | 1.67 | 1.67 | | | 1.67 | 1.67 | | 1.67 | 1.67 | | | |
| PF factor | 1.00 | 0.27 | | | 0.89 | 1.00 | | 0.95 | 1.00 | | | |
| Q _s | 12.1 | 7.0 | | | 11.9 | 22.8 | | 21.9 | 23.4 | | | |
| Q ₀ | 0.4 | 0.9 | | | 0.7 | 0.6 | | 0.7 | 0.6 | | | |
| Q ₁ | 4.6 | 3.4 | | | 1.4 | 12.4 | | 5.4 | 12.3 | | | |
| Q avg. | 16.8 | 10.3 | | | 13.2 | 35.2 | | 27.3 | 35.8 | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|--|--|------|------|--|------|------|--|--|--|
| fb% | 1.7 | 1.8 | | | 1.8 | 1.6 | | 1.6 | 1.6 | | | |
| BOQ, Q% | 29.2 | 13.0 | | | 23.6 | 55.8 | | 44.6 | 56.6 | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|--|------|------|--|------|------|--|--|--|
| Q spacing | 25.0 | 25.0 | | | 25.0 | 25.0 | | 25.0 | 25.0 | | | |
| Q storage | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Avg RG | | | | | | | | | | | | |
| 95% Res: | | | | | | | | | | | | |

37 A
W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|------------------------------|--|--|
| Analyst | USAI | | | Intersection | SR905 NB RAMP/SIEMPRE VIVA R | | |
| Agency or Co | USAI | | | Area Type | All other areas | | |
| Date Performed | 03/05/11 | | | Jurisdiction | SAN DIEGO WITH MITIGATION | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YEAR 2030 ALT-3B-WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|----------|------------------------|------|------|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 3 | 0 | 0 | 3 | 2 | 0 | 1 | 2 | 0 | 0 | 0 |
| Lane group | L | T | | | T | R | | LT | R | | | |
| Volume (vph) | 570 | 2180 | | | 1000 | 610 | 570 | 1 | 1000 | | | |
| % Heavy veh | 10 | 10 | | | 10 | 10 | 10 | 10 | 10 | | | |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Actuated (P/A) | A | A | | | A | A | A | A | A | | | |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | 10 | 5 | 0 | 10 | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | 12.0 | 12.0 | | | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Unit Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Phasing | TH Only | Thru & RT | 03 | 04 | NB Only | 05 | 07 | 08 | | | | |
| Timing | G = 26.0 | G = 51.0 | G = | G = | G = 52.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 142.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|----|------------------|-------|-------|------|-------|-------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj flow rate | 609 | 2274 | | | 1137 | 642 | | 501 | 1053 | | | |
| Lane group cap | 584 | 2625 | | | 1779 | 898 | | 534 | 930 | | | |
| w/c ratio | 1.53 | 0.80 | | | 0.54 | 0.71 | | 0.95 | 1.13 | | | |
| Green ratio | 0.19 | 0.57 | | | 0.35 | 0.36 | | 0.37 | 0.37 | | | |
| Unit delay d1 | 56.5 | 24.2 | | | 37.8 | 39.2 | | 43.7 | 45.0 | | | |
| Delay factor k | 0.50 | 0.35 | | | 0.22 | 0.23 | | 0.46 | 0.50 | | | |
| Increment delay d2 | 44.4 | 1.8 | | | 0.8 | 2.7 | | 23.6 | 73.0 | | | |
| PI factor | 0.951 | 0.119 | | | 0.526 | 0.520 | | 0.615 | 0.615 | | | |
| Control delay | 83.7 | 4.6 | | | 24.5 | 27.3 | | 50.5 | 100.7 | | | |
| Lane group LOS | F | A | | | C | C | | D | F | | | |
| Approach delay | 23.2 | | | 25.5 | | | 82.5 | | | | | |
| Approach LOS | C | | | C | | | F | | | | | |
| Intersection delay | 39.4 | | | Intersection LOS | | | | | | D | | |

37A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: A.I.T.-3B WITH LA MEDIA AM PEAK HOUR WITH MITIGATION

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|----|-------|-------|----|-------|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | T | R | | LT | R | | | |
| In L queue/lane | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | |
| Flow rate/lane | 600 | 2274 | | | 1137 | 642 | | 601 | 1053 | | | |
| Satflow per lane | 1641 | 1818 | | | 1818 | 1412 | | 1732 | 1434 | | | |
| Capacity/lane | 584 | 2525 | | | 1779 | 898 | | 634 | 930 | | | |
| Flow ratio | 0.19 | 0.46 | | | 0.23 | 0.25 | | 0.35 | 0.41 | | | |
| W/O ratio | 1.03 | 0.80 | | | 0.64 | 0.71 | | 0.95 | 1.13 | | | |
| I factor | 1.000 | 1.000 | | | 1.000 | 1.000 | | 1.000 | 1.000 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Platoon ratio | 1.67 | 1.67 | | | 1.67 | 1.67 | | 1.67 | 1.67 | | | |
| PF factor | 1.00 | 0.27 | | | 0.79 | 0.81 | | 0.95 | 1.00 | | | |
| Q1 | 12.1 | 7.0 | | | 10.7 | 10.0 | | 21.9 | 23.4 | | | |
| KR | 0.4 | 0.9 | | | 0.7 | 0.6 | | 0.7 | 0.6 | | | |
| Q2 | 4.6 | 3.4 | | | 1.2 | 1.4 | | 5.4 | 17.3 | | | |
| Q avg. | 15.8 | 10.3 | | | 11.9 | 11.4 | | 27.3 | 35.8 | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|--|--|------|------|--|------|------|--|--|--|
| TR% | 1.7 | 1.8 | | | 1.8 | 1.8 | | 1.6 | 1.6 | | | |
| BOQ, Q% | 29.2 | 19.5 | | | 21.5 | 20.7 | | 44.6 | 56.6 | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|--|------|------|--|------|------|--|--|--|
| Q spacing | 25.0 | 25.0 | | | 25.0 | 25.0 | | 25.0 | 25.0 | | | |
| Q storage | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq | | | | | | | | | | | | |

378
N/A

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|----------------------------|------------------|--|--|--|
| Analyst | USA1 | Intersection | SR905 NB RAMP/ SIEMPRE | | | | |
| Agency or Co. | USA1 | | VIVA R | | | | |
| Date Performed | 03/05/11 | Area Type | All other areas | | | | |
| Time Period | PM PEAK HOUR | Jurisdiction | SR905NB SIEMPR 2B WLMNOMIT | | | | |
| | | Analysis Year | YEAR 2035 AT T-3B-WITH I M | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|----------|------------------------|------|------|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 0 | 3 | 1 | 0 | 1 | 2 | 0 | 0 | 0 |
| Lane group | L | T | | | TR | R | | LT | R | | | |
| Volume (vph) | 1870 | 1100 | | | 1755 | 1570 | 345 | 1 | 650 | | | |
| % Heavy veh | 10 | 10 | | | 10 | 10 | 10 | 10 | 10 | | | |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | 0.95 | 0.25 | 0.95 | | | |
| Actuated (PIA) | A | A | | | A | A | A | A | A | | | |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Ext. eff green | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Ln.1 Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | 10 | 5 | 0 | 10 | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | 12.0 | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Park 10/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Unil Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 2.0 | | | |
| Phasing | EB Only | THru & RT | 03 | 04 | NB Only | 06 | 07 | 08 | | | | |
| Timing | G = 40.0 | G = 65.0 | G = | G = | G = 27.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 145.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-------|-------|-------|-------|-----|--|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 1968 | 1156 | | | 2673 | 827 | | 364 | 632 | | |
| Lane group cap. | 879 | 3723 | | | 2094 | 635 | | 323 | 468 | | | |
| v/c ratio | 2.24 | 0.31 | | | 1.38 | 1.35 | | 1.13 | 1.35 | | | |
| Green ratio | 0.28 | 0.75 | | | 0.45 | 0.45 | | 0.19 | 0.19 | | | |
| Unif. delay d1 | 52.5 | 5.8 | | | 40.0 | 40.0 | | 59.0 | 59.0 | | | |
| Delay factor k | 0.50 | 0.11 | | | 0.50 | 0.50 | | 0.50 | 0.50 | | | |
| Incremental delay c2 | 551.2 | 0.0 | | | 128.3 | 147.3 | | 88.9 | 171.3 | | | |
| PF factor | 0.755 | 0.201 | | | 0.463 | 0.490 | | 0.847 | 0.847 | | | |
| Control delay | 502.9 | 1.2 | | | 146.8 | 156.9 | | 158.9 | 221.3 | | | |
| Lane group LOS | F | A | | | F | F | | F | F | | | |
| Approach delay | 380.0 | | | 151.6 | | | 191.2 | | | | | |
| Approach LOS | F | | | F | | | F | | | | | |
| Intersect. delay | 250.4 | | | Intersection LOS | | | | | | F | | |

378
N
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description ALT-39 WITH LA MEDIA PM PEAK HOUR/NO MIT

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|----|-------|-------|----|-------|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | TR | R | | LT | R | | | |
| Init. queue/lane | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | |
| Flow rate/lane | 1968 | 1158 | | | 2673 | 827 | | 364 | 632 | | | |
| Satflow per lane | 1541 | 1818 | | | 1715 | 1417 | | 1732 | 1419 | | | |
| Capacity/lane | 879 | 3723 | | | 2094 | 635 | | 323 | 468 | | | |
| Flow ratio | 0.52 | 0.23 | | | 0.57 | 0.58 | | 0.21 | 0.25 | | | |
| w/c ratio | 2.24 | 3.31 | | | 1.28 | 1.30 | | 1.13 | 1.35 | | | |
| I factor | 1.000 | 1.000 | | | 1.000 | 1.000 | | 1.000 | 1.000 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Platoon ratio | 1.54 | 1.26 | | | 1.66 | 1.63 | | 1.67 | 1.67 | | | |
| PF factor | 1.50 | 0.22 | | | 1.00 | 1.00 | | 1.00 | 1.00 | | | |
| Q ₁ | 40.8 | 1.2 | | | 36.5 | 33.3 | | 14.7 | 14.4 | | | |
| ku | 0.6 | 1.1 | | | 0.9 | 0.7 | | 0.5 | 0.4 | | | |
| Q ₂ | 71.1 | 0.5 | | | 25.8 | 25.7 | | 7.9 | 13.0 | | | |
| Q avg | 111.9 | 1.7 | | | 62.4 | 60.0 | | 22.5 | 27.4 | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|----------------------|-----|-----|--|--|-----|------|--|------|------|--|--|--|
| fs ₉₅ | 1.5 | 2.0 | | | 1.5 | 1.5 | | 1.7 | 1.6 | | | |
| BOQ, Q ₉₅ | 168 | 3.5 | | | 105 | 91.3 | | 37.6 | 44.7 | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|---------------------|------|------|--|--|------|------|--|------|------|--|--|--|
| Q spacing | 25.0 | 25.0 | | | 25.0 | 25.0 | | 25.0 | 25.0 | | | |
| Q storage | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Avg. R ₀ | | | | | | | | | | | | |
| 95% R ₀ | | | | | | | | | | | | |

HSPSOFT™

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Version 4.1f

318
W
A

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|----------------|----------------------------|------------------|--------------------------------|--|--|
| Analyst | USA! | Agency or Co | USA! | Intersect on | SR905 NB RAMFS/ SIEMPRE VIVA R | | |
| Date Performed | 03/05/11 | Date Performed | 03/05/11 | Area Type | All other areas | | |
| Time Period | PM PEAK HOUR | Jurisdiction | SR905NBSIEMPP3BWLMMWITHMIT | Analysis Year | YEAR 2030 ALT.-3B-WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|----------|------|------------------------|------|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 3 | 0 | 0 | 3 | 2 | 0 | 1 | 2 | 0 | 0 | 0 |
| Lane group | L | T | | | T | R | | LT | R | | | |
| Vol/Trk (vph) | 1870 | 1105 | | | 1755 | 1570 | 345 | 1 | 500 | | | |
| % Heavy veh | 10 | 10 | | | 10 | 10 | 10 | 10 | 10 | | | |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Actuated (F/A) | A | A | | | A | A | A | A | A | | | |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | 2.0 | | 2.0 | 2.0 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Lane Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 0 | 10 | 5 | 0 | 10 | | |
| Lane Width | 12.0 | 12.0 | | | 12.0 | 12.0 | | 12.0 | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Lane Extension | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 | 3.0 | | | |
| Phasing | EB Only | Thru & RT | 03 | 04 | NB Only | 06 | 07 | 08 | | | | |
| Timing | G = 40.0 | G = 65.0 | G = | G = | G = 27.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 145.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-------|-------|-------|-------|-----|--|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 1858 | 1155 | | | 1847 | 1653 | | 354 | 632 | | |
| Lane group cap | 879 | 3723 | | | 2220 | 1124 | | 323 | 468 | | | |
| Vol ratio | 2.24 | 0.31 | | | 0.83 | 1.47 | | 1.13 | 1.35 | | | |
| Green ratio | 0.28 | 0.75 | | | 0.45 | 0.45 | | 0.19 | 0.19 | | | |
| Unif. delay d1 | 52.5 | 5.8 | | | 35.2 | 40.0 | | 59.0 | 59.0 | | | |
| Delay factor < | 0.50 | 0.11 | | | 0.37 | 0.50 | | 0.50 | 0.50 | | | |
| Increment. delay d2 | 561.2 | 0.0 | | | 2.9 | 216.7 | | 88.9 | 171.3 | | | |
| PF factor | 0.795 | 0.201 | | | 0.458 | 0.540 | | 0.947 | 0.647 | | | |
| Control delay | 602.9 | 1.2 | | | 19.0 | 342.3 | | 138.9 | 221.3 | | | |
| Lane group LOS | F | A | | | B | F | | F | F | | | |
| Approch. delay | 389.0 | | | 124.4 | | | 191.2 | | | | | |
| Approach LOS | F | | | F | | | F | | | | | |
| Intersec. delay | 238.0 | | | Intersection LOS | | | | | | F | | |

378

W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description: ALT-3B WITH LA MEDIA PM PEAK HOUR WITH MITIGATION

Average Back of Queue

| | CB | | | WB | | | NB | | | SB | | |
|------------------|-------|-------|----|----|-------|-------|----|-------|-------|----|----|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | L | T | | | R | R | | LT | R | | | |
| init. queue/lane | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | 0.0 | | | |
| Flow rate/lane | 1966 | 1150 | | | 1647 | 1653 | | 354 | 632 | | | |
| Satflow per lane | 1641 | 1618 | | | 1618 | 1417 | | 1732 | 1419 | | | |
| Capacity/lane | 679 | 3723 | | | 2220 | 1124 | | 223 | 468 | | | |
| Flow ratio | 0.62 | 0.23 | | | 0.37 | 0.66 | | 0.21 | 0.25 | | | |
| Vol ratio | 2.24 | 0.31 | | | 0.83 | 1.47 | | 1.13 | 1.35 | | | |
| PF factor | 1.000 | 1.000 | | | 1.000 | 1.000 | | 1.000 | 1.000 | | | |
| Arrival type | 5 | 5 | | | 5 | 5 | | 5 | 5 | | | |
| Platoon ratio | 1.54 | 1.26 | | | 1.67 | 1.44 | | 1.67 | 1.67 | | | |
| PF factor | 1.00 | 0.22 | | | 0.70 | 1.00 | | 1.00 | 1.00 | | | |
| Q1 | 49.8 | 1.2 | | | 18.3 | 37.6 | | 14.7 | 14.4 | | | |
| Q3 | 6.6 | 1.1 | | | 0.8 | 0.7 | | 0.5 | 0.4 | | | |
| Q2 | 71.1 | 0.5 | | | 3.4 | 39.3 | | 7.8 | 13.0 | | | |
| Q avg | 111.9 | 1.7 | | | 21.6 | 76.9 | | 22.5 | 27.4 | | | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|-----|--|--|------|-----|--|------|------|--|--|--|
| 95% | 1.5 | 2.0 | | | 1.7 | 1.5 | | 1.7 | 1.8 | | | |
| BOQ, Q% | 188 | 3.5 | | | 36.4 | 118 | | 37.6 | 44.7 | | | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|--|--|------|------|--|------|------|--|--|--|
| Q spacing | 25.0 | 25.0 | | | 25.0 | 25.0 | | 25.0 | 25.0 | | | |
| Q storage | 0 | 0 | | | 0 | 0 | | 0 | 0 | | | |
| Avg. Rd | | | | | | | | | | | | |
| 95% Row | | | | | | | | | | | | |

Accession

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Version 4.10

38A
227

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-------|------------------|--------------------------------|----------|------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | SIEMPRE VIVA RD./PSEO AMERICAS | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 05/21/12 | | | | | Jurisdiction | SAN DIEGO/NO MITIGATION | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 3 | 1 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | T | R | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 900 | 1255 | 820 | 90 | 715 | 95 | 465 | 50 | 50 | 55 | 100 | 510 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 200 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | 04 | | NB Only | SB Only | 07 | | 08 | |
| Timing | G = 38.0 | G = 35.0 | G = | | G = | | G = 30.0 | G = 19.0 | G = | | G = | |
| | Y = 4 | Y = 5 | Y = | | Y = | | Y = 4 | Y = 5 | Y = | | Y = | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 947 | 1321 | 863 | 95 | 853 | | 489 | 106 | | 58 | 431 | |
| Lane group cap. | 445 | 1238 | 715 | 445 | 848 | | 352 | 676 | | 223 | 403 | |
| v/c ratio | 2.13 | 1.07 | 1.21 | 0.21 | 1.01 | | 1.39 | 0.16 | | 0.26 | 1.07 | |
| Green ratio | 0.27 | 0.25 | 0.50 | 0.27 | 0.25 | | 0.21 | 0.21 | | 0.14 | 0.14 | |
| Unif. delay d1 | 51.0 | 52.5 | 35.0 | 39.4 | 52.5 | | 55.0 | 44.7 | | 54.2 | 60.5 | |
| Delay factor k | 0.50 | 0.50 | 0.50 | 0.11 | 0.50 | | 0.50 | 0.11 | | 0.11 | 0.50 | |
| Increm. delay d2 | 515.2 | 45.5 | 106.0 | 0.2 | 32.4 | | 191.8 | 0.1 | | 0.6 | 64.6 | |
| PF factor | 0.759 | 0.778 | 0.426 | 0.752 | 0.778 | | 0.818 | 0.818 | | 0.895 | 0.895 | |
| Control delay | 553.9 | 86.3 | 120.9 | 29.9 | 73.2 | | 236.8 | 36.7 | | 49.2 | 118.7 | |
| Lane group LOS | F | F | F | C | E | | F | D | | D | F | |
| Apprch. delay | 237.3 | | | 68.8 | | | 201.2 | | | 110.5 | | |
| Approach LOS | F | | | E | | | F | | | F | | |
| Intersec. delay | 190.2 | | | Intersection LOS | | | | | | F | | |

38A
2
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B WITH LA MEDIA AM PEAK HOUR/NO MITIGATION*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----------|----------|----------|----------|-----------|----|----------|-----------|----|----------|-----------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>TR</i> | | <i>L</i> | <i>TR</i> | | <i>L</i> | <i>TR</i> | |
| init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 947 | 1321 | 863 | 95 | 853 | | 489 | 106 | | 58 | 431 | |
| Satflow per lane | 1641 | 1818 | 1430 | 1641 | 1780 | | 1641 | 1655 | | 1641 | 1561 | |
| Capacity/lane | 445 | 1238 | 715 | 445 | 848 | | 352 | 676 | | 223 | 403 | |
| Flow ratio | 0.58 | 0.27 | 0.60 | 0.06 | 0.25 | | 0.30 | 0.03 | | 0.04 | 0.14 | |
| v/c ratio | 2.13 | 1.07 | 1.21 | 0.21 | 1.01 | | 1.39 | 0.16 | | 0.26 | 1.07 | |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.65 | 1.67 | 1.57 | 1.67 | 1.67 | | 1.67 | 1.67 | | 1.67 | 1.67 | |
| PF factor | 1.00 | 1.00 | 1.00 | 0.78 | 1.00 | | 1.00 | 0.84 | | 0.92 | 1.00 | |
| Q1 | 36.8 | 18.8 | 33.6 | 2.2 | 17.4 | | 19.0 | 1.5 | | 1.9 | 8.8 | |
| kB | 0.6 | 0.6 | 0.7 | 0.6 | 0.6 | | 0.5 | 0.5 | | 0.4 | 0.4 | |
| Q2 | 63.8 | 8.0 | 22.1 | 0.1 | 5.8 | | 18.7 | 0.1 | | 0.1 | 4.2 | |
| Q avg. | 100.6 | 26.8 | 55.7 | 2.4 | 23.2 | | 37.7 | 1.5 | | 2.0 | 13.0 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|-----|------|------|-----|------|--|------|-----|--|-----|------|--|
| fB% | 1.5 | 1.6 | 1.5 | 2.0 | 1.7 | | 1.6 | 2.1 | | 2.0 | 1.8 | |
| BOQ, Q% | 151 | 43.8 | 85.0 | 4.8 | 38.6 | | 59.4 | 3.2 | | 4.0 | 23.3 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro% | | | | | | | | | | | | |

38A
W
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|----------|------------------|--------------------------------|-------|-------|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | SIEMPRE VIVA RD./PSEO AMERICAS | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 05/21/12 | | | | | Jurisdiction | SAN DIEGO/WITH MITIGATION | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Lane group | L | T | R | L | T | R | L | LT | R | L | T | R |
| Volume (vph) | 900 | 1255 | 820 | 90 | 715 | 95 | 465 | 50 | 50 | 55 | 100 | 510 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | NB Only | SB Only | 07 | 08 | | | | |
| Timing | G = 38.0 | G = 35.0 | G = | G = | G = 30.0 | G = 19.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 947 | 1321 | 863 | 95 | 753 | 100 | 367 | 175 | 53 | 58 | 105 | 537 |
| Lane group cap. | 865 | 1238 | 703 | 445 | 866 | 551 | 352 | 377 | 694 | 223 | 247 | 1082 |
| v/c ratio | 1.09 | 1.07 | 1.23 | 0.21 | 0.87 | 0.18 | 1.04 | 0.46 | 0.08 | 0.26 | 0.43 | 0.50 |
| Green ratio | 0.27 | 0.25 | 0.50 | 0.27 | 0.25 | 0.39 | 0.21 | 0.21 | 0.49 | 0.14 | 0.14 | 0.44 |
| Unif. delay d1 | 51.0 | 52.5 | 35.0 | 39.4 | 50.3 | 28.4 | 55.0 | 48.0 | 19.2 | 54.2 | 55.5 | 27.8 |
| Delay factor k | 0.50 | 0.50 | 0.50 | 0.11 | 0.40 | 0.11 | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| Increm. delay d2 | 59.8 | 45.5 | 114.7 | 0.2 | 9.5 | 0.2 | 59.5 | 0.9 | 0.0 | 0.6 | 1.2 | 0.4 |
| PF factor | 0.752 | 0.778 | 0.453 | 0.752 | 0.778 | 0.581 | 0.818 | 0.818 | 0.370 | 0.895 | 0.895 | 0.470 |
| Control delay | 98.1 | 86.3 | 130.6 | 29.9 | 48.6 | 16.7 | 104.5 | 40.2 | 7.2 | 49.2 | 50.9 | 13.5 |
| Lane group LOS | F | F | F | C | D | B | F | D | A | D | D | B |
| Apprch. delay | 102.1 | | | 43.4 | | | 76.9 | | | 22.0 | | |
| Approach LOS | F | | | D | | | E | | | C | | |
| Intersec. delay | 78.5 | | | Intersection LOS | | | | | | E | | |

38A
W
M

BACK-OF-QUEUE WORKSHEET

General Information

Project Description *ALT.-3B WITH LA MEDIA AM PEAK HOUR/WITH MITIGATION*

Average Back of Queue

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>LT</i> | <i>R</i> | <i>L</i> | <i>T</i> | <i>R</i> |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 947 | 1321 | 863 | 95 | 753 | 100 | 367 | 175 | 53 | 58 | 105 | 537 |
| Satflow per lane | 1641 | 1818 | 1405 | 1641 | 1818 | 1429 | 1641 | 1757 | 1428 | 1641 | 1818 | 1381 |
| Capacity/lane | 865 | 1238 | 703 | 445 | 866 | 551 | 352 | 377 | 694 | 223 | 247 | 1082 |
| Flow ratio | 0.30 | 0.27 | 0.61 | 0.06 | 0.22 | 0.07 | 0.22 | 0.10 | 0.04 | 0.04 | 0.06 | 0.22 |
| v/c ratio | 1.09 | 1.07 | 1.23 | 0.21 | 0.87 | 0.18 | 1.04 | 0.46 | 0.08 | 0.26 | 0.43 | 0.50 |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Platoon ratio | 1.67 | 1.67 | 1.55 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| PF factor | 1.00 | 1.00 | 1.00 | 0.78 | 0.95 | 0.61 | 1.00 | 0.88 | 0.38 | 0.92 | 0.93 | 0.58 |
| Q1 | 18.9 | 18.8 | 33.6 | 2.2 | 14.1 | 1.6 | 14.3 | 5.2 | 0.4 | 1.9 | 3.5 | 4.9 |
| kB | 0.6 | 0.6 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.7 | 0.4 | 0.4 | 0.7 |
| Q2 | 9.0 | 8.0 | 23.4 | 0.1 | 2.7 | 0.1 | 5.7 | 0.4 | 0.1 | 0.1 | 0.3 | 0.6 |
| Q avg. | 27.9 | 26.8 | 56.9 | 2.4 | 16.8 | 1.7 | 20.0 | 5.7 | 0.5 | 2.0 | 3.8 | 5.5 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|------|-----|------|-----|------|------|-----|-----|-----|------|
| fB% | 1.6 | 1.6 | 1.5 | 2.0 | 1.7 | 2.0 | 1.7 | 1.9 | 2.1 | 2.0 | 2.0 | 1.9 |
| BOQ, Q% | 45.5 | 43.8 | 86.8 | 4.8 | 29.1 | 3.5 | 33.9 | 11.0 | 1.0 | 4.0 | 7.5 | 10.7 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro% | | | | | | | | | | | | |

38P
N
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|----------|------------------------|--------------------------------|-------|---------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | SIEMPRE VIVA RD./PSEO AMERICAS | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 05/21/12 | | | | | Jurisdiction | SIEMPASEO30P3BWL/MNO | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 3 | 1 | 1 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | T | R | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 530 | 735 | 480 | 235 | 1405 | 260 | 915 | 100 | 100 | 100 | 50 | 1005 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 275 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | 04 | | NB Only | | SB Only | | 07 | 08 |
| Timing | G = 22.0 | G = 35.0 | G = | G = | G = 32.0 | | G = 33.0 | | G = | | G = | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | | Y = 5 | | Y = | | Y = | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 558 | 774 | 505 | 247 | 1753 | | 963 | 210 | | 105 | 821 | |
| Lane group cap. | 258 | 1238 | 735 | 258 | 842 | | 375 | 721 | | 387 | 683 | |
| v/c ratio | 2.16 | 0.63 | 0.69 | 0.96 | 2.08 | | 2.57 | 0.29 | | 0.27 | 1.20 | |
| Green ratio | 0.16 | 0.25 | 0.51 | 0.16 | 0.25 | | 0.23 | 0.23 | | 0.24 | 0.24 | |
| Unif. delay d1 | 59.0 | 46.7 | 25.5 | 58.5 | 52.5 | | 54.0 | 44.6 | | 43.7 | 53.5 | |
| Delay factor k | 0.50 | 0.21 | 0.26 | 0.47 | 0.50 | | 0.50 | 0.11 | | 0.11 | 0.50 | |
| Increm. delay d2 | 535.9 | 1.0 | 2.7 | 44.2 | 491.0 | | 713.4 | 0.2 | | 0.4 | 104.6 | |
| PF factor | 0.876 | 0.778 | 0.294 | 0.876 | 0.778 | | 0.817 | 0.802 | | 0.794 | 0.794 | |
| Control delay | 587.6 | 37.3 | 10.2 | 95.5 | 531.8 | | 757.5 | 36.0 | | 35.1 | 147.1 | |
| Lane group LOS | F | D | B | F | F | | F | D | | D | F | |
| Apprch. delay | 197.0 | | | 477.9 | | | 628.3 | | | 134.4 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersec. delay | 367.1 | | | Intersection LOS | | | | | | F | | |

38
25**BACK-OF-QUEUE WORKSHEET****General Information**Project Description *ALT.-3B WITH LA MEDIA PM PEAK HOUR/NO MIT***Average Back of Queue**

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----------|----------|----------|----------|-----------|----|----------|-----------|----|----------|-----------|----|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>TR</i> | | <i>L</i> | <i>TR</i> | | <i>L</i> | <i>TR</i> | |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Flow rate/lane | 558 | 774 | 505 | 247 | 1753 | | 963 | 210 | | 105 | 821 | |
| Satflow per lane | 1641 | 1818 | 1430 | 1641 | 1767 | | 1641 | 1657 | | 1641 | 1521 | |
| Capacity/lane | 258 | 1238 | 735 | 258 | 842 | | 375 | 721 | | 387 | 683 | |
| Flow ratio | 0.34 | 0.16 | 0.35 | 0.15 | 0.52 | | 0.59 | 0.07 | | 0.06 | 0.28 | |
| w/c ratio | 2.16 | 0.63 | 0.69 | 0.96 | 2.08 | | 2.57 | 0.29 | | 0.27 | 1.20 | |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | | 1.62 | 1.67 | | 1.67 | 1.67 | |
| PF factor | 1.00 | 0.89 | 0.46 | 0.99 | 1.00 | | 1.00 | 0.84 | | 0.83 | 1.00 | |
| Q1 | 21.7 | 8.7 | 6.8 | 9.5 | 35.8 | | 37.5 | 3.0 | | 2.8 | 16.8 | |
| kB | 0.4 | 0.6 | 0.7 | 0.4 | 0.6 | | 0.5 | 0.5 | | 0.5 | 0.5 | |
| Q2 | 38.2 | 0.9 | 1.6 | 2.9 | 60.8 | | 74.3 | 0.2 | | 0.2 | 11.4 | |
| Q avg. | 59.9 | 9.6 | 8.4 | 12.4 | 96.6 | | 111.8 | 3.2 | | 3.0 | 28.2 | |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|------|------|-----|--|-----|-----|--|-----|------|--|
| fB% | 1.5 | 1.9 | 1.9 | 1.8 | 1.5 | | 1.5 | 2.0 | | 2.0 | 1.6 | |
| BOQ, Q% | 91.2 | 17.8 | 15.7 | 22.3 | 145 | | 168 | 6.4 | | 6.0 | 45.8 | |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|--|------|------|--|------|------|--|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | | 25.0 | 25.0 | | 25.0 | 25.0 | |
| Q storage | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Avg. Ro | | | | | | | | | | | | |
| 95% Ro% | | | | | | | | | | | | |

38P
W
M

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-------|------------------|--------------------------------|----------|-------|---------|-------|-------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAI | | | | | Intersection | SIEMPRE VIVA RD./PSEO AMERICAS | | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 05/21/12 | | | | | Jurisdiction | SIEMPASEO30P3BWLM/WITH MIT | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| Lane group | L | T | R | L | T | R | L | LT | R | L | T | R | |
| Volume (vph) | 530 | 735 | 480 | 235 | 1405 | 260 | 915 | 100 | 100 | 100 | 50 | 1005 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 275 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | NB Only | | SB Only | | 07 | 08 |
| Timing | G = 22.0 | G = 35.0 | G = | G = | | G = 32.0 | | G = 33.0 | | G = | | G = | |
| | Y = 4 | Y = 5 | Y = | Y = | | Y = 4 | | Y = 5 | | Y = | | Y = | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 558 | 774 | 505 | 247 | 1479 | 274 | 520 | 548 | 105 | 105 | 53 | 768 | |
| Lane group cap. | 501 | 1238 | 723 | 258 | 866 | 695 | 375 | 400 | 326 | 387 | 429 | 1064 | |
| v/c ratio | 1.11 | 0.63 | 0.70 | 0.96 | 1.71 | 0.39 | 1.39 | 1.37 | 0.32 | 0.27 | 0.12 | 0.72 | |
| Green ratio | 0.16 | 0.25 | 0.51 | 0.16 | 0.25 | 0.49 | 0.23 | 0.23 | 0.23 | 0.24 | 0.24 | 0.43 | |
| Unif. delay d1 | 59.0 | 46.7 | 25.8 | 58.5 | 52.5 | 22.9 | 54.0 | 54.0 | 45.0 | 43.7 | 42.1 | 33.1 | |
| Delay factor k | 0.50 | 0.21 | 0.26 | 0.47 | 0.50 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.11 | 0.28 | |
| Increm. delay d2 | 75.2 | 1.0 | 3.0 | 44.2 | 323.5 | 0.4 | 189.8 | 181.8 | 0.6 | 0.4 | 0.1 | 2.4 | |
| PF factor | 0.876 | 0.778 | 0.294 | 0.876 | 0.778 | 0.370 | 0.802 | 0.802 | 0.802 | 0.794 | 0.794 | 0.500 | |
| Control delay | 126.8 | 37.3 | 10.6 | 95.5 | 364.3 | 8.9 | 233.1 | 225.1 | 36.7 | 35.1 | 33.6 | 19.0 | |
| Lane group LOS | F | D | B | F | F | A | F | F | D | D | C | B | |
| Apprch. delay | 57.1 | | | 282.4 | | | 211.8 | | | 21.6 | | | |
| Approach LOS | E | | | F | | | F | | | C | | | |
| Intersec. delay | 158.1 | | | Intersection LOS | | | | | | F | | | |

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M**BACK-OF-QUEUE WORKSHEET****General Information**Project Description *ALT.-3B WITH LA MEDIA PM PEAK HOUR/WITH MIT***Average Back of Queue**

| | EB | | | WB | | | NB | | | SB | | |
|------------------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Lane group | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>T</i> | <i>R</i> | <i>L</i> | <i>LT</i> | <i>R</i> | <i>L</i> | <i>T</i> | <i>R</i> |
| Init. queue/lane | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Flow rate/lane | 558 | 774 | 505 | 247 | 1479 | 274 | 520 | 548 | 105 | 105 | 53 | 768 |
| Satflow per lane | 1641 | 1818 | 1405 | 1641 | 1818 | 1430 | 1641 | 1748 | 1425 | 1641 | 1818 | 1402 |
| Capacity/lane | 501 | 1238 | 723 | 258 | 866 | 695 | 375 | 400 | 326 | 387 | 429 | 1064 |
| Flow ratio | 0.17 | 0.16 | 0.36 | 0.15 | 0.43 | 0.19 | 0.32 | 0.31 | 0.07 | 0.06 | 0.03 | 0.31 |
| w/c ratio | 1.11 | 0.63 | 0.70 | 0.96 | 1.71 | 0.39 | 1.39 | 1.37 | 0.32 | 0.27 | 0.12 | 0.72 |
| l factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Platoon ratio | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 |
| PF factor | 1.00 | 0.89 | 0.47 | 0.99 | 1.00 | 0.44 | 1.00 | 1.00 | 0.85 | 0.83 | 0.81 | 0.71 |
| Q1 | 11.2 | 8.7 | 7.0 | 9.5 | 30.2 | 3.0 | 20.2 | 21.3 | 2.9 | 2.8 | 1.3 | 9.9 |
| kB | 0.4 | 0.6 | 0.7 | 0.4 | 0.6 | 0.7 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.7 |
| Q2 | 6.1 | 0.9 | 1.6 | 2.9 | 41.6 | 0.5 | 19.8 | 20.3 | 0.2 | 0.2 | 0.1 | 1.6 |
| Q avg. | 17.3 | 9.6 | 8.6 | 12.4 | 71.7 | 3.4 | 40.0 | 41.6 | 3.1 | 3.0 | 1.4 | 11.5 |

Percentile Back of Queue (95th percentile)

| | | | | | | | | | | | | |
|---------|------|------|------|------|-----|-----|------|------|-----|-----|-----|------|
| fB% | 1.7 | 1.9 | 1.9 | 1.8 | 1.5 | 2.0 | 1.6 | 1.6 | 2.0 | 2.0 | 2.1 | 1.8 |
| BOQ, Q% | 29.9 | 17.8 | 16.1 | 22.3 | 108 | 6.9 | 62.6 | 64.8 | 6.2 | 6.0 | 2.9 | 20.9 |

Queue Storage Ratio

| | | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|
| Q spacing | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| Q storage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avg. Rq | | | | | | | | | | | | |
| 95% Rq% | | | | | | | | | | | | |

3/11

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|-------------------------|--|--|
| Analyst | USA1 | | | Intersection | DEL SOL BLVD/JENNERY RD | | |
| Agency or Co. | USA1 | | | Area Type | All other areas | | |
| Date Performed | 03/05/11 | | | Jurisdiction | DELSOLDEN30A38WLM | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YFAR 2030 WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|-----|-----|----------|------------------------|-----|-----|----|------|----|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LI | TH | RT | LI | TH | RT | LI | TH | RT | LI | TH | RT |
| Num. of Lanes | 1 | 2 | 5 | 0 | 2 | 0 | 5 | 0 | 5 | 1 | 0 | 1 |
| Lane group | L | T | | | TR | | | | | L | | R |
| Volume (vph) | 450 | 220 | | | 300 | 600 | | | | 430 | | 400 |
| % Heavy veh | 5 | 5 | | | 5 | 5 | | | | 5 | | 5 |
| P-F | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | 0.95 | | 0.95 |
| Actuated (P/A) | A | A | | | A | A | | | | A | | A |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Arrival type | 3 | 3 | | | 3 | | | | | 3 | | 3 |
| Ln: Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | 10 | 5 | 5 | 10 | | | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | | 12.0 | | | | | 12.0 | | 12.0 |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 5 | 0 | | | 0 | | | | | 0 | | 5 |
| Ln: Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Phasing | EB Only | Thru & RT | 03 | 04 | SB Only | 05 | 07 | 08 | | | | |
| Timing | G = 40.0 | G = 40.0 | G = | G = | G = 35.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 4 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 125.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|----|------------------|-------|----|----|----|----|-------|----|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | LI | TH | RT | LI | TH | RT | LI | TH | RT | LI | TH | RT |
| Adj. flow rate | 474 | 232 | | | 948 | | | | | 453 | | 421 |
| Lane group cap. | 550 | 2437 | | | 965 | | | | | 454 | | 924 |
| v/c ratio | 0.86 | 0.10 | | | 0.98 | | | | | 1.30 | | 0.46 |
| Green ratio | 0.32 | 0.67 | | | 0.32 | | | | | 0.26 | | 0.62 |
| Unit delay d1 | 39.9 | 7.2 | | | 42.2 | | | | | 45.0 | | 12.8 |
| Delay factor k | 0.39 | 0.11 | | | 0.49 | | | | | 0.50 | | 0.11 |
| Incr. delay d2 | 13.2 | 0.0 | | | 24.5 | | | | | 41.6 | | 0.4 |
| P-F factor | 1.500 | 1.000 | | | 1.000 | | | | | 1.000 | | 1.060 |
| Control delay | 53.1 | 7.2 | | | 55.8 | | | | | 87.6 | | 13.2 |
| Lane group LOS | D | A | | | E | | | | | F | | B |
| Approach delay | 38.6 | | | 66.8 | | | | | | 51.7 | | |
| Approach LOS | D | | | E | | | | | | D | | |
| Intersect. delay | 53.6 | | | Intersection LOS | | | | | | D | | |

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SHORT REPORT

| General Information | | | Site Information | | |
|---------------------|--------------|--|------------------|---------------------------|--|
| Analyst | USA1 | | Intersection | DEL SOL BLVD./DENNERY RD. | |
| Agency or Co. | USA1 | | Area Type | All other areas | |
| Date Performed | 03/06/11 | | Jurisdiction | DELSOLDEN30P3BWLM | |
| Time Period | PM PEAK HOUR | | Analysis Year | YEAR 2030 WITH LM | |

| | EB | | | WB | | | NB | | | SB | | |
|-----------------------|------|------|----|----|------|------|----|----|----|------|----|------|
| | L | TH | RT | L | TH | RT | L | TH | RT | L | TH | RT |
| Num of Lanes | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Lane group | L | T | | | TR | | | | | L | | R |
| Volume (vph) | 500 | 240 | | | 150 | 400 | | | | 470 | | 430 |
| % Heavy veh | 5 | 5 | | | 5 | 5 | | | | 5 | | 5 |
| PHF | 0.95 | 0.95 | | | 0.95 | 0.95 | | | | 0.95 | | 0.95 |
| Actuated (P/A) | A | A | | | A | A | | | | A | | A |
| Startup lost time | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | | | 2.0 | | | | | 2.0 | | 2.0 |
| Arrival type | 3 | 3 | | | 3 | | | | | 3 | | 3 |
| Unif. Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |
| Ped/Bike/RTOR Volume | | | | | 10 | 5 | 0 | 10 | | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | | 12.0 | | | | | 12.0 | | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | | 0 | | | | | 0 | | 0 |
| Unif. Extension | 3.0 | 3.0 | | | 3.0 | | | | | 3.0 | | 3.0 |

| Phasing | EB Only | Thru & RT | 03 | 04 | SB Only | 06 | 07 | 08 |
|----------------------------|-------------------|-------------------|------------|------------|-------------------|------------------------|------------|------------|
| Timing | G = 40.0 Y = 4 | G = 40.0 Y = 4 | G = Y = | G = Y = | G = 33.0 Y = 4 | G = Y = | G = Y = | G = Y = |
| Duration of Analysis (hrs) | 0.25 | | | | | Cycle Length C = 125.0 | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | |
|---|-------|-------|------------------|-------|----|---|------|-------|-------|
| | EB | | WB | | NB | | SB | | |
| | L | T | L | T | L | T | L | T | |
| Adj. flow rate | 526 | 253 | | 679 | | | | 495 | 453 |
| Lane group cap. | 550 | 2437 | | 953 | | | | 454 | 924 |
| v/c ratio | 0.95 | 0.10 | | 0.61 | | | | 1.09 | 0.49 |
| Green ratio | 0.32 | 0.57 | | 0.32 | | | | 0.25 | 0.62 |
| Unif. delay d1 | 41.5 | 7.2 | | 35.9 | | | | 46.0 | 13.9 |
| Delay factor k | 0.17 | 0.11 | | 0.19 | | | | 0.50 | 0.11 |
| Incram. delay d2 | 27.7 | 5.0 | | 1.1 | | | | 68.9 | 0.4 |
| PF factor | 1.000 | 1.000 | | 1.000 | | | | 1.000 | 1.000 |
| Control delay | 69.4 | 7.2 | | 37.0 | | | | 114.9 | 13.6 |
| Lane group LOS | F | A | | D | | | | F | B |
| Approach delay | 49.2 | | 37.0 | | | | 68.5 | | |
| Approach LOS | D | | D | | | | E | | |
| Intersec. delay | 53.2 | | Intersection LOS | | | | D | | |

27:0
3

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|------------------------------|------------------|--|--|--|
| Analyst: | USAI | Intersection | OCEAN VIEW HILLS/DEL DOL BL. | | | | |
| Agency or Co. | USAI | Area Type | All other areas | | | | |
| Date Performed | 03/08/11 | Jurisdiction | OCEAN DEL 30A 39W/L/M/NM | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | YEAR 2030 39 WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|----------------------------|-------------------|-------------------|------------|------------|-------------------|------------------------|------------|------------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Numb. of Lanes | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | T | R | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 400 | 20 | 460 | 50 | 20 | 50 | 400 | 1000 | 20 | 20 | 855 | 350 |
| % Heavy veh | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Accreted (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.5 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | | 3 | 3 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Pad/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 100 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | S | N | N | 0 | N | N | 0 | N | N | S | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phase | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 30.0 Y = 4 | G = 28.0 Y = 5 | G = Y = | G = Y = | G = 20.0 Y = 4 | G = 49.0 Y = 5 | G = Y = | G = Y = | | | | |
| Duration of Analysis (hrs) | = 0.25 | | | | | Cycle Length C = 145.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|----|-------|-------|------|-------|-------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 421 | 21 | 484 | 53 | 74 | | 421 | 1074 | | 21 | 1163 |
| Lane group cap. | 366 | 350 | 561 | 366 | 314 | | 474 | 1709 | | 244 | 1152 | |
| w/c ratio | 1.15 | 0.06 | 0.96 | 0.14 | 0.24 | | 0.99 | 0.53 | | 0.09 | 1.01 | |
| Green ratio | 0.21 | 0.19 | 0.37 | 0.21 | 0.19 | | 0.14 | 0.34 | | 0.14 | 0.34 | |
| Unif. delay d1 | 57.5 | 47.7 | 42.6 | 47.0 | 49.5 | | 61.4 | 40.4 | | 54.5 | 46.0 | |
| Delay factor k | 0.50 | 0.11 | 0.39 | 0.11 | 0.11 | | 0.41 | 0.21 | | 0.11 | 0.50 | |
| Incremental delay d2 | 94.5 | 0.1 | 13.1 | 0.2 | 0.4 | | 18.3 | 0.7 | | 0.2 | 28.9 | |
| PF factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Control delay | 152.0 | 47.6 | 55.7 | 47.2 | 49.8 | | 79.7 | 41.1 | | 54.7 | 76.9 | |
| Lane group LOS | F | D | E | D | D | | E | D | | D | E | |
| Approach delay | 99.3 | | | 48.7 | | | 52.0 | | | 76.6 | | |
| Approach LOS | F | | | D | | | D | | | E | | |
| Intersec. delay | 71.4 | | | Intersection LOS | | | | | | E | | |

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| SHORT REPORT | | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-------|-------------------------|----------------------------|-------|------------|-----------|-------|-------|-----|--|
| General Information | | | | | | Site Information | | | | | | | | |
| Analyst | USA! | | | | | Intersection | OCEAN VIEW HILL S/D EL DCL | | | | | | | |
| Agency or Co. | USA! | | | | | | EL | | | | | | | |
| Data Performer | 03/28/11 | | | | | Area Type | All other areas | | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Jurisdiction | OCEAN DEL 30436 WLM/MM | | | | | | | |
| | | | | | | Analysis Year | YEAR 2033 2B WITH LM | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | | |
| | E3 | | | WB | | | NB | | | SB | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| Num of Lanes | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 3 | 0 | 1 | 2 | 1 | | |
| Lane group | L | LT | R | L | TR | | L | TR | | L | T | R | | |
| Volume (vph) | 403 | 25 | 460 | 56 | 20 | 50 | 400 | 1000 | 20 | 20 | 855 | 350 | | |
| % Heavy veh | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | | |
| Start-up los: time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | | |
| Arrival type | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | | 3 | 3 | 3 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 100 | | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | | |
| Parking/hr | | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | | | Excl. Left | Thru & RT | 07 | | 08 | |
| Timing | G = 36.0 | G = 28.0 | G = | | | G = | | | G = 20.0 | G = 49.0 | G = | | G = | |
| | Y = 4 | Y = 5 | Y = | | | Y = | | | Y = 4 | Y = 5 | Y = | | Y = | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length, C = 145.0 | | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | | |
| | FB | | | WB | | | NB | | | SB | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| Adj. flow rate | 211 | 231 | 484 | 53 | 74 | | 421 | 1074 | | 21 | 900 | 283 | | |
| Lane group cap. | 366 | 344 | 581 | 366 | 314 | | 474 | 1708 | | 244 | 1199 | 522 | | |
| v/c ratio | 0.58 | 0.67 | 0.86 | 0.14 | 0.24 | | 0.89 | 0.63 | | 0.09 | 0.75 | 0.50 | | |
| Green ratio | 0.21 | 0.16 | 0.37 | 0.21 | 0.19 | | 0.14 | 0.34 | | 0.14 | 0.34 | 0.34 | | |
| Unit delay d1 | 51.8 | 54.2 | 42.5 | 47.0 | 43.5 | | 51.4 | 40.4 | | 54.5 | 42.5 | 38.3 | | |
| Delay factor k | 0.17 | 0.24 | 0.29 | 0.11 | 0.11 | | 0.41 | 0.21 | | 0.11 | 0.31 | 0.11 | | |
| Incr. delay c2 | 2.2 | 3.0 | 13.1 | 0.2 | 0.4 | | 18.3 | 0.7 | | 0.2 | 2.7 | 0.9 | | |
| PH factor | 1.000 | 1.000 | 1.500 | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | | |
| Control delay | 54.0 | 59.3 | 55.7 | 47.2 | 49.8 | | 79.7 | 41.1 | | 54.7 | 45.3 | 39.1 | | |
| Lane group LOS | D | E | E | D | D | | E | D | | D | D | D | | |
| Approach delay | 55.2 | | | 48.7 | | | 52.0 | | | 44.1 | | | | |
| Approach LOS | E | | | D | | | D | | | D | | | | |
| Intersec. delay | 50.4 | | | Intersection LOS | | | | | | D | | | | |

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SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|----------------------|------------------|--|--|--|
| Analyst | USAi | Intersection | OCEAN VIEW HILLS/DCL | | | | |
| Agency or Cr. | USAi | | DCL BL | | | | |
| Date Performed | 03/06/11 | Area Type | All other areas | | | | |
| Time Period | PM PEAK HOUR | Jurisdiction | COESANDEL30A3BWLM NO | | | | |
| | | | MIT | | | | |
| | | Analysis Year | YEAR 2030 3R WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|-----------|------------------------|------|------|------|------|------|
| | FB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 3 | 0 | 1 | 2 | 0 |
| Lane group | L | T | R | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 350 | 20 | 390 | 20 | 20 | 20 | 450 | 1235 | 50 | 50 | 1010 | 225 |
| % Heavy veh | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.5 | 2.5 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Exc. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 3 | 3 | 3 | 3 | 3 | | 4 | 4 | | 4 | 4 | |
| Lr 1 Extension | 3.0 | 3.5 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.5 | 3.5 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 100 |
| Lane Width | 12.5 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.5 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Lr 1 Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 30.0 | G = 28.0 | G = | G = | G = 20.0 | G = 49.6 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 145.6 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|----|-------|-------|------|-------|-------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 368 | 21 | 411 | 21 | 42 | | 474 | 1353 | | 53 | 1195 |
| Lane group cap. | 366 | 350 | 561 | 366 | 327 | | 474 | 1702 | | 244 | 1176 | |
| Vol ratio | 1.01 | 0.06 | 0.73 | 0.06 | 0.13 | | 1.50 | 0.79 | | 0.22 | 1.02 | |
| Green ratio | 0.21 | 0.19 | 0.37 | 0.21 | 0.19 | | 0.14 | 0.34 | | 0.14 | 0.34 | |
| Unif. delay d1 | 57.5 | 47.7 | 39.9 | 46.2 | 48.4 | | 62.5 | 43.5 | | 55.5 | 48.0 | |
| Delay factor k | 0.50 | 0.11 | 0.29 | 0.11 | 0.11 | | 0.50 | 0.34 | | 0.11 | 0.50 | |
| Increment. delay d2 | 48.4 | 0.1 | 4.9 | 0.1 | 0.2 | | 41.3 | 2.7 | | 0.4 | 30.3 | |
| PF factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 0.954 | | 1.000 | 0.954 | |
| Control delay | 105.9 | 47.8 | 44.8 | 46.2 | 46.6 | | 103.8 | 44.2 | | 56.0 | 76.1 | |
| Lane group LOS | F | D | D | D | D | | F | D | | E | E | |
| Approach delay | 73.0 | | | 47.8 | | | 59.7 | | | 75.3 | | |
| Approach LOS | E | | | D | | | E | | | E | | |
| Intersec. delay | 67.1 | | | Intersection LOS | | | | | | E | | |

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| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|------------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | OCEAN VIEW HILLS/DEL DCL BL. | | | | | |
| Agency or Co. | USAJ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | OCEANDEL3GA3BWLM WITH MIT | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 3B WITH LM | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|----------|------------------------|------------|-----------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 3 | 3 | 1 | 2 | 1 |
| Lane group | L | LT | R | L | TR | | L | TR | | L | T | R |
| Volume (vph) | 350 | 20 | 350 | 20 | 20 | 20 | 450 | 1235 | 50 | 50 | 1010 | 225 |
| % heavy veh | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Arrival type | 3 | 3 | 3 | 3 | 3 | | 4 | 4 | | 4 | 4 | 3 |
| Unl. Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 100 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Unl. Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | Excl. Left | Thru & RT | 07 | | | 08 |
| Timing | G = 30.0 | G = 28.0 | G = | G = | G = 26.0 | G = 49.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 145.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|-----------------|-------|----|-------|-------|------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 271 | 168 | 411 | 21 | 42 | | 474 | 1353 | | 53 | 1063 |
| Lane group cap. | 368 | 345 | 561 | 358 | 321 | | 474 | 1702 | | 244 | 1199 | 522 |
| v/c ratio | 0.85 | 0.49 | 0.73 | 0.06 | 0.13 | | 1.00 | 0.79 | | 0.22 | 0.89 | 0.25 |
| Green ratio | 0.21 | 0.19 | 0.37 | 0.21 | 0.19 | | 0.14 | 0.34 | | 0.14 | 0.34 | 0.34 |
| Unif. delay d1 | 52.1 | 52.1 | 39.9 | 48.2 | 48.4 | | 62.5 | 43.5 | | 55.5 | 45.4 | 34.7 |
| Delay factor k | 0.19 | 0.11 | 0.29 | 0.11 | 0.11 | | 0.50 | 0.34 | | 0.11 | 0.41 | 0.11 |
| Increment delay d2 | 2.8 | 1.1 | 4.5 | 0.1 | 0.2 | | 41.3 | 2.1 | | 0.4 | 8.3 | 0.3 |
| PF factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 0.954 | | 1.000 | 0.954 | 1.000 |
| Control delay | 54.9 | 53.2 | 44.8 | 48.2 | 48.6 | | 103.8 | 44.2 | | 56.0 | 51.6 | 35.0 |
| Lane group LOS | D | D | D | D | D | | F | D | | F | D | D |
| Approch. delay | 49.4 | | | 47.8 | | | 59.7 | | | 50.0 | | |
| Approach LOS | D | | | D | | | E | | | D | | |
| Intersec. delay | 54.3 | | | Interaction LOS | | | | | | D | | |

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SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|-----------------|------------------------|------------------|---------------------------|--|--|
| Analyst: | USAJ | Agency or Co: | USAJ | Intersection: | OCEAN VIEW HILLS/STREET A | | |
| Date Performed: | 03/07/11 | Date Performed: | 03/07/11 | Area Type: | All other areas | | |
| Time Period: | AM PEAK HOUR | Jurisdiction: | OCEANSTA303BWLM NO | Jurisdiction: | MIT | | |
| | | Analysis Year: | YEAR 2030 3B WITH LMMO | Analysis Year: | MIT | | |

| | EB | | | WB | | | NB | | | SB | | |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| Lane group | L | TR | | L | TR | | L | T | R | L | TR | |
| Volume (veh) | 10 | 1150 | 255 | 85 | 900 | 20 | 502 | 45 | 65 | 40 | 50 | 20 |
| % Heavy veh | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 4 | 4 | | 4 | 4 | | 4 | 4 | 1 | 4 | 4 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grader/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |

| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | |
|------------------------------|------------|-----------|-----|--------------------|------------|-----------|-----|-----|-------|
| Timing | G = 15.0 | G = 47.0 | G = | G = | G = 40.0 | G = 15.0 | G = | G = | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | |
| Duration of Analysis (hrs) - | 0.25 | | | Cycle Length - C - | | | | | 135.0 |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|----|------------------|-------|----|-------|-------|-------|-------|-------|----|
| | LB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 11 | 1426 | | 89 | 968 | | 526 | 47 | 68 | 42 | 74 | |
| Lane group cap. | 107 | 1704 | | 107 | 1759 | | 524 | 267 | 167 | 524 | 105 | |
| v/c ratio | 0.06 | 0.84 | | 0.45 | 0.55 | | 1.00 | 0.23 | 0.41 | 0.08 | 0.38 | |
| Green ratio | 0.11 | 0.35 | | 0.11 | 0.35 | | 0.30 | 0.11 | 0.11 | 0.30 | 0.11 | |
| Unif. delay d1 | 53.7 | 40.5 | | 56.2 | 35.5 | | 47.5 | 54.7 | 55.9 | 34.2 | 55.7 | |
| Delay factor x | 0.11 | 0.37 | | 0.11 | 0.15 | | 0.50 | 0.11 | 0.11 | 0.11 | 0.11 | |
| Incremental delay d2 | 0.1 | 3.8 | | 1.6 | 0.4 | | 40.3 | 0.6 | 1.6 | 0.1 | 1.2 | |
| PF factor | 1.000 | 0.945 | | 1.000 | 0.945 | | 0.985 | 1.000 | 1.000 | 0.989 | 1.000 | |
| Control delay | 53.8 | 42.1 | | 57.8 | 33.9 | | 67.2 | 55.3 | 57.5 | 33.9 | 56.9 | |
| Lane group LOS | D | D | | E | C | | F | E | E | C | E | |
| Approach delay | 42.2 | | | 35.9 | | | 61.7 | | | 48.5 | | |
| Approach LOS | D | | | D | | | F | | | D | | |
| Intersec. delay | 48.2 | | | Intersection LOS | | | | | | D | | |

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| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|------------|------------------------|-------------------------------|-------|-------|-------|-------|------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USAI | | | | | Intersection | OCEAN VIEW HILLS/STREETA | | | | | | |
| Agency or Co. | USAI | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/07/11 | | | | | Jurisdiction | OCEANSTATION WITH | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2035 3B WITH LMM WITH MI | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 1 | 3 | 1 | 1 | 3 | 0 | 2 | 1 | 1 | 1 | 1 | 0 | |
| Lane group | L | T | R | L | TR | | L | T | R | L | TR | | |
| Volume (vph) | 10 | 1105 | 255 | 85 | 905 | 25 | 500 | 45 | 65 | 45 | 50 | 20 | |
| % Heavy veh | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | |
| Arrival type | 4 | 4 | 3 | 4 | 4 | | 4 | 4 | 4 | 4 | 4 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/nr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | | |
| Timing | G = 15.0 | G = 47.0 | G = | G = | G = 40.0 | G = 15.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle length C = 135.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 11 | 1158 | 258 | 89 | 958 | | 526 | 47 | 68 | 42 | 74 | | |
| Lane group cap | 197 | 1757 | 530 | 197 | 1759 | | 1618 | 207 | 167 | 524 | 195 | | |
| w/c ratio | 0.06 | 0.68 | 0.51 | 0.45 | 0.55 | | 0.52 | 0.23 | 0.41 | 0.08 | 0.38 | | |
| Green ratio | 0.11 | 0.35 | 0.35 | 0.11 | 0.35 | | 0.30 | 0.11 | 0.11 | 0.30 | 0.11 | | |
| Unif. delay c1 | 53.7 | 37.2 | 34.8 | 56.2 | 35.5 | | 35.5 | 54.7 | 55.9 | 34.2 | 55.7 | | |
| Delay factor k | 0.11 | 0.23 | 0.11 | 0.11 | 0.15 | | 0.12 | 0.11 | 0.11 | 0.11 | 0.11 | | |
| Incrmnt. delay d2 | 5.1 | 0.9 | 0.8 | 1.6 | 0.4 | | 0.5 | 0.6 | 1.5 | 0.1 | 1.2 | | |
| PF factor | 1.000 | 0.945 | 1.000 | 1.000 | 0.945 | | 0.989 | 1.000 | 1.000 | 0.989 | 1.000 | | |
| Control delay | 53.9 | 36.0 | 35.9 | 57.8 | 33.9 | | 35.5 | 55.3 | 57.5 | 33.9 | 56.9 | | |
| Lane group LOS | D | D | D | E | C | | D | E | E | C | E | | |
| Approch. delay | 36.1 | | | 35.9 | | | 42.5 | | | 48.6 | | | |
| Approach LOS | D | | | D | | | D | | | D | | | |
| Intersec. delay | 37.7 | | | Intersection LOS | | | | | | | | | D |

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|-----------------------------|--|--|
| Analyst | USAI | | | Intersection | OCEAN VIEW HILLS/STREETA | | |
| Agency or Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 03/07/11 | | | Jurisdiction | OCCANSTP302BWLW NO MIT | | |
| Time Period | PM PEAK HOUR | | | Analysis Year | YEAR 2030 3B WITH LMMVD MIT | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|-----------|------------------------|------|------|------|------|------|
| | FB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 3 | 0 | 1 | 3 | 0 | 1 | 1 | 1 | 1 | 1 | 0 |
| Lane group | L | TR | | L | TR | | L | T | R | L | TR | |
| Volume (veh) | 20 | 300 | 660 | 75 | 1125 | 45 | 600 | 60 | 85 | 20 | 40 | 10 |
| % Heavy veh | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Excl. of green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 4 | 4 | | 4 | 4 | | 4 | 4 | 4 | 4 | 4 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/h: | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 15.0 | G = 47.0 | G = | G = | G = 40.0 | G = 16.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 135.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|-------|------------------|----|-------|-------|-------|-------|-------|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 21 | 1432 | 79 | 1226 | | 532 | 63 | 89 | 21 | 53 | | |
| Lane group cap | 197 | 1607 | 197 | 1756 | | 524 | 207 | 167 | 524 | 199 | | |
| v/c ratio | 0.11 | 0.89 | 0.40 | 0.70 | | 1.21 | 0.30 | 0.53 | 0.04 | 0.27 | | |
| Green ratio | 0.11 | 0.35 | 0.11 | 0.35 | | 0.30 | 0.11 | 0.11 | 0.30 | 0.11 | | |
| Unit. delay d1 | 54.0 | 41.6 | 55.8 | 37.9 | | 47.5 | 55.2 | 56.7 | 33.8 | 55.0 | | |
| Delay factor k | 0.11 | 0.42 | 0.11 | 0.25 | | 0.50 | 0.11 | 0.14 | 0.11 | 0.11 | | |
| Increm. delay d2 | 0.2 | 6.7 | 1.3 | 1.2 | | 109.7 | 0.6 | 3.3 | 0.0 | 0.7 | | |
| P-factor | 1.000 | 0.945 | 1.000 | 0.945 | | 0.989 | 1.000 | 1.000 | 0.989 | 1.000 | | |
| Control delay | 54.2 | 45.0 | 57.2 | 37.1 | | 155.7 | 56.0 | 50.0 | 32.5 | 55.7 | | |
| Lane group LOS | D | D | E | D | | F | E | E | C | E | | |
| Approach delay | 45.1 | | | 38.3 | | | 137.6 | | | 49.4 | | |
| Approach LOS | D | | | D | | | F | | | D | | |
| Intersect delay | 63.2 | | | Intersection LOS | | | | | | E | | |

Handwritten notes:
 H-P
 W!
 MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|-------------------------------|--|--|
| Analyst | USA! | | | Intersection | OCEAN VIEW HILLS/STREET A | | |
| Agency or Co. | USA! | | | Area Type | All other areas | | |
| Date Performed | 5/3/07/11 | | | Jurisdiction | OCEAN ST/363 HWY. M WITH MIT | | |
| Time Period | PM PEAK HOUR | | | Analysis Year | YEAR 2030 SB WITH LM/WITH MIT | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|----------|------------------------|------------|-----------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 1 | 3 | 1 | 1 | 3 | 0 | 2 | 1 | 1 | 1 | 1 | 0 |
| Lane group | L | T | R | L | TR | | L | T | R | L | TR | |
| Volume (veh) | 20 | 700 | 660 | 75 | 1125 | 40 | 600 | 60 | 95 | 20 | 40 | 10 |
| % Heavy veh | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 4 | 4 | 3 | 4 | 4 | | 4 | 4 | 4 | 4 | 4 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/h: | | | | | | | | | | | | |
| Bus stops/h: | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | | 04 | | Excl. Left | Thru & RT | 07 | | 08 | |
| Timing | G = 15.0 | G = 47.0 | G = | G = | G = 40.0 | G = 15.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 135.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|----|------------------|-------|-------|-------|-------|----|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 21 | 737 | 695 | 79 | 1226 | | 632 | 63 | 89 | 21 | 53 | | |
| Lane group cap. | 197 | 1767 | 1040 | 197 | 1755 | | 1018 | 207 | 167 | 524 | 193 | | |
| w/c ratio | 0.11 | 0.42 | 0.67 | 0.40 | 0.70 | | 0.62 | 0.30 | 0.52 | 0.04 | 0.27 | | |
| Green ratio | 0.11 | 0.35 | 0.68 | 0.11 | 0.35 | | 0.30 | 0.11 | 0.11 | 0.30 | 0.11 | | |
| Unif. delay d1 | 54.0 | 33.6 | 12.5 | 55.8 | 37.9 | | 41.0 | 55.2 | 56.7 | 33.8 | 55.0 | | |
| Delay factor < | 0.11 | 0.11 | 0.24 | 0.11 | 0.25 | | 0.20 | 0.11 | 0.14 | 0.11 | 0.11 | | |
| Increment delay d2 | 0.2 | 0.2 | 1.7 | 1.3 | 1.2 | | 1.2 | 0.8 | 3.3 | 0.0 | 0.7 | | |
| PF factor | 1.000 | 0.945 | 1.000 | 1.000 | 0.945 | | 0.969 | 1.000 | 1.000 | 0.989 | 1.000 | | |
| Control delay | 54.2 | 31.0 | 14.2 | 57.2 | 37.1 | | 41.7 | 56.0 | 60.0 | 33.5 | 55.7 | | |
| Lane group LOS | D | C | B | E | D | | D | E | E | C | E | | |
| Approach delay | 23.8 | | | 38.3 | | | 14.9 | | | 49.4 | | | |
| Approach LOS | C | | | D | | | D | | | D | | | |
| Intersec. delay | 34.1 | | | | | | Intersection LOS | | | | | | C |

AL-A
N
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------------|---------------|----------------------------|------------------|--|--|--|
| Analyst | USAI | Intersection | OLD OTAY MESA/BEYER BLVD. | | | | |
| Agency or Co. | USAI | Area Type | All other areas | | | | |
| Date Performed | 03/07/11 | Jurisdiction | DOMBEYER30A39WLM NO MIT | | | | |
| Time Period | A.M. PEAK HOUR | Analysis Year | YEAR 2030 35 WITH LMMO MIT | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|------------|------|------|------------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 2 | 1 | 2 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Lane group | L | T | R | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 300 | 1245 | 300 | 860 | 1200 | 15 | 200 | 100 | 800 | 10 | 200 | 600 |
| % Heavy veh | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 4 | 4 | 3 | 4 | 4 | | 4 | 4 | | 4 | 4 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/h | | | | | | | | | | | | |
| Bus stops/h | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru. & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 30.0 | G = 38.0 | G = | G = | G = 39.0 | G = 30.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (Hrs) = 0.25 | | | | | | Cycle Length C = 155.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-------|------------------|-------|------|-------|-------|-----|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Approach rate | 316 | 1311 | 316 | 926 | 1279 | | 316 | 737 | | 11 | 843 |
| Lane group cap. | 646 | 845 | 367 | 849 | 843 | | 433 | 297 | | 433 | 393 | |
| v/c ratio | 0.49 | 1.55 | 0.86 | 1.43 | 1.52 | | 0.73 | 2.48 | | 0.03 | 2.14 | |
| Green ratio | 0.19 | 0.25 | 0.25 | 0.19 | 0.25 | | 0.25 | 0.19 | | 0.25 | 0.19 | |
| Unit delay d1 | 55.7 | 58.5 | 56.0 | 62.5 | 58.5 | | 53.2 | 62.5 | | 43.7 | 52.5 | |
| Delay factor k | 0.11 | 0.50 | 0.39 | 0.50 | 0.50 | | 0.29 | 0.50 | | 0.11 | 0.50 | |
| Incremental delay d2 | 0.6 | 254.0 | 18.4 | 203.9 | 238.8 | | 6.2 | 676.7 | | 0.6 | 811.1 | |
| PF factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Control delay | 56.3 | 312.5 | 74.4 | 265.4 | 297.3 | | 59.4 | 739.2 | | 43.7 | 673.6 | |
| Lane group LOS | F | F | E | F | F | | E | F | | D | F | |
| Approach delay | 232.1 | | | 264.3 | | | 535.2 | | | 853.0 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersec delay | 392.8 | | | Intersection LOS | | | | | | F | | |

42A
W
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|--------------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAJ | | | | | Intersection | OLD STAY MESA/BYER BLVD | | | | | |
| Agency or Co | USAJ | | | | | Area Type | All other areas | | | | | |
| Data Performed | 03/07/11 | | | | | Jurisdiction | DUMBEYE#30A 3BWL M WITH MIT | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 3B WITH LMM WITH MIT | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 1 | 2 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lane group | L | T | R | L | TR | | L | T | R | L | T | R |
| Volume (vph) | 300 | 1245 | 300 | 880 | 1700 | 15 | 300 | 100 | 600 | 10 | 200 | 600 |
| % Heavy veh | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | A | A | A | A | A | | A | A | A | A | A | A |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |

| Phasing | Exc. Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 |
|-----------------------------------|-------------------|-------------------|------------|------------|-------------------|------------------------|------------|------------|
| Timing | G = 30.0 Y = 4 | G = 36.0 Y = 5 | G = Y = | G = Y = | G = 39.0 Y = 4 | G = 30.0 Y = 5 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 155.0 | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 316 | 1311 | 316 | 926 | 1279 | | 316 | 105 | 632 | 11 | 211 |
| Lane group cap. | 646 | 845 | 793 | 646 | 843 | | 433 | 350 | 626 | 433 | 350 | 626 |
| wc ratio | 0.49 | 1.55 | 0.40 | 1.43 | 1.52 | | 0.73 | 0.30 | 1.01 | 0.03 | 0.60 | 1.01 |
| Green ratio | 0.19 | 0.25 | 0.53 | 0.19 | 0.25 | | 0.25 | 0.19 | 0.42 | 0.25 | 0.19 | 0.42 |
| Unif. delay d1 | 55.7 | 58.5 | 21.8 | 62.5 | 58.5 | | 53.2 | 53.5 | 45.0 | 43.7 | 57.1 | 45.0 |
| Delay factor k | 0.11 | 0.55 | 0.11 | 0.50 | 0.50 | | 0.29 | 0.11 | 0.50 | 0.11 | 0.19 | 0.50 |
| Increm delay d2 | 0.6 | 254.0 | 0.3 | 203.9 | 236.6 | | 6.2 | 0.5 | 38.4 | 0.5 | 2.9 | 32.4 |
| PF factor | 1.000 | 1.000 | 0.719 | 1.000 | 1.000 | | 1.000 | 1.000 | 0.873 | 1.000 | 1.000 | 0.973 |
| Control delay | 56.3 | 312.5 | 16.0 | 266.4 | 291.3 | | 58.4 | 54.0 | 77.7 | 43.7 | 60.0 | 77.7 |
| Lane group LOS | E | F | E | F | F | | E | D | E | D | E | F |
| Approach delay | 222.6 | | | 284.3 | | | 69.8 | | | 72.9 | | |
| Approach LOS | F | | | F | | | E | | | E | | |
| Intersec delay | 187.4 | | | Intersection LOS | | | | | | F | | |

42-P
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|--------------------------|------------------|--|--|--|
| Analyst | USAI | Intersection | OLD CAY MESA/BEYER BLVD. | | | | |
| Agency or Co. | USAI | Area Type | All other areas | | | | |
| Date Performed | 03/07/11 | Jurisdiction | COMBEYER39P38WLM NO | | | | |
| Time Period | PM PEAK HOUR | Analysis Year | YEAR 2030 3S WITH LM/NO | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|-----------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 1 | 2 | 2 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| Lane group | L | T | R | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 600 | 1200 | 300 | 600 | 1245 | 10 | 300 | 200 | 890 | 15 | 100 | 300 |
| % Heavy veh. | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| P-HF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Start-up lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 4 | 4 | 3 | 4 | 4 | | 4 | 4 | | 4 | 4 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Paving | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/lt | | | | | | | | | | | | |
| Bus stop/lt | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 30.0 | G = 38.0 | G = | G = | G = 34.0 | G = 30.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-------|------------------|-------|------|-------|-------|------|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | 632 | 1263 | 316 | 632 | 1322 | | 316 | 1137 | | 16 | 421 |
| Lane group cap | 668 | 873 | 379 | 668 | 871 | | 390 | 309 | | 390 | 313 | |
| W/ratio | 0.95 | 1.45 | 0.83 | 0.95 | 1.52 | | 0.81 | 3.68 | | 0.94 | 1.35 | |
| Green ratio | 0.20 | 0.25 | 0.25 | 0.20 | 0.25 | | 0.23 | 0.20 | | 0.23 | 0.20 | |
| Unit delay d1 | 59.2 | 56.0 | 53.0 | 59.2 | 56.0 | | 54.9 | 60.0 | | 45.3 | 60.0 | |
| Delay factor k | 0.46 | 0.50 | 0.37 | 0.46 | 0.50 | | 0.35 | 0.50 | | 0.11 | 0.50 | |
| Incrnt. delay d2 | 22.5 | 207.5 | 14.7 | 22.5 | 238.9 | | 12.1 | 1214 | | 0.0 | 176.1 | |
| PF factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Control delay | 81.7 | 285.5 | 67.9 | 81.7 | 294.9 | | 87.1 | 1274 | | 45.3 | 235.1 | |
| Lane group LOS | F | F | E | F | F | | F | F | | D | F | |
| Approach delay | 183.6 | | | 225.9 | | | 1911 | | | 228.2 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersec delay | 395.1 | | | Intersection LOS | | | | | | F | | |

12-1
W
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---|--|--|---|------------------|--|--|--|
| Analyst Agency or Co. Date Performed Time Period | USA1 USA1 03/07/11 PM PEAK HOUR | Intersection Area Type Jurisdiction Analysis Year | OLD D'AY MESA/BEYER BLVD. All other areas OOMBEYER30P38WLM WITH MIT YEAR 2030 3B WITH 1 MONTH MIT | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|-----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 1 | 2 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lane group | L | T | R | L | TR | | L | T | R | L | T | R |
| Volume (vph) | 650 | 1200 | 300 | 600 | 1245 | 10 | 300 | 200 | 880 | 15 | 100 | 300 |
| % Heavy veh | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 4 | 4 | 3 | 4 | 4 | | 4 | 4 | 3 | 4 | 4 | 3 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 35.0 | G = 38.0 | G = | G = | G = 34.0 | G = 30.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|-------|------------------|-------|----|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 632 | 1263 | 316 | 632 | 1327 | | 316 | 211 | 926 | 16 | 106 | 316 |
| Lane group cap | 668 | 673 | 379 | 658 | 671 | | 390 | 362 | 647 | 390 | 362 | 647 |
| v/c ratio | 0.95 | 1.45 | 0.83 | 0.95 | 1.52 | | 0.81 | 0.58 | 1.43 | 0.04 | 0.29 | 0.49 |
| Green ratio | 0.20 | 0.25 | 0.25 | 0.20 | 0.25 | | 0.23 | 0.20 | 0.43 | 0.23 | 0.20 | 0.43 |
| Unit. delay d1 | 54.7 | 56.0 | 53.0 | 59.2 | 56.0 | | 54.9 | 54.3 | 42.5 | 45.3 | 51.0 | 30.5 |
| Delay factor k | 0.46 | 0.50 | 0.37 | 0.46 | 0.50 | | 0.36 | 0.17 | 0.50 | 0.11 | 0.11 | 0.11 |
| Increm. delay d2 | 22.6 | 207.5 | 14.7 | 22.6 | 238.9 | | 12.1 | 2.4 | 202.9 | 0.0 | 0.4 | 0.6 |
| PF factor | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Control delay | 81.7 | 263.5 | 67.8 | 81.7 | 294.9 | | 57.1 | 56.7 | 245.4 | 45.3 | 51.4 | 31.1 |
| Lane group LOS | F | F | F | F | F | | E | F | F | D | D | C |
| Approch. delay | 183.6 | | | 225.9 | | | 179.2 | | | 36.5 | | |
| Approach LOS | F | | | F | | | F | | | D | | |
| Intersec. delay | 165.6 | | | Intersection LOS | | | | | | F | | |

A3A
K

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|----------------------|-------------------------|--|-----|--|
| Analyst | USA1 | Intersection | OTAY MESA | | | | |
| Agency or Co | USA1 | Area Type | RD./CORPORATE CENTER | | | | |
| Date Performed | 03/07/11 | Jurisdiction | All other areas | | | | |
| Time Period | AM PEAK HOUR | Analysis Year | OTAYCORP30A30WLM/NO | | | MIT | |
| | | | | YEAR 2030 3B WLM/NO MIT | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|----------|-----------|------|----------|------------------------|------|------|------|------|------|------|
| | FB | | | WB | | | NB | | | SB | | |
| | L | TR | RT | L | T | R | L | TR | RT | L | TR | R |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 1 | 1 | 2 | 0 | 1 | 1 | 1 |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | R |
| Volume (vph) | 725 | 2980 | 275 | 185 | 1950 | 525 | 125 | 50 | 80 | 275 | 115 | 375 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Arrival type | S | S | | S | S | S | S | S | | S | S | S |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.5 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Phasing | Excl Left | EB Only | Thru & RT | 04 | SB Only | NB Only | 07 | 08 | | | | |
| Timing | G = 10.0 | G = 18.0 | G = 50.0 | G = | G = 25.0 | G = 19.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = 5 | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-----|-------|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 763 | 3426 | 195 | 1165 | 553 | 126 | 137 | | 289 | 212 | 304 |
| Lane group cap. | 729 | 2546 | 228 | 1769 | 759 | 223 | 416 | | 234 | 227 | 303 | |
| v/c ratio | 1.05 | 1.35 | 0.86 | 0.62 | 0.72 | 0.57 | 0.33 | | 1.24 | 0.93 | 1.06 | |
| Green ratio | 0.23 | 0.52 | 0.07 | 0.38 | 0.54 | 0.14 | 0.14 | | 0.14 | 0.14 | 0.21 | |
| Unit delay c1 | 54.5 | 53.5 | 64.3 | 37.2 | 24.5 | 56.6 | 54.7 | | 60.0 | 59.3 | 55.0 | |
| Delay factor k | 0.50 | 0.50 | 0.36 | 0.21 | 0.29 | 0.16 | 0.11 | | 0.50 | 0.45 | 0.50 | |
| Incr em delay c2 | 46.6 | 158.2 | 25.5 | 0.7 | 3.3 | 3.3 | 0.5 | | 137.0 | 41.9 | 52.5 | |
| PF factor | 0.602 | 0.614 | 0.949 | 0.630 | 0.231 | 0.895 | 0.895 | | 0.889 | 0.889 | 0.816 | |
| Control delay | 90.5 | 176.8 | 86.8 | 24.1 | 8.9 | 54.0 | 49.5 | | 190.3 | 94.5 | 97.5 | |
| Lane group LOS | F | F | F | C | A | D | D | | F | F | C | |
| Approach delay | 162.6 | | | 26.2 | | | 51.6 | | | 130.1 | | |
| Approach LOS | F | | | C | | | D | | | F | | |
| Intersec delay | 119.3 | | | Intersection LOS | | | | | | F | | |

A3A
W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|--------------------------------|--|--|
| Analyst: | USAI | | | Intersection: | OTAY MESA RD /CORPORATE CENTER | | |
| Agency or Co: | USAI | | | Area Type: | All other areas | | |
| Date Performed: | 03/07/11 | | | Jurisdiction: | OTAYCORP30A.3BWLH/WTH | | |
| Time Period: | AM PEAK HOUR | | | Analysis Year: | YEAR 2030 38 W L/M/WTH | | |
| | | | | | MIT | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|----------|-----------|------|----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | L | T | RT | LT | T | RT | LT | T | RT | LT | T | RT |
| Num of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 1 | 0 | 2 | 1 | 1 |
| Lane group | L | T | R | L | T | R | L | TR | | L | TR | R |
| Volume (vph) | 725 | 2980 | 275 | 185 | 1050 | 525 | 120 | 50 | 90 | 275 | 115 | 375 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Arrival type | S | S | S | S | S | S | S | S | | S | S | S |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Phasing | Excl Left | EB Only | Thru & RT | 04 | SB Only | NB Only | 07 | 08 | | | | |
| Timing | G = 10.0 | G = 18.0 | G = 50.0 | G = | G = 20.0 | G = 19.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = 5 | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-----|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 763 | 3137 | 269 | 195 | 1105 | 553 | 126 | 137 | | 289 | 212 |
| Lane group cap. | 725 | 2593 | 946 | 228 | 1769 | 769 | 433 | 218 | | 455 | 227 | 303 |
| v/c ratio | 1.05 | 1.21 | 0.31 | 0.86 | 0.62 | 0.72 | 0.29 | 0.63 | | 0.64 | 0.93 | 1.00 |
| Green ratio | 0.23 | 0.52 | 5.66 | 0.07 | 0.36 | 0.54 | 0.14 | 0.14 | | 0.14 | 0.14 | 0.21 |
| Unit delay d1 | 54.0 | 33.5 | 10.3 | 64.3 | 37.2 | 24.4 | 54.4 | 57.2 | | 56.6 | 59.3 | 55.0 |
| Delay factor k | 0.50 | 0.50 | 0.11 | 0.39 | 0.21 | 0.26 | 0.11 | 0.21 | | 0.22 | 0.45 | 0.50 |
| Incrom. delay d2 | 46.6 | 100.3 | 0.2 | 26.9 | 6.7 | 3.3 | 0.4 | 5.7 | | 2.9 | 41.8 | 52.5 |
| PF factor | 0.802 | 0.455 | 0.145 | 0.949 | 0.630 | 0.231 | 0.895 | 0.895 | | 0.889 | 0.839 | 0.818 |
| Control delay | 90.0 | 115.5 | 1.7 | 86.5 | 24.1 | 8.9 | 49.1 | 58.9 | | 53.2 | 94.5 | 97.5 |
| Lane group LOS | F | F | A | F | C | A | D | E | | D | F | F |
| Approach delay | 103.0 | | | 26.2 | | | 53.1 | | | 80.8 | | |
| Approach LOS | F | | | C | | | D | | | F | | |
| Intersec. delay | 78.5 | | | Intersection LOS | | | | | | E | | |

43 P

N
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|--------------|--------------|------------------|---------------------------------|--|--|
| Analyst | USAI | Agency or Co | USAI | Intersection | OTAY MESA RD / CORPORAIF CENTER | | |
| Date Performed | 03/07/11 | Time Period | PM PEAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | OTAYCORP309A36V/LM NO MIT | | |
| | | | | Analysis Year | YEAR 2030 36 WITH LM/NO MIT | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 1 | 1 | 2 | 0 | 1 | 1 | 1 |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | R |
| Volume (vph) | 375 | 1050 | 400 | 260 | 2690 | 275 | 515 | 215 | 340 | 525 | 135 | 725 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PKF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 100 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | SB Only | NB Only | 07 | 08 | | | | |
| Timing | G = 20.0 | G = 54.0 | G = | G = | G = 30.0 | G = 19.0 | G = | G = | | | | |
| | Y = 4 | Y = 4 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|----|------------------|-------|-------|-------|-------|----|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 395 | 1526 | | 274 | 2832 | 299 | 542 | 479 | | 553 | 295 | 610 |
| Lane group cap. | 425 | 2014 | | 425 | 2113 | 939 | 208 | 395 | | 328 | 314 | 475 |
| v/c ratio | 0.93 | 0.76 | | 0.64 | 1.34 | 0.31 | 2.61 | 1.21 | | 1.69 | 0.94 | 1.28 |
| Green ratio | 0.13 | 0.43 | | 0.13 | 0.43 | 0.65 | 0.13 | 0.13 | | 0.29 | 0.25 | 0.33 |
| Unif. delay c1 | 64.3 | 36.4 | | 61.5 | 43.0 | 11.3 | 65.5 | 65.5 | | 60.0 | 59.1 | 50.0 |
| Delay factor c1 | 0.44 | 0.31 | | 0.22 | 0.50 | 0.11 | 0.50 | 0.50 | | 0.50 | 0.45 | 0.50 |
| Incremental delay c2 | 26.9 | 1.7 | | 3.4 | 156.4 | 0.2 | 736.4 | 117.0 | | 321.6 | 35.2 | 143.2 |
| Pf factor | 0.697 | 0.504 | | 0.697 | 0.507 | 0.144 | 0.903 | 0.903 | | 0.833 | 0.833 | 0.657 |
| Control delay | 84.5 | 20.1 | | 56.7 | 178.2 | 1.8 | 795.5 | 178.1 | | 371.6 | 64.4 | 175.5 |
| Lane group LOS | F | C | | E | F | A | F | F | | F | F | F |
| Approach delay | 33.2 | | | 153.6 | | | 504.9 | | | 291.9 | | |
| Approach LOS | C | | | F | | | F | | | F | | |
| Intersec. delay | 184.6 | | | Intersection LOS | | | | | | F | | |

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|--------------|--------------|------------------|--------------------------------|--|--|
| Analyst | USAI | Agency or Co | USAI | Intersection | OTAY MESA RD./CORPORATE CENTER | | |
| Date Performed | 03/27/11 | Time Period | PM PEAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | OTAYCORP36PA3B/WLM WITH MIT | | |
| | | | | Analysis Year | YEAR 2030 3B WITH LMM WITH MIT | | |

| Volume and Timing Input | | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|------|------|------------------------|------|----------|------|------|------|-----|
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 1 | 0 | 2 | 1 | 1 | |
| Lane group | L | TR | R | L | T | R | L | TR | | L | TR | R | |
| Volume (vph) | 375 | 1050 | 400 | 260 | 2690 | 275 | 515 | 215 | 340 | 525 | 135 | 725 | |
| % heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.85 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Ext eff green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 100 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl Left | Thru & RT | 03 | | 04 | | SB Only | | NB Only | | 07 | | 08 |
| Timing | G = 20.0 | G = 64.0 | G = | | G = | | G = 25.0 | | G = 24.0 | | G = | | G = |
| | Y = 4 | Y = 4 | Y = | | Y = | | Y = 4 | | Y = 5 | | Y = | | Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-----|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 395 | 1105 | 421 | 274 | 2832 | 269 | 542 | 479 | | 553 | 371 |
| Lane group cap | 425 | 2113 | 831 | 425 | 2113 | 892 | 510 | 263 | | 531 | 256 | 425 |
| vc ratio | 0.93 | 0.52 | 0.51 | 0.64 | 1.34 | 0.32 | 1.06 | 1.82 | | 1.04 | 1.45 | 1.25 |
| Green ratio | 0.13 | 0.43 | 0.59 | 0.13 | 0.43 | 0.62 | 0.16 | 0.16 | | 0.17 | 0.17 | 0.30 |
| Unit. delay d1 | 64.3 | 31.7 | 18.2 | 61.6 | 43.0 | 13.6 | 83.0 | 83.0 | | 62.5 | 62.5 | 52.5 |
| Delay factor k | 0.44 | 0.13 | 0.12 | 0.22 | 0.50 | 0.11 | 0.50 | 0.50 | | 0.50 | 0.50 | 0.50 |
| Increment. delay d2 | 26.9 | 0.2 | 0.5 | 3.4 | 156.4 | 0.2 | 57.6 | 394.2 | | 50.3 | 227.7 | 132.1 |
| PF factor | 0.897 | 0.504 | 0.121 | 0.897 | 0.507 | 0.132 | 0.873 | 0.873 | | 0.857 | 0.667 | 0.714 |
| Control delay | 84.6 | 16.2 | 2.7 | 58.7 | 178.2 | 2.0 | 112.5 | 439.2 | | 104.4 | 276.9 | 169.5 |
| Lane group LOS | F | B | A | E | F | A | F | F | | F | F | F |
| Approach delay | 27.3 | | | 152.6 | | | 285.8 | | | 172.2 | | |
| Approach LOS | C | | | F | | | F | | | F | | |
| Intersec. delay | 140.6 | | | Intersection LOS | | | | | | F | | |

AAA

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M

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|------------|------------------------|-------------------------|-------|------|-------|-------|-------|---|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA1 | | | | | Intersection | OTAY MESA | | | | | | |
| Agency or Co. | USA1 | | | | | Area Type | RD INNOVATIVE DR. | | | | | | |
| Date Performed | 03/27/11 | | | | | Jurisdiction | OTAY/INNOV30A3B/MLM NO | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 3B WITH LM NO | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 2 | 3 | 0 | 2 | 3 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | R | |
| Volume (veh) | 510 | 2735 | 90 | 60 | 1445 | 465 | 40 | 15 | 25 | 250 | 40 | 275 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | |
| Parking/Grage/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 05 | | | | | |
| Timing | G = 20.0 | G = 67.0 | G = | G = | G = 30.0 | G = 15.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 5 | Y = 4 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| Adj flow rate | 537 | 2974 | | 63 | 1521 | 489 | 42 | 42 | | 263 | 42 | 269 | |
| Lane group cap. | 425 | 2200 | | 425 | 2212 | 979 | 328 | 160 | | 328 | 173 | 365 | |
| v/c ratio | 1.26 | 1.35 | | 0.15 | 0.69 | 0.50 | 0.13 | 0.26 | | 0.80 | 0.24 | 0.79 | |
| Green ratio | 0.13 | 0.45 | | 0.13 | 0.45 | 0.68 | 0.20 | 0.10 | | 0.20 | 0.10 | 0.26 | |
| Unit delay d1 | 65.0 | 41.5 | | 57.5 | 33.1 | 11.5 | 49.3 | 52.4 | | 57.2 | 62.3 | 51.7 | |
| Delay factor k | 0.50 | 0.50 | | 0.11 | 0.25 | 0.11 | 0.11 | 0.11 | | 0.35 | 0.11 | 0.34 | |
| Incrim. delay d2 | 135.3 | 151.4 | | 0.2 | 0.9 | 0.4 | 0.2 | 0.9 | | 13.3 | 0.7 | 11.3 | |
| PF factor | 0.897 | 0.536 | | 0.897 | 0.462 | 0.156 | 0.833 | 0.925 | | 0.833 | 0.926 | 0.766 | |
| Control delay | 194.6 | 183.7 | | 51.7 | 16.2 | 2.2 | 41.2 | 58.5 | | 61.0 | 56.4 | 50.9 | |
| Lane group LOS | F | F | | D | B | A | D | E | | E | E | D | |
| Approach delay | 185.3 | | | 14.0 | | | 49.5 | | | 55.9 | | | |
| Approach LOS | F | | | B | | | D | | | E | | | |
| Intersec delay | 114.5 | | | Intersection LOS | | | | | | | | | F |

AAA
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M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|--------------------------------|--|--|
| Analyst | USA: | | | Intersection | OTAY MESA | | |
| Agency or Co. | USA: | | | Area Type | RD. INNOVATIVE DR. | | |
| Date Performed | 03/27/11 | | | Jurisdiction | OTAY INNOVATIVE DR. M WITH MIT | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YEAR 2030 3B WITH LM WITH MIT | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|-----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of lanes | 2 | 3 | 0 | 2 | 3 | 1 | 1 | 1 | 0 | 2 | 1 | 1 |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | R |
| Volume (vph) | 510 | 2735 | 90 | 50 | 1445 | 465 | 40 | 15 | 25 | 250 | 40 | 275 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Ext. ef. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = 97.0 | G = | G = | G = 30.0 | G = 15.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 5 | Y = 4 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|------|------------------|-------|-------|-------|-------|----|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | 537 | 2974 | | 63 | 1521 | 489 | 42 | 47 | | 263 | 42 |
| Lane group cap | 425 | 9206 | | 425 | 2912 | 979 | 328 | 160 | | 637 | 173 | 365 |
| Wt ratio | 1.26 | 1.35 | | 0.15 | 0.69 | 0.50 | 0.13 | 0.26 | | 0.41 | 0.24 | 0.79 |
| Green ratio | 0.13 | 0.45 | | 0.13 | 0.45 | 0.68 | 0.20 | 0.10 | | 0.20 | 0.10 | 0.26 |
| Unit delay c1 | 65.0 | 41.5 | | 57.5 | 33.1 | 11.6 | 49.3 | 62.4 | | 52.3 | 62.3 | 51.7 |
| Delay factor k | 0.50 | 0.50 | | 0.11 | 0.26 | 0.11 | 0.11 | 0.11 | | 0.11 | 0.11 | 0.34 |
| Incremental delay c2 | 136.3 | 161.4 | | 0.2 | 0.9 | 0.4 | 0.2 | 0.9 | | 0.4 | 0.7 | 11.3 |
| P/F factor | 0.697 | 0.539 | | 0.897 | 0.462 | 0.155 | 0.833 | 0.926 | | 0.833 | 0.326 | 0.766 |
| Control delay | 194.6 | 163.7 | | 51.7 | 16.2 | 2.2 | 11.2 | 58.5 | | 44.0 | 58.4 | 50.9 |
| Lane group LOS | F | F | | D | B | A | D | E | | D | E | D |
| Approach delay | 185.3 | | | 14.0 | | | 45.9 | | | 46.4 | | |
| Approach LOS | F | | | B | | | D | | | D | | |
| Intersec. delay | 113.6 | | | Intersection LOS | | | | | | F | | |

AAP

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SHORT REPORT

| General Information | | | | | | Site Information | | | | | | | |
|---|-----------|-----------|------|------------------|-----------|--|-------|-------|------|-------|-------|-------|---|
| Analyst: USAI Agency or Co.: USAI Date Performed: 03/27/11 Time Period: PM PEAK HOUR | | | | | | Intersection: CTAY MESA RD. INNOVATIVE DR Area Type: All other areas Jurisdiction: OTAYINNOV3GP3RWLM NU MIT Analysis Year: YEAR 2030 SB WITH LM NO MIT | | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | R | |
| Volume (veh) | 275 | 1510 | 130 | 85 | 2645 | 250 | 170 | 70 | 115 | 465 | 90 | 510 | |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | |
| Arrival type | S | S | | S | S | S | S | S | | S | S | S | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Thru & RT | Excl. Left | 07 | 08 | | | | | |
| Timing | G = 20.0 | G = 64.0 | G = | G = | G = 19.0 | G = 29.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 5 | Y = 4 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 289 | 1726 | | 89 | 2679 | 263 | 179 | 195 | | 489 | 202 | 430 | |
| Lane group cap. | 425 | 2084 | | 425 | 2113 | 692 | 317 | 203 | | 217 | 197 | 367 | |
| v/c ratio | 0.68 | 0.83 | | 0.21 | 1.27 | 0.29 | 0.56 | 0.96 | | 1.54 | 1.03 | 1.17 | |
| Green ratio | 0.13 | 0.43 | | 0.13 | 0.43 | 0.02 | 0.19 | 0.13 | | 0.19 | 0.13 | 0.26 | |
| Unif. delay d1 | 52.0 | 38.1 | | 58.0 | 43.0 | 43.3 | 54.8 | 65.7 | | 60.5 | 65.5 | 55.5 | |
| Delay factor k | 0.25 | 0.37 | | 0.11 | 0.50 | 0.11 | 0.16 | 0.47 | | 0.50 | 0.50 | 0.50 | |
| Incremental delay d2 | 4.4 | 2.9 | | 0.2 | 124.4 | 0.2 | 2.3 | 51.0 | | 259.4 | 70.9 | 107.5 | |
| PF factor | 0.957 | 0.504 | | 0.897 | 0.504 | 0.132 | 0.840 | 0.903 | | 0.840 | 0.503 | 0.766 | |
| Control delay | 80.0 | 22.1 | | 52.3 | 146.1 | 1.9 | 48.4 | 110.5 | | 310.2 | 130.1 | 145.0 | |
| Lane group LOS | E | C | | D | F | A | D | F | | F | F | F | |
| Approach delay | 27.6 | | | 130.8 | | | 80.8 | | | 211.1 | | | |
| Approach LOS | C | | | F | | | F | | | F | | | |
| Intersect. delay | 110.5 | | | Intersection LOS | | | | | | | | | F |

449
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M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|---------------|--------------|------------------|-------------------------------|--|--|
| Analyst | USAJ | Agency or Co. | USAJ | Intersection | DTAY MESA RD. INNOVATIVE DR | | |
| Date Performed | 03/27/11 | Time Period | PM PEAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | DTA YINNOV30P3BWLM WITH MIT | | |
| | | | | Analyst's Year | YEAR 2030 3d WITH LM WITH MIT | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|-----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 1 | 1 | 1 | 0 | 2 | 1 | 1 |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | R |
| Volume (veh) | 275 | 1510 | 130 | 85 | 2545 | 250 | 170 | 70 | 115 | 465 | 90 | 510 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Ext. of green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Arrival type | S | S | | S | S | S | S | S | | S | S | S |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Thru & RT | Excl. Left | 07 | 08 | | | | |
| Timing | G = 20.0 | G = 64.0 | G = | G = | G = 19.0 | G = 29.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 5 | Y = 4 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-------|-------|-------|--|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 289 | 1726 | 99 | 2679 | 263 | 179 | 195 | | 489 | 262 | 430 |
| Lane group cap. | 425 | 2084 | | 425 | 2113 | 892 | 317 | 203 | | 615 | 197 | 367 |
| w/s ratio | 0.68 | 0.83 | | 0.21 | 1.27 | 0.26 | 0.56 | 0.96 | | 0.79 | 1.03 | 1.17 |
| Green ratio | 0.13 | 0.43 | | 0.13 | 0.43 | 0.62 | 0.19 | 0.13 | | 0.19 | 0.13 | 0.26 |
| Unif. delay d1 | 62.5 | 38.1 | | 58.0 | 43.0 | 13.3 | 54.8 | 65.1 | | 57.7 | 65.5 | 58.5 |
| Delay factor k | 0.25 | 0.37 | | 0.11 | 0.50 | 0.11 | 0.16 | 0.47 | | 0.34 | 0.50 | 0.50 |
| Inc-rem delay d2 | 4.4 | 2.9 | | 0.2 | 124.4 | 0.2 | 2.3 | 51.8 | | 7.1 | 70.9 | 102.5 |
| PF factor | 0.897 | 0.504 | | 0.897 | 0.504 | 0.132 | 0.840 | 0.903 | | 0.840 | 0.903 | 0.766 |
| Control delay | 60.0 | 22.1 | | 52.3 | 146.1 | 1.9 | 48.4 | 110.6 | | 55.5 | 130.1 | 145.0 |
| Lane group LOS | L | C | | C | F | A | D | F | | E | F | F |
| Approach delay | 27.6 | | | 139.8 | | | 80.8 | | | 103.3 | | |
| Approach LOS | C | | | F | | | F | | | F | | |
| Intersec. delay | 91.4 | | | Intersection LOS | | | | | | F | | |

AS-A
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M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|---------------|--------------|------------------|-------------------------|--|--|
| Analyst | USA! | Agency or Co. | USA! | Intersection | AIRWAY RD./HARVEST RD | | |
| Date Performed | 03/27/11 | Time Period | AM PEAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | AIR/HARV30A3BWLM NO | | |
| | | | | Analysis Year | YEAR 2030 3B WITH LM NO | | |
| | | | | | MIT | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|------|------|----------|------------------------|------|-----|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 2 | 0 | 2 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 |
| Lane group | | TR | | L | T | | L | | R | | | |
| Volume (vph) | | 1910 | 365 | 470 | 485 | | 320 | | 415 | | | |
| % Heavy veh | | 10 | 10 | 10 | 10 | | 10 | | 10 | | | |
| PHF | | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | | | |
| Actuated (P/A) | | A | A | A | A | A | A | | A | | | |
| Startup lost time | | 2.0 | | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Ext. eff. green | | 2.0 | | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Arrival type | | 5 | | 5 | 5 | | 5 | | 5 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Peak/kt/RTOR Volume | 10 | 5 | 0 | | | | 10 | 5 | 0 | 10 | | |
| Lane Width | | 12.0 | | 12.0 | 12.0 | | 12.0 | | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | 0 | 0 | | 0 | | 0 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Phasing | WB Only | Thru & RT | C3 | C4 | NB Only | C5 | C7 | C8 | | | | |
| Timing | G = 37.0 | G = 70.0 | G = | G = | G = 20.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-----|-------|-----|-------|-----|---|--|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | 2289 | | 495 | 511 | | 337 | | 437 | | |
| Lane group cap. | | 1682 | | 842 | 1731 | | 458 | | 617 | | | |
| W/c ratio | | 1.35 | | 0.59 | 0.30 | | 0.74 | | 0.71 | | | |
| Green ratio | | 0.50 | | 0.26 | 0.50 | | 0.14 | | 0.44 | | | |
| Unif. delay d1 | | 35.0 | | 44.9 | 20.5 | | 57.5 | | 32.2 | | | |
| Delay factor k | | 0.50 | | 0.18 | 0.11 | | 0.30 | | 0.27 | | | |
| Incremental delay d2 | | 166.3 | | 1.1 | 0.1 | | 6.4 | | 3.9 | | | |
| PF factor | | 0.604 | | 0.761 | 0.333 | | 0.888 | | 0.485 | | | |
| Control delay | | 187.5 | | 35.2 | 6.9 | | 57.5 | | 19.4 | | | |
| Lane group LOS | | F | | D | A | | E | | B | | | |
| Approch. delay | | 187.5 | | 20.9 | | | 36.0 | | | | | |
| Approach LOS | | F | | C | | | D | | | | | |
| Intersec. delay | | 117.5 | | Intersection LOS | | | | | | | F | |

45.1

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|-------------------------------|------------------|-----------------|--------------|--------------------------|
| Analyst | USAI | Intersection | AIRWAY RD/HARVEST RD | Area Type | All other areas | Jurisdiction | AIRHARV30A3BWLW WITH MIT |
| Agency or Co. | USAI | Analysis Year | YEAR 2035 3B WITH LM WITH MIT | | | | |
| Date Performed | 03/27/11 | | | | | | |
| Time Period | AM PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|----|------|------|------|------|----|------|----|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 0 | 2 | 1 | 2 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 |
| Lane group | | T | R | L | T | | L | | R | | | |
| Volume (vph) | | 1815 | 363 | 470 | 485 | | 320 | | 415 | | | |
| % Heavy veh | | 10 | 10 | 10 | 10 | | 10 | | 10 | | | |
| PHI | | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | | | |
| Actuated (P/A) | | A | A | A | A | A | A | | A | | | |
| Startup lost time | | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Ext. eff. green | | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Arrival type | | 5 | 5 | 5 | 5 | | 5 | | 5 | | | |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | | | | 10 | 5 | 0 | 10 | | |
| Lane Width | | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | 0 | 0 | | 0 | | 0 | | | |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |

| Phasing | WB Only | Thru & RT | 03 | 04 | NB Only | 06 | 07 | 08 |
|-----------------------------------|-------------------|-------------------|------------|------------|-------------------|------------|------------|------------------------|
| Timing | G = 37.0 Y = 4 | G = 70.0 Y = 5 | G = Y = | G = Y = | G = 20.0 Y = 4 | G = Y = | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | | | | Cycle Length C = 140.0 |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|-------|------------------|-----|-------|------|-------|-----|--|---|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | 1905 | 384 | 495 | 511 | | 337 | | 437 | | |
| Lane group cap | | 1731 | 720 | 842 | 1731 | | 455 | | 617 | | | |
| w/c ratio | | 1.10 | 0.53 | 0.59 | 0.30 | | 0.74 | | 0.71 | | | |
| Green ratio | | 0.55 | 0.50 | 0.26 | 0.50 | | 0.14 | | 0.44 | | | |
| Unif. delay d1 | | 35.5 | 23.9 | 44.9 | 20.5 | | 57.5 | | 32.2 | | | |
| Delay factor k | | 0.50 | 0.14 | 0.18 | 0.11 | | 0.30 | | 0.27 | | | |
| Incom. delay d2 | | 54.7 | 0.6 | 1.1 | 0.1 | | 6.4 | | 3.9 | | | |
| PF factor | | 0.333 | 0.333 | 0.761 | 0.333 | | 0.989 | | 0.495 | | | |
| Control delay | | 66.3 | 8.7 | 35.2 | 6.9 | | 57.5 | | 19.4 | | | |
| Lane group LOS | | F | A | D | A | | E | | B | | | |
| Approach delay | | 56.7 | | | 20.9 | | | 36.0 | | | | |
| Approach LOS | | E | | | C | | | D | | | | |
| Intersection delay | | 43.9 | | | Intersection LOS | | | | | | | D |

45P
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| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|----------|------------------------|-------------------------|-----|-------|----|----|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst: | USA1 | | | | | Intersection: | AIRWAY RD./HARVEST RD | | | | | |
| Agency or Co.: | USA1 | | | | | Area Type: | All other cross | | | | | |
| Date Performed: | 03/27/11 | | | | | Jurisdiction: | AIRHARV20P2B4LM NO | | | | | |
| Time Period: | PM PEAK HOUR | | | | | Analysis Year: | YEAR 2030 30 WITH LM NO | | | | | |
| | | | | | | | MIT | | | | | |
| | | | | | | | MIT | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 2 | 0 | 2 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 |
| Lane group | | TR | | L | T | | L | | R | | | |
| Volume (vph) | | 455 | 320 | 415 | 1810 | | 365 | | 470 | | | |
| % Heavy veh. | | 10 | 10 | 10 | 10 | | 10 | | 10 | | | |
| PHF | | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | | | |
| Actuated (P/A) | | A | A | A | A | | A | | A | | | |
| Startup lost time | | 2.0 | | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Ext. eff. green | | 2.0 | | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Arrival type | | 5 | | 5 | 5 | | 5 | | 5 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | | | | 10 | 5 | 0 | 10 | | |
| Lane Width | | 12.0 | | 12.0 | 12.0 | | 12.0 | | 12.0 | | | |
| Parking/Grade/Paving | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/yr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | | 0 | 0 | | 0 | | 0 | | | |
| Unit Extension | | 3.0 | | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Phasing | WB Only | Thru & RT | 03 | 04 | NB Only | 06 | 07 | 08 | | | | |
| Timing | G = 37.0 | G = 50.0 | G = | G = | G = 20.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | | 348 | | 437 | 1505 | | 384 | | 495 | | | |
| Lane group cap | | 1495 | | 507 | 2690 | | 490 | | 556 | | | |
| v/c ratio | | 0.57 | | 0.48 | 0.71 | | 0.78 | | 0.74 | | | |
| Green ratio | | 0.46 | | 0.28 | 0.78 | | 0.15 | | 0.47 | | | |
| Unif. delay d' | | 25.6 | | 38.6 | 7.7 | | 52.9 | | 28.1 | | | |
| Delay factor k | | 0.16 | | 0.11 | 0.27 | | 0.33 | | 0.30 | | | |
| Increment. delay d2 | | 0.5 | | 0.4 | 0.9 | | 8.1 | | 4.5 | | | |
| PF factor | | 0.429 | | 0.735 | 0.224 | | 0.979 | | 0.411 | | | |
| Control delay | | 11.5 | | 28.7 | 2.5 | | 54.6 | | 16.1 | | | |
| Lane group LOS | | B | | C | A | | D | | B | | | |
| Approch. delay | | 11.5 | | 7.4 | | | 32.9 | | | | | |
| Approach LOS | | B | | A | | | C | | | | | |
| Intersec. delay | | 13.6 | | Intersection LOS | | | | | | | B | |

4-58
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M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|----------------|----------|------------------|-------------------------------|--|--|
| Analyst | USAI | Agency or Co | USAI | Intersection | AIRWAY RD/HARVEST RD | | |
| Date Performed | 03/27/11 | Date Performed | 03/27/11 | Area Type | All other areas | | |
| Time Period | PM PEAK HOUR | Jurisdiction | | Jurisdiction | AIRHARV30P3BWL M WITH MIT | | |
| | | Analysis Year | | Analysis Year | YEAR 2030 38 WITH LM WITH MIT | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----------|------|------|----------|--------------------------|------|-----|------|----|----|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 0 | 2 | 1 | 2 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 |
| Lane group | | T | R | L | T | | L | | R | | | |
| Volume (vph) | | 485 | 320 | 415 | 1810 | | 365 | | 470 | | | |
| % Heavy veh | | 10 | 10 | 10 | 10 | | 10 | | 10 | | | |
| PHF | | 0.95 | 0.95 | 0.95 | 0.95 | | 0.95 | | 0.95 | | | |
| Actuated (P/A) | | A | A | A | A | | A | | A | | | |
| Start up lost time | | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Ext. eff. green | | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | | 2.0 | | | |
| Arrival type | | 5 | 5 | 5 | 5 | | 5 | | 5 | | | |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | | | | 10 | 5 | 0 | 10 | | |
| Lane Width | | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | | 12.0 | | | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | 0 | 0 | 0 | 0 | | 0 | | 0 | | | |
| Unit Extension | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | | 3.0 | | | |
| Phasing | WB Only | Thru & RT | 03 | 04 | NB Only | 05 | 07 | 08 | | | | |
| Timing | G = 37.0 | G = 60.0 | G = | G = | G = 20.0 | G = | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length (s) = 130.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|-------|------------------|------|-------|------|-------|-----|--|---|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | 517 | 337 | 437 | 1905 | | 384 | | 495 | | |
| Lane group cap. | | 1598 | 664 | 907 | 2680 | | 490 | | 666 | | | |
| w/c ratio | | 0.32 | 0.51 | 0.48 | 0.71 | | 0.78 | | 0.74 | | | |
| Green ratio | | 0.46 | 0.46 | 0.28 | 0.78 | | 0.15 | | 0.47 | | | |
| Unit delay d1 | | 22.1 | 24.5 | 38.6 | 7.2 | | 52.9 | | 28.1 | | | |
| Delay factor x | | 0.11 | 0.12 | 0.11 | 0.27 | | 0.33 | | 0.30 | | | |
| Incr. delay c2 | | 0.1 | 0.6 | 0.4 | 0.9 | | 0.1 | | 4.5 | | | |
| PF factor | | 0.420 | 0.420 | 0.736 | 0.224 | | 0.879 | | 0.411 | | | |
| Control delay | | 9.6 | 11.2 | 26.7 | 2.5 | | 54.6 | | 16.1 | | | |
| Lane group LOS | | A | B | C | A | | D | | B | | | |
| Approach delay | | 10.2 | | | 7.4 | | | 32.9 | | | | |
| Approach LOS | | E | | | A | | | C | | | | |
| Intersect. delay | | 13.5 | | | Intersection LOS | | | | | | | B |

66A
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SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|---------------------------------|--|--|
| Analyst | USAI | | | Intersection | SIEMPRE VIVA RD./HARVEST RD. | | |
| Agency of Co. | USAI | | | Area Type | All other areas | | |
| Date Performed | 03/27/11 | | | Jurisdiction | SIEMPHARV30438WLM NO MIT | | |
| Time Period | AM PEAK HOUR | | | Analysis Year | YEAR 2030/ALT - 3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|-----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 455 | 1665 | 110 | 90 | 2590 | 465 | 40 | 5 | 35 | 95 | 20 | 140 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | S | S | | S | S | | S | S | | S | S | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/h | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Thru & RT | Excl. Left | 07 | 08 | | | | |
| Timing | G = 15.0 | G = 75.0 | G = | G = | G = 10.0 | G = 10.0 | G = | G = | | | | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|------|------------------|-------|------|-------|-------|----|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Ag. flow rate | 479 | 1669 | | 95 | 3205 | | 42 | 42 | | 100 | 168 |
| Lane group cap | 368 | 2827 | | 368 | 2794 | | 126 | 216 | | 126 | 216 | |
| v/c ratio | 1.30 | 0.65 | | 0.26 | 1.15 | | 0.33 | 0.19 | | 0.79 | 0.77 | |
| Green ratio | 0.12 | 0.58 | | 0.12 | 0.58 | | 0.09 | 0.08 | | 0.09 | 0.09 | |
| Unit delay c1 | 57.5 | 18.8 | | 52.4 | 21.5 | | 56.8 | 56.2 | | 59.0 | 58.9 | |
| Delay factor c | 0.50 | 0.24 | | 0.11 | 0.50 | | 0.11 | 0.11 | | 0.34 | 0.32 | |
| Increment. delay c2 | 154.3 | 0.6 | | 0.4 | 72.7 | | 1.6 | 0.4 | | 28.5 | 15.5 | |
| P-factor | 0.913 | 0.118 | | 0.913 | 0.413 | | 0.944 | 0.944 | | 0.944 | 0.944 | |
| Control delay | 206.8 | 2.8 | | 46.2 | 94.0 | | 55.2 | 53.5 | | 84.2 | 71.1 | |
| Lane group LOS | F | A | | D | F | | E | D | | F | E | |
| Approach delay | 44.4 | | | 83.0 | | | 54.4 | | | 76.0 | | |
| Approach LOS | D | | | F | | | D | | | E | | |
| Intersec. delay | 67.2 | | | Intersection LOS | | | | | | E | | |

26A
W
M

SHORT REPORT

| General Information | | | | Site Information | | | | | | | | |
|---------------------|--------------|--|--|-------------------------|--|--|--|--|--|--|--|--|
| Analyst | USA/ | | | SIEMPRE VIVA | | | | | | | | |
| Agency or Co. | USA/ | | | RD. HARVEST RD. | | | | | | | | |
| Date Performed | 03/27/11 | | | All other areas | | | | | | | | |
| Time Period | AM PEAK HOUR | | | SIEMPHARV30A3BWLM | | | | | | | | |
| | | | | WITH MIT | | | | | | | | |
| | | | | YEAR 2030//ALT.-3B WITH | | | | | | | | |
| | | | | LM WIT | | | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|-----------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 1 | 1 | 2 | 0 | 2 | 2 | 1 |
| Lane group | L | TR | | L | T | R | L | TR | | L | T | R |
| Volume (vph) | 455 | 1665 | 110 | 90 | 2580 | 465 | 40 | 5 | 35 | 95 | 20 | 140 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Ext eff green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Thru & RT | Excl Left | 07 | 08 | | | | |
| Timing | G = 15.0 | G = 75.0 | G = | G = | G = 10.0 | G = 19.0 | G = | G = | | | | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-------|------------------|-------|-------|-------|----|-------|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj flow rate | 479 | 1669 | 95 | 2716 | 489 | 47 | 47 | | 100 | 21 | 147 |
| Lane group cap. | 368 | 2827 | 358 | 2857 | 831 | 125 | 218 | | 245 | 266 | 108 | |
| w/c ratio | 1.30 | 0.66 | 0.26 | 0.95 | 0.59 | 0.33 | 0.19 | | 0.41 | 0.08 | 1.39 | |
| Green ratio | 0.12 | 0.58 | 0.12 | 0.58 | 0.58 | 0.08 | 0.08 | | 0.08 | 0.58 | 0.08 | |
| Unif delay d1 | 57.5 | 18.8 | 57.4 | 25.8 | 17.6 | 56.8 | 56.2 | | 57.2 | 55.7 | 60.0 | |
| Delay factor k | 0.50 | 0.24 | 0.11 | 0.48 | 0.18 | 0.11 | 0.11 | | 0.11 | 0.11 | 0.50 | |
| Incrim delay c2 | 154.3 | 0.6 | 6.4 | 8.2 | 1.7 | 1.5 | 0.4 | | 1.7 | 0.7 | 221.8 | |
| PF factor | 0.913 | 0.718 | 0.913 | 0.718 | 0.718 | 0.944 | 0.944 | | 0.944 | 0.944 | 0.944 | |
| Control delay | 256.8 | 2.8 | 48.2 | 11.2 | 3.2 | 55.2 | 53.5 | | 55.1 | 52.8 | 278.5 | |
| Lane group LOS | F | A | D | B | A | E | D | | E | D | F | |
| Approach delay | 44.4 | | | 11.1 | | | 54.4 | | | 177.5 | | |
| Approach LOS | D | | | B | | | D | | | F | | |
| Intersoc. delay | 32.2 | | | Intersection LOS | | | | | | C | | |

A.G.F
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M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|------------------------|------------------|----------------|--------------|----------------------|
| Analyst | USAI | Intersection | SIEMPRE VIVA | Area Type | RD/HARVEST RD. | Jurisdiction | SIEMPHARV30P35WLM NO |
| Agency or Co | USAI | Analysis Year | YLAH 2030/ALT.-JB WITH | | | | |
| Date Performed | 03/27/11 | | | | | | |
| Time Period | PM PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------|------------|-----------|------|------|-----------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 125 | 1530 | 55 | 80 | 1665 | 120 | 175 | 36 | 145 | 470 | 30 | 455 |
| % Heavy veh. | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Accel'd (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. of. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Lxcl. Lef. | Thru & RT | 03 | 04 | Thru & RT | Excl Left | 07 | 08 | | | | |
| Timing | G = 10.0 | G = 45.0 | G = | G = | G = 20.0 | G = 25.0 | G = | G = | | | | |
| | Y = 5 | Y = 5 | Y = | Y = | Y = 5 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs.) | = 0.25 | | | | | | Cycle Length C = 120.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|----------------|-------|------|-------|-------|------|------------------|-------|-----|-------|-------|-----|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj. flow rate | 132 | 1711 | | 84 | 1679 | | 184 | 185 | | 495 | 511 | |
| Lane group cap. | 265 | 1839 | | 266 | 1635 | | 342 | 490 | | 342 | 479 | | |
| v/c ratio | 0.56 | 0.93 | | 0.32 | 1.02 | | 0.54 | 0.39 | | 1.45 | 1.07 | | |
| Green ratio | 0.08 | 0.38 | | 0.08 | 0.38 | | 0.21 | 0.17 | | 0.21 | 0.17 | | |
| Unif. delay d1 | 52.6 | 36.0 | | 51.8 | 37.5 | | 42.4 | 44.5 | | 47.5 | 50.0 | | |
| Delay factor k | 0.11 | 0.45 | | 0.11 | 0.56 | | 0.14 | 0.11 | | 0.50 | 0.50 | | |
| Incomm. delay d2 | 1.5 | 9.0 | | 0.7 | 27.2 | | 1.7 | 5.5 | | 217.1 | 60.1 | | |
| Pt factor | 0.939 | 0.600 | | 0.939 | 0.600 | | 0.825 | 0.867 | | 0.825 | 0.867 | | |
| Control delay | 50.9 | 35.6 | | 49.2 | 48.7 | | 36.6 | 39.0 | | 256.3 | 103.4 | | |
| Lane group LOS | D | C | | D | D | | D | D | | F | F | | |
| Approach delay | 32.1 | | | 49.5 | | | 37.8 | | | 178.6 | | | |
| Approach LOS | C | | | D | | | D | | | F | | | |
| Intersection delay | 57.6 | | | | | | Intersection LOS | | | | | | E |

4-68

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|--|--|------------------|--------------------------------|--|--|
| Analyst | USAJ | | | Intersection | SIEMPRE VIVA RD, HARVEST RD | | |
| Agency or Co. | USAJ | | | Area Type | All other areas | | |
| Date Performed | 03/27/11 | | | Jurisdiction | SIEMPHARV30P30VLM WITH MIT | | |
| Time Period | PM PEAK HOUR | | | Analysis Year | YEAR 2030//ALT.-38 WITH LM WIT | | |

| | EB | | | WB | | | NB | | | SB | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | 2 | 3 | 0 | 2 | 3 | 1 | 1 | 2 | 0 | 2 | 2 | 1 |
| Lane group | L | TR | | L | T | R | L | TR | | L | T | R |
| Volume (vph) | 125 | 1530 | 95 | 60 | 1665 | 120 | 175 | 30 | 145 | 470 | 39 | 455 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Arrival type | S | S | | S | S | S | S | S | | S | S | S |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |

| Phasing | Excl. Left | Thru & RT | C6 | C4 | Thru & RT | Excl. Left | C7 | C8 |
|-----------------------------------|-------------------|-------------------|------------|------------|------------------------|-------------------|------------|------------|
| Timing | G = 10.0 Y = 5 | G = 45.0 Y = 5 | G = Y = | G = Y = | G = 20.0 Y = 5 | G = 25.0 Y = 5 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | Cycle Length C = 125.0 | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|--|------------------|-------|-------|-------|-------|--|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| Adj. flow rate | 132 | 1711 | | 84 | 1753 | 126 | 184 | 185 | | 495 | 32 | 479 |
| Lane group cap | 266 | 1835 | | 268 | 1857 | 838 | 342 | 490 | | 684 | 577 | 355 |
| v/c ratio | 0.50 | 0.93 | | 0.32 | 0.94 | 0.15 | 0.54 | 0.38 | | 0.75 | 0.06 | 1.35 |
| Green ratio | 0.08 | 0.38 | | 0.08 | 0.39 | 0.58 | 0.21 | 0.17 | | 0.21 | 0.17 | 0.25 |
| Unif. delay d1 | 52.6 | 36.0 | | 51.8 | 36.3 | 11.4 | 42.4 | 44.5 | | 44.5 | 42.1 | 45.0 |
| Delay factor k | 0.11 | 0.45 | | 0.11 | 0.45 | 0.11 | 0.14 | 0.11 | | 0.30 | 0.11 | 0.50 |
| Increm. delay d2 | 1.5 | 9.0 | | 0.7 | 19.5 | 0.1 | 1.7 | 0.5 | | 4.6 | 0.0 | 174.8 |
| PF factor | 0.939 | 0.605 | | 0.939 | 0.600 | 0.125 | 0.825 | 0.867 | | 0.825 | 0.867 | 0.778 |
| Control delay | 50.9 | 30.6 | | 49.3 | 32.4 | 1.5 | 36.6 | 39.0 | | 41.3 | 36.5 | 209.8 |
| Lane group LOS | D | C | | C | C | A | D | D | | D | C | F |
| Approach delay | 32.1 | | | 31.0 | | | 37.8 | | | 121.4 | | |
| Approach LOS | C | | | C | | | D | | | F | | |
| Intersec. delay | 49.4 | | | Intersection LOS | | | | | | D | | |

A-7-A
N
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|--------------|--------------|------------------|---------------------------|--|--|
| Analyst | USA1 | Agency or Co | USA1 | Intersection | OTAY MESA RD/SANYO AVE | | |
| Date Performed | 03/25/11 | Time Period | AM PEAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | OTAYSANYO3013BIWLM NO MIT | | |
| | | | | Analysis Year | YEAR 2030 ALT. 3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|-----------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 700 | 255 | 1180 | 90 | 200 | 10 | 655 | 310 | 100 | 75 | 205 | 390 |
| % Heavy veh | 10 | 10 | 10 | 5 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| P-TF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Exc. eff. clear | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Line Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Exc. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 35.0 | C = 25.0 | G = | G = | G = 32.0 | G = 25.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 135.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-----|-------|-------|-----|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 737 | 1616 | | 95 | 222 | | 689 | 431 | | 79 | 627 |
| Lane group cap. | 876 | 790 | | 865 | 909 | | 389 | 613 | | 389 | 565 | |
| Vol ratio | 0.89 | 2.05 | | 0.11 | 0.24 | | 1.77 | 0.70 | | 0.20 | 1.11 | |
| Green ratio | 0.26 | 0.19 | | 0.26 | 0.19 | | 0.24 | 0.19 | | 0.24 | 0.19 | |
| Unif. delay d1 | 48.2 | 55.0 | | 38.1 | 46.9 | | 51.5 | 51.5 | | 41.3 | 55.0 | |
| Delay factor x | 0.42 | 0.50 | | 0.11 | 0.11 | | 0.50 | 0.27 | | 0.11 | 0.50 | |
| Incremental delay d2 | 12.0 | 474.9 | | 0.1 | 0.1 | | 357.4 | 3.6 | | 0.3 | 71.6 | |
| PF factor | 0.767 | 0.848 | | 0.767 | 0.848 | | 1.000 | 1.000 | | 1.000 | 1.000 | |
| Control delay | 49.0 | 521.6 | | 29.3 | 40.0 | | 408.9 | 55.2 | | 41.5 | 126.5 | |
| Lane group LOS | D | F | | C | D | | F | E | | D | F | |
| Approach delay | 373.6 | | | 36.8 | | | 272.8 | | | 117.1 | | |
| Approach LOS | F | | | D | | | F | | | F | | |
| Intersection delay | 284.4 | | | Intersection LOS | | | | | | F | | |

471-A
W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|--------------|--------------|------------------|------------------------------|--|--|
| Analyst | USAI | Agency or Co | USAI | Intersection | OTAY MESA RD./SANYO AVE. | | |
| Date Performed | 03/25/11 | Time Period | AM PEAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | OTAY SANYO 30A38W M WITH MIT | | |
| | | | | Analysis Year | YEAR 2030 ALT. 36 WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|----------|----------|------------------------|------|-----------|-----------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 2 | 3 | 2 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (veh) | 700 | 355 | 1180 | 90 | 200 | 10 | 655 | 310 | 100 | 75 | 205 | 390 | |
| % Heavy veh | 10 | 10 | 10 | 5 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | S | S | S | S | S | S | S | S | S | S | S | S | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl Left | Thru & RT | 03 | | | 04 | | | Exc. Left | Thru & RT | 07 | | 08 |
| Timing | G = 32.0 | G = 50.0 | G = | G = | G = 30.0 | G = 15.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 145.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 737 | 374 | 1242 | 95 | 211 | 11 | 689 | 326 | 105 | 75 | 216 |
| Lane group cap. | 703 | 1768 | 1456 | 737 | 1768 | 494 | 659 | 168 | 504 | 340 | 168 | 504 |
| w/c ratio | 1.05 | 0.22 | 0.85 | 0.13 | 0.12 | 0.02 | 1.05 | 1.73 | 0.21 | 0.23 | 1.15 | 0.82 |
| Green ratio | 0.22 | 0.34 | 0.59 | 0.22 | 0.34 | 0.34 | 0.21 | 0.10 | 0.35 | 0.21 | 0.10 | 0.36 |
| Uniform delay d1 | 56.5 | 33.7 | 24.7 | 45.3 | 32.5 | 31.4 | 57.5 | 65.0 | 32.2 | 47.9 | 65.0 | 42.2 |
| Delay factor k | 0.50 | 0.11 | 0.38 | 0.11 | 0.11 | 0.11 | 0.50 | 0.50 | 0.11 | 0.11 | 0.50 | 0.35 |
| Incrun. delay d2 | 47.3 | 0.1 | 4.8 | 0.1 | 0.0 | 0.0 | 47.5 | 351.6 | 5.2 | 0.4 | 111.4 | 10.9 |
| PF factor | 0.811 | 0.649 | 0.121 | 0.811 | 0.545 | 0.549 | 1.000 | 1.000 | 0.627 | 1.000 | 1.000 | 1.000 |
| Control delay | 93.1 | 21.9 | 7.8 | 38.8 | 21.1 | 20.4 | 105.0 | 416.6 | 20.4 | 48.3 | 175.4 | 52.2 |
| Lane group LOS | F | C | A | D | C | C | F | F | C | D | F | D |
| Approach delay | 35.9 | | | 25.9 | | | 137.5 | | | 38.8 | | |
| Approach LOS | D | | | C | | | F | | | F | | |
| Intersec. delay | 57.9 | | | Intersection LOS | | | | | | F | | |

AT-1
N
M

| SHORT REPORT | | | | | | | | | | | | |
|---------------------|--------------|--|--|--|--|------------------|---------------------------|--|--|--|--|--|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA/ | | | | | Intersection | OTAY MESA RD./SANYO AVE | | | | | |
| Agency or Co. | USA/ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 05/25/11 | | | | | Jurisdiction | OTAYSANYO30P3BWLM NO | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-35 WITH LM | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 3 | 0 | 2 | 3 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (voh) | 290 | 215 | 750 | 100 | 315 | 75 | 1045 | 205 | 25 | 10 | 310 | 520 |
| % Heavy veh | 10 | 10 | 10 | 5 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 3 | 3 | | 3 | 3 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 17.0 | G = 25.0 | G = | G = | G = 45.0 | G = 25.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 130.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
|---|----------------|-------|------|------------------|-------|-----|-------|-------|-----|-------|-------|-----|---|
| | EB | | | WB | | | NB | | | SB | | | |
| | Adj. flow rate | 305 | 1015 | | 100 | 411 | | 1100 | 242 | | 11 | 979 | |
| Lane group cap. | 417 | 820 | | 437 | 919 | | 558 | 953 | | 558 | 599 | | |
| Vol ratio | 0.73 | 1.24 | | 0.24 | 0.45 | | 1.94 | 0.37 | | 0.02 | 1.63 | | |
| Green ratio | 0.13 | 0.19 | | 0.13 | 0.19 | | 0.35 | 0.19 | | 0.35 | 0.19 | | |
| Unif. delay d* | 54.3 | 52.5 | | 50.7 | 46.4 | | 42.5 | 45.7 | | 26.0 | 52.6 | | |
| Delay factor k | 0.29 | 0.50 | | 0.11 | 0.11 | | 0.50 | 0.11 | | 0.11 | 0.50 | | |
| Increment. delay d2 | 6.5 | 117.4 | | 6.3 | 0.3 | | 427.9 | 0.4 | | 3.0 | 293.0 | | |
| PF factor | 0.900 | 0.841 | | 0.900 | 0.841 | | 1.000 | 1.000 | | 1.000 | 1.000 | | |
| Control delay | 55.3 | 161.6 | | 45.9 | 39.4 | | 470.4 | 46.0 | | 28.0 | 345.5 | | |
| Lane group LOS | E | F | | D | D | | F | D | | C | F | | |
| Approach delay | 137.0 | | | 40.7 | | | 393.9 | | | 347.0 | | | |
| Approach LOS | F | | | D | | | F | | | F | | | |
| Intersec. delay | 256.5 | | | Intersection LOS | | | | | | | | | F |

47-1
w
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|---------------|--------------|------------------|----------------------------------|--|--|
| Analyst | USAI | Agency or Co. | USAI | Intersection | OTAY MESA RD/SANYO AVE | | |
| Date Performed | 03/26/11 | Time Period | PM PEAK HOUR | Area Type | All other areas | | |
| | | | | Jurisdiction | OTAY SAN YOLO 30P3B WLM WITH MIT | | |
| | | | | Analysis Year | YEAR 2030 ALT - 3B WITH LM | | |

| Volume and Timing Input | | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|----------|----------|------------------------|------|------------|-----------|------|------|----|
| | E3 | | | W3 | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num. of Lanes | 2 | 3 | 2 | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (veh) | 290 | 215 | 750 | 100 | 315 | 75 | 1545 | 205 | 25 | 10 | 310 | 620 | |
| % Heavy veh | 10 | 10 | 10 | 5 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. greens | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 5 | 3 | 3 | 3 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | C3 | | | C4 | | | Excl. Left | Thru & RT | C7 | | C8 |
| Timing | G = 17.0 | G = 25.0 | G = | G = | G = 45.0 | G = 25.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 135.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | W3 | | | NB | | | SB | | |
| | Adj flow rate | 305 | 226 | 789 | 155 | 332 | 79 | 1100 | 216 | 26 | 11 | 326 |
| Lane group cap | 417 | 953 | 1426 | 437 | 953 | 822 | 1163 | 350 | 515 | 568 | 350 | 531 |
| v/c ratio | 0.73 | 0.24 | 0.55 | 0.24 | 0.35 | 0.10 | 1.50 | 0.52 | 0.05 | 0.02 | 0.92 | 1.23 |
| Green ratio | 0.12 | 0.19 | 0.58 | 0.13 | 0.19 | 0.58 | 0.35 | 0.19 | 0.36 | 0.35 | 0.13 | 0.36 |
| Unit delay d1 | 54.3 | 44.4 | 17.1 | 50.7 | 45.4 | 12.3 | 42.4 | 48.1 | 27.0 | 28.0 | 51.7 | 41.5 |
| Delay factor k | 0.29 | 0.11 | 0.15 | 0.11 | 0.11 | 0.11 | 0.50 | 0.20 | 0.11 | 0.11 | 0.45 | 0.50 |
| Incremental delay d2 | 6.5 | 6.1 | 2.5 | 6.3 | 6.2 | 2.1 | 16.4 | 3.3 | 0.0 | 0.0 | 31.1 | 119.1 |
| PF factor | 0.900 | 0.841 | 0.119 | 0.900 | 0.841 | 0.118 | 1.000 | 1.000 | 0.522 | 1.000 | 1.000 | 1.000 |
| Control delay | 55.2 | 37.5 | 2.5 | 45.9 | 38.5 | 1.5 | 58.8 | 51.4 | 16.8 | 28.5 | 92.7 | 150.6 |
| Lane group LOS | E | D | A | D | D | A | E | D | B | C | F | F |
| Approach delay | 20.7 | | | 34.3 | | | 55.0 | | | 133.5 | | |
| Approach LOS | C | | | C | | | E | | | F | | |
| Intersec delay | 62.5 | | | Intersection LOS | | | | | | E | | |

482A
23

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|------------|------------------|---------------------------|-------|------|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USAI | | | | | Intersection | AIRWAY RD./SANYO AVE | | | | | |
| Agency or Co | USAI | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/27/11 | | | | | Jurisdiction | AIRSANYO30A3BWLM NO | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT -3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | CB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 0 | 2 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (veh) | 1205 | 490 | 535 | 110 | 210 | 50 | 230 | 120 | 50 | 315 | 260 | 515 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/h* | | | | | | | | | | | | |
| Bus stops/h* | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Turning | G = 50.0 | G = 25.0 | G = | G = | G = 22.0 | G = 25.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 1 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | CB | | | WB | | | NB | | | SB | | |
| | LT | TR | | LT | TR | | LT | TR | | LT | TR | |
| Adj. flow rate | 1263 | 1079 | | 116 | 214 | | 242 | 179 | | 332 | 816 | |
| Lane group cap. | 1138 | 556 | | 1138 | 596 | | 258 | 565 | | 258 | 544 | |
| v/c ratio | 1.11 | 1.93 | | 0.10 | 0.45 | | 0.94 | 0.31 | | 1.29 | 1.50 | |
| Green ratio | 0.36 | 0.18 | | 0.36 | 0.18 | | 0.16 | 0.18 | | 0.16 | 0.18 | |
| Unif. delay d1 | 45.0 | 57.5 | | 30.0 | 51.5 | | 58.3 | 50.0 | | 59.0 | 57.5 | |
| Delay factor k | 0.50 | 0.50 | | 0.11 | 0.11 | | 0.45 | 0.11 | | 0.50 | 0.50 | |
| Increm. delay d2 | 52.1 | 425.2 | | 0.0 | 0.6 | | 39.5 | 0.3 | | 155.1 | 234.5 | |
| PF factor | 0.630 | 0.855 | | 0.630 | 0.855 | | 0.876 | 0.855 | | 0.876 | 0.855 | |
| Control delay | 90.5 | 474.3 | | 18.9 | 44.6 | | 90.6 | 43.0 | | 206.6 | 283.7 | |
| Lane group LOS | F | F | | B | D | | F | D | | F | F | |
| Approach delay | 267.3 | | | 36.9 | | | 70.3 | | | 261.4 | | |
| Approach LOS | F | | | D | | | E | | | F | | |
| Intersect. delay | 225.6 | | | Intersection LOS | | | | | | F | | |

W
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|---------------|---------------|----------------------------|------------------|--|--|--|
| Analyst | USAJ | Intersection | AIRWAY RD./SANYO AVE | | | | |
| Agency or Co | USAJ | Area Type | All other roads | | | | |
| Date Performed | 03/25/11 | Jurisdiction | AIRSANYOC3CA3BWLM WITH MIT | | | | |
| Time Period | AM PEAK HOUR? | Analysis Year | YEAR 2030 ALT.-3B WITH IM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | L | T | R | L | T | R | L | T | R | L | T | R |
| Num. of Lanes | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Volume (vph) | 1200 | 495 | 535 | 110 | 210 | 50 | 230 | 120 | 50 | 315 | 260 | 515 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adjusted (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 5 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 50.0 | G = 25.0 | G = | G = | G = 27.0 | G = 20.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|-------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | EB | | | WB | | | NB | | | SB | | |
| | L | T | R | L | T | R | L | T | R | L | T | R |
| Adj. flow rate | 1253 | 516 | 563 | 110 | 221 | 53 | 242 | 126 | 53 | 332 | 274 | 542 |
| Lane group cap | 1138 | 619 | 1003 | 1138 | 619 | 579 | 515 | 495 | 760 | 515 | 495 | 1312 |
| v/c ratio | 1.11 | 0.83 | 0.56 | 0.10 | 0.36 | 0.09 | 0.39 | 0.25 | 0.07 | 0.54 | 0.55 | 0.41 |
| Green ratio | 0.36 | 0.18 | 0.41 | 0.36 | 0.18 | 0.41 | 0.19 | 0.14 | 0.54 | 0.19 | 0.14 | 0.54 |
| Unif. delay d1 | 45.0 | 55.5 | 31.9 | 30.0 | 50.5 | 25.5 | 49.3 | 53.4 | 15.7 | 50.3 | 55.8 | 19.4 |
| Delay factor k | 5.50 | 0.37 | 0.16 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.14 | 0.15 | 0.11 |
| Incrom. delay d2 | 62.1 | 9.7 | 0.7 | 0.0 | 0.4 | 0.1 | 0.4 | 0.3 | 0.0 | 1.0 | 1.4 | 0.2 |
| PF factor | 0.530 | 0.855 | 0.542 | 0.630 | 0.855 | 0.542 | 0.641 | 0.829 | 0.231 | 0.841 | 0.899 | 0.231 |
| Control delay | 90.5 | 57.1 | 18.0 | 18.9 | 43.5 | 13.9 | 41.9 | 47.7 | 3.7 | 43.9 | 51.0 | 4.7 |
| Lane group LOS | F | F | B | B | D | E | D | D | A | D | D | A |
| Approch. delay | 65.7 | | | 32.2 | | | 36.8 | | | 27.5 | | |
| Approach LOS | E | | | C | | | D | | | C | | |
| Int. sec. delay | 49.7 | | | Intersection LOS | | | | | | D | | |

ASP
M
M

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|---------------------------|------------------|-----------------|--------------|--------------------|
| Analyst | USA1 | Intersection | AIRWAY RD./SANYO AVE. | Area Type | All other areas | Jurisdiction | AIRSANYO30P3B/M/NO |
| Agency or Co. | USA1 | Analysis Year | YEAR 2030 ALT -3B WITH LM | Date Performed | 03/07/11 | | |
| Time Period | PM PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|------------|-----------|------|------|------------|------------------------|------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Number of Lanes | 2 | 2 | 0 | 2 | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 515 | 210 | 230 | 50 | 490 | 315 | 535 | 260 | 110 | 50 | 120 | 1200 |
| % Heavy veh. | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 25.0 | G = 20.0 | G = | G = | G = 22.0 | G = 55.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 140.5 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|---------------|-------|-----|------------------|-------|-----|-------|-------|-----|-------|-------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | Ad. flow rate | 542 | 463 | | 53 | 848 | | 563 | 390 | | 53 | 1389 |
| Lane group cap. | 565 | 446 | | 589 | 458 | | 256 | 1291 | | 258 | 1151 | |
| v/c ratio | 0.95 | 1.04 | | 0.09 | 1.85 | | 2.18 | 0.30 | | 0.21 | 1.21 | |
| Green ratio | 0.18 | 0.14 | | 0.18 | 0.14 | | 0.16 | 0.39 | | 0.16 | 0.29 | |
| Unif. delay c | 56.9 | 60.0 | | 46.0 | 60.0 | | 59.0 | 26.3 | | 51.4 | 42.5 | |
| Delay factor k | 0.46 | 0.50 | | 0.11 | 0.50 | | 0.50 | 0.11 | | 0.11 | 0.50 | |
| Increment. delay d2 | 28.3 | 52.6 | | 0.1 | 391.6 | | 544.5 | 0.1 | | 0.4 | 101.4 | |
| PF factor | 0.855 | 0.889 | | 0.855 | 0.889 | | 0.876 | 0.569 | | 0.876 | 0.569 | |
| Control delay | 75.0 | 106.2 | | 41.1 | 444.9 | | 596.2 | 16.6 | | 45.4 | 125.6 | |
| Lane group LOS | E | F | | D | F | | F | E | | D | F | |
| Approach delay | 86.4 | | | 421.1 | | | 350.1 | | | 122.6 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersect. delay | 220.9 | | | Intersection LOS | | | | | | F | | |

480
W
M

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|-----------|------------------|---------------------------|-------|-------|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA/ | | | | | Intersection | AIRWAY RD./SANYO AVE | | | | | |
| Agency or Co. | USA/ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/07/11 | | | | | Jurisdiction | AIRSANYO30P39WLM WITH MIT | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2010 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Volume (vph) | 515 | 210 | 230 | 50 | 490 | 315 | 535 | 260 | 115 | 50 | 120 | 1200 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuals (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 25.0 | G = 25.0 | G = | G = | G = 27.0 | G = 45.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 140.0 | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 542 | 221 | 242 | 53 | 516 | 332 | 563 | 274 | 116 | 53 | 126 | 1263 |
| Lane group cap. | 599 | 618 | 1003 | 569 | 618 | 579 | 615 | 1113 | 768 | 615 | 1113 | 1339 |
| w/c ratio | 0.95 | 0.36 | 0.24 | 0.09 | 0.83 | 0.57 | 0.92 | 0.25 | 0.15 | 0.09 | 0.11 | 0.94 |
| Green ratio | 0.18 | 0.18 | 0.41 | 0.18 | 0.18 | 0.41 | 0.19 | 0.32 | 0.54 | 0.19 | 0.32 | 0.54 |
| Unit. delay d1 | 56.9 | 50.5 | 27.3 | 48.0 | 56.5 | 32.1 | 55.4 | 35.0 | 16.4 | 46.4 | 33.4 | 30.5 |
| Delay factor k | 0.46 | 0.11 | 0.11 | 0.11 | 0.37 | 0.17 | 0.43 | 0.11 | 0.11 | 0.11 | 0.11 | 0.46 |
| Instruc. delay c2 | 25.3 | 0.4 | 0.1 | 0.1 | 9.7 | 1.4 | 16.5 | 0.1 | 0.1 | 0.1 | 0.0 | 13.4 |
| PF factor | 0.655 | 0.655 | 0.542 | 0.855 | 0.855 | 0.542 | 0.841 | 0.684 | 0.231 | 0.841 | 0.684 | 0.231 |
| Control delay | 75.0 | 43.5 | 14.9 | 41.1 | 57.1 | 19.8 | 65.1 | 24.1 | 3.9 | 39.0 | 27.9 | 20.4 |
| Lane group LOS | F | C | B | D | E | B | E | C | A | D | C | C |
| Approach delay | 53.6 | | | 42.1 | | | 45.6 | | | 21.2 | | |
| Approach LOS | D | | | D | | | D | | | C | | |
| Intersec. delay | 38.6 | | | Intersection LOS | | | | | | D | | |

AG-A
N
MIT

| TWO-WAY STOP CONTROL SUMMARY | | | | | | | | | |
|--|--------------|------------|-----------|---|-----------------------------------|-----------|----|------|--|
| General Information | | | | Site Information | | | | | |
| Analyst | USA/ | | | Intersection | H. HERTZ DR / PAS DE LAS AMERICAS | | | | |
| Agency/Co | USA/ | | | Location | SAN DIEGO | | | | |
| Date Performed | 3/8/2011 | | | Analysis Year | 2030 3B WITH LA MEDIA / NO MIT. | | | | |
| Analysis Time Period | AM PEAK HOUR | | | | | | | | |
| Project Description 3B WITH LA MEDIA / NO MIT. | | | | | | | | | |
| East/West Street HEINRICH HERTZ DR | | | | North/South Street. PASEO DE LAS AMERICAS | | | | | |
| Intersection Orientation North-South | | | | Study Period (hrs) 0.25 | | | | | |
| Vehicle Volumes and Adjustments | | | | | | | | | |
| Major Street | | Northbound | | | Southbound | | | | |
| Movement | 1 | 2 | 3 | 4 | 5 | 6 | | | |
| | L | T | R | L | T | R | | | |
| Volume | 720 | 435 | 0 | 0 | 305 | 80 | | | |
| Peak-Hour Factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Hourly Flow Rate, HFR | 757 | 457 | 0 | 0 | 321 | 84 | | | |
| Percent Heavy Vehicles | 10 | - | - | 10 | - | - | | | |
| Median Type | Undivided | | | | | | | | |
| RT Channelized | | | 0 | | | 0 | | | |
| Lanes | 1 | 2 | 0 | 0 | 2 | 1 | | | |
| Configuration | L | T | | | T | R | | | |
| Upstream Signal | | 0 | | | 0 | | | | |
| Minor Street | | Westbound | | | Eastbound | | | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 | | | |
| | L | T | R | L | T | R | | | |
| Volume | 0 | 0 | 0 | 20 | 0 | 360 | | | |
| Peak-Hour Factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | | |
| Hourly Flow Rate, HFR | 0 | 0 | 0 | 21 | 0 | 378 | | | |
| Percent Heavy Vehicles | 10 | 10 | 10 | 10 | 10 | 10 | | | |
| Percent Grade (%) | 0 | | | 0 | | | | | |
| Flared Approach | | N | | | N | | | | |
| Storage | | 0 | | | 0 | | | | |
| RT Channelized | | | 0 | | | 0 | | | |
| Lanes | 0 | 0 | 0 | 1 | 0 | 1 | | | |
| Configuration | | | | L | | R | | | |
| Delay, Queue Length, and Level of Service | | | | | | | | | |
| Approach | NB | SB | Westbound | | | Eastbound | | | |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 | |
| Lane Configuration | L | | | | | L | | R | |
| v (vph) | 757 | | | | | 21 | | 378 | |
| C (m) (vph) | 1076 | | | | | 12 | | 794 | |
| w/c | 0.75 | | | | | 1.75 | | 0.48 | |
| 95% queue length | 6.17 | | | | | 3.42 | | 2.60 | |
| Control Delay | 15.9 | | | | | 988.3 | | 13.5 | |
| LOS | C | | | | | F | | B | |
| Approach Delay | -- | -- | | | | | | 84.9 | |
| Approach LOS | -- | -- | | | | | | F | |

49-A
W
MT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|------------|------------------------|--------------------------------|-------|----|------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA! | | | | | Intersection | HERTZ DR./PASEO DE LAS AMERICA | | | | | |
| Agency or Co | USA! | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/08/11 | | | | | Jurisdiction | HERTZ AMERIC30A38W/LM | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year: | YEAR 2010 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 0 |
| Lane group | L | | R | | | | L | T | | | TR | |
| Volume (vph) | 26 | | 360 | | | | 720 | 435 | | | 305 | 80 |
| % Heavy veh | 10 | | 10 | | | | 10 | 10 | | | 10 | 10 |
| PHF | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | |
| Ext. eff. green | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | |
| Arrival type | A | | S | | | | S | S | | | S | |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | | | | 12.0 | 12.0 | | | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/tr | | | | | | | | | | | | |
| Bus stops/tr | 0 | | 0 | | | | 0 | 0 | | | 0 | |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Excl. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 13.0 | G = 20.0 | G = | G = | G = 39.0 | G = 40.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 21 | | 379 | | | | 758 | 458 | | | 405 | |
| Lane group cap. | 164 | | 699 | | | | 956 | 1066 | | | 1027 | |
| v/c ratio | 0.13 | | 0.54 | | | | 0.79 | 0.43 | | | 0.39 | |
| Green ratio | 0.10 | | 0.49 | | | | 0.30 | 0.31 | | | 0.31 | |
| Unit delay d1 | 52.3 | | 22.9 | | | | 41.8 | 35.9 | | | 35.5 | |
| Delay factor k | 0.11 | | 0.14 | | | | 0.34 | 0.11 | | | 0.11 | |
| Program delay d2 | 0.4 | | 0.9 | | | | 4.6 | 0.3 | | | 0.3 | |
| PF factor | 0.926 | | 0.354 | | | | 0.714 | 0.794 | | | 0.794 | |
| Control delay | 49.7 | | 8.9 | | | | 34.5 | 25.5 | | | 25.2 | |
| Lane group LOS | D | | A | | | | C | C | | | C | |
| Approch delay | 11.1 | | | | | | 31.1 | | | 25.2 | | |
| Approach LOS | D | | | | | | C | | | C | | |
| Intersec. delay | 25.0 | | | Intersection LOS | | | | | | C | | |

A9-P
NO
MIT

| TWO-WAY STOP CONTROL SUMMARY | | | | | | | | |
|--|--------------|------|-----------|---|-------------------------------|-----------|------|-------|
| General Information | | | | Site Information | | | | |
| Analyst | USAi | | | Intersection | 4. HERTZ DR./PAS O L AMERICAS | | | |
| Agency/Co | USAi | | | Jurisdiction | SAN DIEGO | | | |
| Date Performed | 3/08/2011 | | | Analysis Year | 2030 3B WITH LA MEDIA NO MIT. | | | |
| Analysis Time Period | PM PEAK HOUR | | | | | | | |
| Project Description: 3B WITH LA MEDIA/NO MIT. | | | | | | | | |
| East/West Street: HEINRICH HERTZ DR. | | | | North/South Street: PASEO DE LAS AMERICAS | | | | |
| Intersection Orientation: North-South | | | | Study Period (hrs): 0.75 | | | | |
| Vehicle Volumes and Adjustments | | | | | | | | |
| Major Street | Northbound | | | Southbound | | | | |
| Movement | 1 | 2 | 3 | 4 | 5 | 6 | | |
| | L | T | R | L | T | R | | |
| Volume | 350 | 319 | 0 | 0 | 435 | 20 | | |
| Peak-Hour Factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Hourly Flow Rate, HFR | 378 | 326 | 0 | 0 | 457 | 21 | | |
| Percent Heavy Vehicles | 10 | -- | -- | 10 | -- | -- | | |
| Median Type | Undivided | | | | | | | |
| RT Channelized | | | 0 | | | 0 | | |
| Lanes | 1 | 2 | 0 | 0 | 2 | 1 | | |
| Configuration | L | T | | | T | R | | |
| Upstream Signal | | 0 | | | 0 | | | |
| Minor Street | Westbound | | | Eastbound | | | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 | | |
| | L | T | R | L | T | R | | |
| Volume | 0 | 0 | 0 | 80 | 0 | 720 | | |
| Peak-Hour Factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Hourly Flow Rate, HFR | 0 | 0 | 0 | 84 | 0 | 757 | | |
| Percent Heavy Vehicles | 10 | 10 | 10 | 10 | 10 | 10 | | |
| Percent Grade (%) | 0 | | | 0 | | | | |
| Faired Approach | N | | | N | | | | |
| Storage | 0 | | | 0 | | | | |
| RT Channelized | | | 0 | | | 0 | | |
| Lanes | 0 | 0 | 0 | 1 | 0 | 1 | | |
| Configuration | | | | L | | R | | |
| Delay, Queue Length, and Level of Service | | | | | | | | |
| Approach | NB | SB | Westbound | | | Eastbound | | |
| Movement | | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | L | | | | | L | | R |
| V (vph) | 378 | | | | | 84 | | 757 |
| C (m) (vph) | 1000 | | | | | 75 | | 716 |
| w/c | 0.37 | | | | | 1.11 | | 1.06 |
| 95% queue length | 1.76 | | | | | 6.13 | | 19.50 |
| Control Delay | 10.7 | | | | | 231.4 | | 75.5 |
| LOS | B | | | | | F | | F |
| Approach Delay | -- | -- | | | | | 89.3 | |
| Approach LOS | -- | -- | | | | | F | |

49-P
W
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|---------------------------------|------------------|--|--|--|
| Analyst | USA! | Intersection | HERTZ DR / PASEO DE LAS AMERICA | | | | |
| Agency or Co | USA! | Area Type | All other areas | | | | |
| Date Performed | 03/03/11 | Jurisdiction | HERTZ AMERICAS 30P3BW.LM | | | | |
| Time Period | PM PEAK HOUR | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-------------------------|------|----|------|----|----|----|------|------|----|----|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LI | TH | RT | LT | TH | RT | LI | TH | RT | LI | TH | RT |
| Num. of Lanes | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 0 |
| Lane group | L | | R | | | | L | T | | | TR | |
| Volume (vph) | 80 | | 720 | | | | 360 | 310 | | | 435 | 20 |
| % Heavy veh | 10 | | 10 | | | | 10 | 10 | | | 10 | 10 |
| PHF | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuals (P/A) | A | | A | | | | A | A | | | A | A |
| Startup lost time | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | |
| Ext. ef. green | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | |
| Arrival type | 5 | | 5 | | | | 5 | 5 | | | 5 | |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | | | | 12.0 | 12.0 | | | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | | | N | 0 | N | N | 0 | N |
| Parking/h | | | | | | | | | | | | |
| Bus stops/h | 0 | | 0 | | | | 0 | 0 | | | 0 | |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | |

| Phasing | EB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 |
|-----------------------------------|-------------------|------------|------------|------------|-----------------------|-------------------|------------|------------|
| Timing | G = 30.0 Y = 4 | G = Y = | G = Y = | G = Y = | G = 34.0 Y = 4 | G = 16.0 Y = 5 | G = Y = | G = Y = |
| Duration of Analysis (hrs) = 0.25 | | | | | Cycle Length C = 93.0 | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|----|-------|------------------|--|--|-------|-------|-----|------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 84 | | 758 | | | | 379 | 326 | | | 479 |
| Lane group cap. | 529 | | 1048 | | | | 1165 | 2016 | | | 591 | |
| v/c ratio | 0.16 | | 0.72 | | | | 0.33 | 0.16 | | | 0.81 | |
| Green ratio | 0.32 | | 0.73 | | | | 0.37 | 0.58 | | | 0.17 | |
| Unit delay d1 | 22.5 | | 7.1 | | | | 21.2 | 9.0 | | | 37.0 | |
| Delay factor k | 0.11 | | 0.26 | | | | 0.11 | 0.11 | | | 0.35 | |
| Incem. delay c2 | 0.1 | | 2.5 | | | | 0.2 | 0.0 | | | 9.4 | |
| P-factor | 0.883 | | 0.186 | | | | 0.616 | 0.119 | | | 0.681 | |
| Control delay | 15.5 | | 3.8 | | | | 13.2 | 1.1 | | | 40.3 | |
| Lane group LOS | E | | A | | | | B | A | | | D | |
| Approach delay | 5.0 | | | | | | 7.6 | | | 40.3 | | |
| Approach LOS | A | | | | | | A | | | D | | |
| Intersec. delay | 14.2 | | | Intersection LOS | | | | | | B | | |

50A
N
MIT

TWO-WAY STOP CONTROL SUMMARY

| General Information | | Site Information | |
|--|--------------|---|--------------------------------|
| Analyst | USA: | Intersection | PASEO DE LAS AMERICAS/MARCONI |
| Agency/Co | USA: | Jurisdiction | SAN DIEGO |
| Date Performed | 3/08/2011 | Analysis Year | 2030 3B W LA MEDANO MITIGATION |
| Analysis Time Period | AM PEAK HOUR | | |
| Project Description: 2030 3B WITH LA MEDANO MITIGATION | | | |
| East/West Street: MARCONI DR | | North/South Street: PASEO DE LAS AMERICAS | |
| Intersection Orientation: North-South | | Study Period (hrs): 0.25 | |

Vehicle Volumes and Adjustments

| Major Street | Northbound | | | Southbound | | |
|------------------------|------------|--------|------|------------|--------|------|
| | Movement | Volume | PHF | Movement | Volume | PHF |
| | L | 0 | 0.95 | L | 726 | 0.95 |
| | T | 395 | 0.95 | T | 290 | 0.95 |
| | R | 65 | 0.95 | R | 0 | 0.95 |
| Hourly Flow Rate, HFR | | 465 | | | 757 | |
| Percent Heavy Vehicles | | -- | | | 10 | |
| Median Type | Undivided | | | | | |
| RT Channelized | | | 0 | | | 0 |
| Lanes | 0 | 2 | 0 | 1 | 2 | 0 |
| Configuration | | T | TR | L | T | |
| Upstream Signal | | 0 | | | 0 | |
| Minor Street | Westbound | | | Eastbound | | |
| | Movement | Volume | PHF | Movement | Volume | PHF |
| | L | 15 | 0.95 | L | 0 | 0.95 |
| | T | 0 | 0.95 | T | 0 | 0.95 |
| | R | 180 | 0.95 | R | 0 | 0.95 |
| Hourly Flow Rate, HFR | | 195 | | | 0 | |
| Percent Heavy Vehicles | | 0 | | | 0 | |
| Percent Grade (%) | | 0 | | | 0 | |
| Flared Approach | | N | | | N | |
| Storage | | 0 | | | 0 | |
| RT Channelized | | | 0 | | | 0 |
| Lanes | 1 | 0 | 1 | 0 | 0 | 0 |
| Configuration | L | | R | | | |

Delay, Queue Length, and Level of Service

| Approach | NB | SB | Westbound | | | Eastbound | | |
|--------------------|----|------|-----------|---|------|-----------|----|----|
| | | | 7 | 8 | 9 | 10 | 11 | 12 |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | | L | L | | R | | | |
| V (veh) | | 757 | 15 | | 180 | | | |
| C (m) (veh) | | 1013 | 10 | | 707 | | | |
| w/c | | 0.75 | 1.50 | | 0.77 | | | |
| 85% queue length | | 7.24 | 2.70 | | 1.08 | | | |
| Control Delay | | 18.2 | 94.1 | | 11.9 | | | |
| LOS | | C | F | | B | | | |
| Approach Delay | -- | -- | | | 83.4 | | | |
| Approach LOS | -- | -- | | | F | | | |

3/8/2011

Report: 3/8/2011 1:50:00 PM - San Diego - 2030 3B W LA MEDANO MITIGATION

3/8/2011

EXCESSIVE DELAY/LOS F

SBA
W
MT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-----|------------------|----------|-----------------------|-------------------------------|-------|------|-------|-------|----|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA1 | | | | | Intersection | PASEO DE LAS AMERICAS/MARCONI | | | | | |
| Agency or Co. | USA1 | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/08/11 | | | | | Jurisdiction | PASEOMARCONI3CA3BWLJM | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysis Year | YEAR 2035 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 2 | 0 |
| Lane group | | | | L | | R | | LR | | L | | R |
| Volume (vph) | | | | 15 | | 180 | | 385 | 65 | 720 | 290 | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| P.H.F. | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | | | S | | S | | S | | S | S | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | | | 10 | 0 | 0 | 5 | 10 | 0 | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | | 0 | 0 | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 25.0 | G = | G = | G = | G = 42.0 | G = 15.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 95.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| Adj flow rate | | | | 16 | | 189 | | 473 | | 758 | 305 | |
| Lane group cap | | | | 432 | | 1075 | | 532 | | 1409 | 2223 | |
| v/c ratio | | | | 0.04 | | 0.18 | | 0.89 | | 0.54 | 0.14 | |
| Green ratio | | | | 0.26 | | 0.75 | | 0.16 | | 0.44 | 0.64 | |
| Unit delay d1 | | | | 26.0 | | 3.5 | | 39.2 | | 19.4 | 6.7 | |
| Delay factor k | | | | 0.11 | | 0.11 | | 0.41 | | 0.14 | 0.11 | |
| Increment delay d2 | | | | 0.0 | | 0.1 | | 16.8 | | 0.4 | 0.0 | |
| PF factor | | | | 0.762 | | 0.198 | | 0.875 | | 0.472 | 0.140 | |
| Control delay | | | | 19.9 | | 0.6 | | 51.1 | | 9.6 | 1.0 | |
| Lane group LOS | | | | B | | A | | C | | A | A | |
| Approach delay | | | | 2.3 | | | 51.1 | | | 7.1 | | |
| Approach LOS | | | | A | | | C | | | A | | |
| Intersec delay | 18.5 | | | Intersection LOS | | | | | | B | | |

50-P
N
MIT

| TWO-WAY STOP CONTROL SUMMARY | | | | | | | | |
|---|--------------|------|-----------|---|----------------------------------|-----------|----|----|
| General Information | | | | Site Information | | | | |
| Analyst | USA1 | | | Intersection | PASEO DE LAS AMERICAS/MARCONI | | | |
| Agency/Cc | USA1 | | | Jurisdiction | SAN DIEGO | | | |
| Date Performed | 3/06/2011 | | | Analysis Year | 2030 30 W/ LA MEDIANO MITIGATION | | | |
| Analysis Time Period | PM PEAK HOUR | | | | | | | |
| Project Description: 2030 30 WITH LA MEDIANO MITIGATION | | | | | | | | |
| East/West Street: MARCONI DR. | | | | North/South Street: PASEO DE LAS AMERICAS | | | | |
| Intersection Orientation: North-South | | | | Study Period (Yrs): 0.25 | | | | |
| Vehicle Volumes and Adjustments | | | | | | | | |
| Major Street | Northbound | | | Southbound | | | | |
| Movement | 1 | 2 | 3 | 4 | 5 | 6 | | |
| | L | T | R | L | - | R | | |
| Volume | 0 | 490 | 15 | 360 | 305 | 0 | | |
| Peak-Hour Factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Hourly Flow Rate, HFR | 0 | 421 | 15 | 326 | 321 | 0 | | |
| Percent Heavy Vehicles | 0 | -- | -- | 10 | -- | -- | | |
| Median Type | Undivided | | | | | | | |
| RT Channelized | | | 0 | | | 0 | | |
| Lanes | 0 | 2 | 0 | 1 | 2 | 0 | | |
| Configuration | | T | TR | L | T | | | |
| Upstream Signal | | 0 | | | 0 | | | |
| Minor Street | Westbound | | | Eastbound | | | | |
| Movement | 7 | 8 | 9 | 10 | 11 | 12 | | |
| | - | T | R | L | T | R | | |
| Volume | 65 | 0 | 715 | 0 | 0 | 0 | | |
| Peak-Hour Factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | | |
| Hourly Flow Rate, HFR | 68 | 0 | 752 | 0 | 0 | 0 | | |
| Percent Heavy Vehicles | 10 | 0 | 10 | 0 | 0 | 0 | | |
| Percent Grade (%) | 0 | | | 0 | | | | |
| Flared Approach | | N | | | N | | | |
| Storage | | 0 | | | 0 | | | |
| RT Channelized | | | 0 | | | 0 | | |
| Lanes | 1 | 0 | 1 | 0 | 0 | 0 | | |
| Configuration | L | | R | | | | | |
| Delay, Queue Length, and Level of Service | | | | | | | | |
| Approach | NE | SE | Westbound | | | Eastbound | | |
| Movement | 1 | 4 | 7 | 8 | 9 | 10 | 11 | 12 |
| Lane Configuration | | L | L | | R | | | |
| V (veh) | | 378 | 68 | | 752 | | | |
| C (m) (mph) | | 1547 | 81 | | 727 | | | |
| v/c | | 0.35 | 0.84 | | 1.03 | | | |
| 95% Queue Length | | 1.66 | 1.30 | | 18.43 | | | |
| Control Delay | | 10.1 | 147.8 | | 66.3 | | | |
| LOS | | B | F | | F | | | |
| Approach Delay | -- | -- | | | 73.1 | | | |
| Approach LOS | -- | -- | | | F | | | |

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|----------------|-------------------------------|------------------|--|--|--|
| Analyst: | USAJ | Intersection: | PASEO DE LAS AMERICAS/MARCONI | | | | |
| Agency or Co: | USAJ | Area Type: | All other areas | | | | |
| Date Performed: | 03/08/11 | Jurisdiction: | PASEO/MARCONI/30P/3B/L/M | | | | |
| Time Period: | PM PEAK HOUR | Analysis Year: | YEAR 2030 ALT.-3B WITH LM | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|-----|------|----------|------------------------|-----|------|------|------|------|----|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 2 | 0 | 2 | 2 | 0 |
| Lane group | | | | L | | R | | TR | | L | T | |
| Volume (vph) | | | | 65 | | 715 | | 400 | 15 | 360 | 305 | |
| % Heavy veh | | | | 10 | | 10 | | 10 | 10 | 10 | 10 | |
| PHF | | | | 0.95 | | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | | | | A | | A | | A | A | A | A | |
| Startup lost time | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | | | | 2.0 | | 2.0 | | 2.0 | | 2.0 | 2.0 | |
| Arrival type | | | | 5 | | 5 | | 5 | | 5 | 5 | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Ped/Bikes/RTOR Volume | 10 | | | 10 | 5 | 0 | 10 | 5 | 0 | | | |
| Lane Width | | | | 12.0 | | 12.0 | | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | | | | 0 | | 0 | | 0 | | 0 | 0 | |
| Unit Extension | | | | 3.0 | | 3.0 | | 3.0 | | 3.0 | 3.0 | |
| Phasing | WB Only | 02 | 03 | 04 | SB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 60.0 | G = | G = | G = | G = 25.0 | G = 15.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 113.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|--|--|------------------|----|-------|------|-------|-----|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | | | | 68 | | 753 | | 437 | | 379 | 321 |
| Lane group cap. | | | | 871 | | 1125 | | 456 | | 705 | 1348 | |
| v/c ratio | | | | 0.08 | | 0.65 | | 0.95 | | 0.54 | 0.24 | |
| Green ratio | | | | 0.53 | | 0.79 | | 0.13 | | 0.22 | 0.39 | |
| Unif. delay d1 | | | | 13.0 | | 5.3 | | 48.7 | | 39.6 | 23.2 | |
| Delay factor k | | | | 0.11 | | 0.24 | | 0.47 | | 0.14 | 0.11 | |
| Increm. delay d2 | | | | 0.0 | | 1.5 | | 31.5 | | 0.8 | 0.1 | |
| PF factor | | | | 0.245 | | 0.235 | | 0.898 | | 0.811 | 0.575 | |
| Control delay | | | | 3.2 | | 2.7 | | 75.3 | | 32.3 | 13.4 | |
| Lane group LOS | | | | A | | A | | E | | C | B | |
| Approach delay | | | | 2.8 | | | 75.3 | | | 23.7 | | |
| Approach LOS | | | | A | | | E | | | C | | |
| Intersec. delay | 26.4 | | | intersection LOS | | | | | | C | | |

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SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|----------------------------|------------------|-----------------|--------------|----------------------|
| Analyst | USA | Intersection | HERITAGE RD/OTAY VALLEY RD | Area Type | All other areas | Jurisdiction | HERO VALLEY 30A39WLM |
| Agency or Co | USA | Analysis Year | YEAR 2020 ALT -36/NC MIT | | | | |
| Date Performed | 05/06/11 | | | | | | |
| Time Period | AM PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|-----------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 3 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 560 | 190 | 430 | 305 | 40 | 403 | 705 | 1490 | 405 | 760 | 2435 | 1595 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext eff green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl Left | Thru & RT | 03 | 04 | Excl Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 25.0 | G = 30.0 | G = | G = | G = 30.0 | G = 57.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 160.0 | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|-------|-------|--|------------------|-------|--|-------|-------|--|-------|-------|--|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TR | | LT | TR | | LT | TR | | LT | TR | |
| Adj. flow rate | 589 | 558 | | 316 | 463 | | 737 | 1989 | | 800 | 1242 | |
| Lane group cap | 256 | 555 | | 256 | 544 | | 598 | 1700 | | 558 | 1644 | |
| v/c ratio | 2.30 | 1.01 | | 1.23 | 0.85 | | 1.22 | 1.17 | | 1.34 | 2.58 | |
| Green ratio | 0.15 | 0.19 | | 0.15 | 0.19 | | 0.19 | 0.36 | | 0.19 | 0.36 | |
| Unit delay d' | 67.5 | 65.0 | | 67.5 | 62.8 | | 65.0 | 61.5 | | 65.0 | 61.5 | |
| Delay factor k | 0.50 | 0.50 | | 0.50 | 0.38 | | 0.50 | 0.50 | | 0.50 | 0.50 | |
| incrom. delay d2 | 597.5 | 36.5 | | 134.5 | 12.3 | | 118.7 | 83.2 | | 163.1 | 712.9 | |
| PF factor | 0.877 | 0.846 | | 0.877 | 0.846 | | 0.846 | 0.631 | | 0.846 | 0.981 | |
| Control delay | 656.7 | 94.5 | | 193.7 | 55.4 | | 173.7 | 115.7 | | 212.1 | 763.5 | |
| Lane group LOS | F | F | | F | E | | F | F | | F | F | |
| Approach delay | 383.2 | | | 117.5 | | | 121.4 | | | 576.9 | | |
| Approach LOS | F | | | F | | | F | | | F | | |
| Intersection delay | 443.8 | | | Intersection LOS | | | | | | F | | |

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| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----------|-------|------------------|----------|------------------------|------------------------------|-----------|-------|-------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst: | USAJ | | | | | Intersector: | HERITAGE RD./OTAY VALLEY RD. | | | | | |
| Agency or Co.: | USAJ | | | | | Area Type: | All other areas | | | | | |
| Date Performed: | 03/08/11 | | | | | Jurisdiction: | HERO VALLEY 30A3B/M.M | | | | | |
| Time Period: | AM PFAK HOUR | | | | | Analysis Year: | YEAR 2030 ALT -3BAWITH | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 3 | 2 |
| Lane group | L | T | R | L | T | R | L | T | R | L | T | R |
| Volume (vpi) | 580 | 100 | 430 | 300 | 40 | 400 | 700 | 1490 | 400 | 780 | 2435 | 1565 |
| % Heavy veh | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PdF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Phasing | Excl. Left | Thru & RT | 03 | | | 04 | Excl. Left | Thru & RT | 07 | | 08 | |
| Timing | G = 25.0 | G = 30.0 | G = | G = | G = 30.0 | G = 57.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 160.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj flow rate | 589 | 105 | 453 | 316 | 42 | 421 | 737 | 1568 | 421 | 809 | 2563 | 1679 |
| Lane group cap. | 498 | 649 | 579 | 498 | 649 | 579 | 598 | 1785 | 781 | 598 | 1765 | 1261 |
| v/c ratio | 1.18 | 0.16 | 0.78 | 0.63 | 0.06 | 0.73 | 1.23 | 0.89 | 0.54 | 1.34 | 1.45 | 1.25 |
| Green ratio | 0.16 | 0.19 | 0.41 | 0.16 | 0.19 | 0.41 | 0.19 | 0.35 | 0.54 | 0.19 | 0.35 | 0.54 |
| Unif delay d1 | 67.5 | 54.5 | 41.3 | 63.2 | 53.5 | 40.0 | 65.0 | 48.5 | 23.6 | 65.0 | 51.5 | 39.5 |
| Delay factor k | 0.50 | 0.11 | 0.33 | 0.21 | 0.11 | 0.29 | 0.50 | 0.41 | 0.14 | 0.50 | 0.50 | 0.50 |
| Incremental delay d2 | 161.2 | 0.1 | 6.9 | 2.7 | 0.0 | 4.6 | 118.7 | 5.0 | 0.8 | 163.1 | 206.7 | 111.7 |
| PF factor | 0.977 | 0.846 | 0.544 | 0.877 | 0.846 | 0.544 | 0.846 | 0.531 | 0.255 | 0.846 | 0.631 | 0.503 |
| Control delay | 160.4 | 46.2 | 29.4 | 58.1 | 45.3 | 25.4 | 173.7 | 35.6 | 5.5 | 218.1 | 238.2 | 130.1 |
| Lane group LOS | F | D | C | C | D | C | F | D | A | F | F | F |
| Approach delay | 98.2 | | | 40.2 | | | 68.9 | | | 159.5 | | |
| Approach LOS | F | | | D | | | E | | | F | | |
| Intersec delay | 138.0 | | | Intersection LOS | | | | | | F | | |

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|----------|--------------|------------------------|------------------|--------------|---------------|--------------------------|
| Analyst | USAI | Intersection | HERITAGE RD./CTAY | Agency or Co. | USAI | Area Type | VALLEY RD |
| Date Performed | 02/09/11 | Jurisdiction | HERD VALLEY 3003 BURLM | Time Period | PM PEAK HOUR | Analysis Year | YEAR 2030 ALT.-3B/NO MIT |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|-----------|-----------|------|------|-----------|-----------|------------------------|------|------|------|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 2 | 0 | 1 | 2 | 0 | 2 | 3 | 0 | 2 | 3 | 0 |
| Lane group | L | TR | | L | TR | | L | TR | | L | TR | |
| Volume (vph) | 1765 | 40 | 715 | 460 | 150 | 700 | 285 | 2065 | 300 | 460 | 1345 | 585 |
| % Heavy veh. | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Pod/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Exc. Left | Thru & RT | 03 | 04 | Exc. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 3/0 | G = 20.0 | G = | G = | G = 25.0 | G = 50.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 150.0 | | | | | |

Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | WB | | NB | | SB | |
|--------------------|-------|-------|-------|-------|------------------|-------|-------|-------|
| | LT | TR | LT | TR | LT | TR | LT | TR |
| Adj. Flow rate | 1858 | 795 | 421 | 842 | 300 | 2490 | 464 | 2032 |
| Lane group cap. | 405 | 380 | 405 | 386 | 531 | 1615 | 531 | 1564 |
| Wic ratio | 4.59 | 2.05 | 1.04 | 2.18 | 0.56 | 1.54 | 0.91 | 1.30 |
| Green ratio | 0.25 | 0.13 | 0.25 | 0.13 | 0.17 | 0.33 | 0.17 | 0.33 |
| Unit delay d1 | 55.5 | 65.0 | 56.5 | 65.0 | 57.5 | 50.0 | 61.4 | 56.5 |
| Delay factor k | 0.50 | 0.50 | 0.50 | 0.50 | 0.16 | 0.50 | 0.43 | 0.50 |
| Increment delay d2 | 1520 | 550.4 | 55.3 | 540.1 | 1.4 | 246.9 | 20.0 | 139.5 |
| PF factor | 1.065 | 0.897 | 0.762 | 0.897 | 0.857 | 0.667 | 0.867 | 0.657 |
| Control delay | 107.7 | 558.7 | 98.5 | 556.4 | 51.2 | 280.3 | 73.2 | 172.8 |
| Lane group LOS | F | F | F | F | D | F | E | F |
| Approch. delay | 134.2 | | 132.1 | | 255.0 | | 153.7 | |
| Approach LOS | F | | F | | F | | F | |
| Intersec. delay | 564.4 | | | | Intersection LOS | | | |

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| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|----------|-------|------------------|----------|------------------------|------------------------------|-------|------------|----------|-------|-------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA1 | | | | | Intersection | HERITAGE RD./OTAY VALLEY RD. | | | | | | |
| Agency or Co. | USA1 | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/08/11 | | | | | Jurisdiction | HERO VALLEY 50P38WLMM/ITH | | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR 2030 ALT.-38/WITH MIT | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | L | T | R | L | T | R | L | T | R | L | T | R | |
| Num. of Lanes | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 3 | 2 | |
| Lane Group | L | T | R | L | T | R | L | T | R | L | T | R | |
| Volume (vph) | 1765 | 40 | 715 | 405 | 100 | 700 | 285 | 2055 | 300 | 460 | 1345 | 585 | |
| % Heavy Veh. | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & R | 03 | | | 04 | | | Excl. Left | Thru & R | 07 | | 08 |
| Timing | G = 37.0 | G = 26.0 | G = | G = | G = 25.0 | G = 50.0 | G = | G = | | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 150.0 | | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | L | T | R | L | T | R | L | T | R | L | T | R | |
| Adj. flow rate | 1858 | 42 | 753 | 421 | 105 | 737 | 390 | 2174 | 316 | 484 | 1415 | 616 | |
| Lane group cap. | 785 | 462 | 471 | 780 | 462 | 471 | 531 | 1551 | 690 | 531 | 1651 | 1534 | |
| Vol. ratio | 2.36 | 0.09 | 1.60 | 0.54 | 0.23 | 1.56 | 0.56 | 1.32 | 0.36 | 0.91 | 0.86 | 0.40 | |
| Green ratio | 0.25 | 0.13 | 0.33 | 0.25 | 0.13 | 0.33 | 0.17 | 0.33 | 0.61 | 0.17 | 0.33 | 0.61 | |
| Unif. delay (s) | 55.5 | 57.0 | 50.0 | 49.0 | 50.1 | 50.0 | 57.5 | 50.0 | 14.4 | 61.4 | 46.7 | 14.9 | |
| Delay factor k | 0.50 | 0.11 | 0.50 | 0.14 | 0.11 | 0.50 | 0.10 | 0.50 | 0.11 | 0.43 | 0.39 | 0.11 | |
| Incremental delay (s) | 617.7 | 0.1 | 279.3 | 0.7 | 0.3 | 264.3 | 1.1 | 146.9 | 0.3 | 20.0 | 1.3 | 0.2 | |
| PF factor | 0.793 | 0.897 | 0.667 | 0.782 | 0.897 | 0.667 | 0.861 | 0.667 | 0.129 | 0.867 | 0.667 | 0.129 | |
| Control delay | 662.5 | 51.3 | 312.6 | 39.1 | 52.4 | 297.7 | 51.2 | 189.3 | 2.1 | 73.2 | 35.9 | 2.1 | |
| Lane group LOS | F | D | C | D | E | F | D | C | A | E | D | A | |
| Approach delay | 553.5 | | | 191.1 | | | 146.2 | | | 34.8 | | | |
| Approach LOS | F | | | F | | | F | | | C | | | |
| Intersoc. delay | 235.1 | | | Intersection LOS | | | | | | F | | | |

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| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-------|-----|----------|------------------------|----------------------------|-------|----|-------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA! | | | | | Intersection | LA MEDIA RD./AVIATOR RD | | | | | |
| Agency or Co | USA! | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/08/11 | | | | | Jurisdiction | LAMEDAVIAT30A38WLMND | | | | | |
| Time Period | AM PEAK HOUR | | | | | | MIT | | | | | |
| | | | | | | Analysis Year | YEAR 2030 ALT.-3D WITH LIA | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 0 |
| Lane group | L | | R | | | | L | T | | | TR | |
| Volume (vph) | 280 | | 280 | | | | 320 | 1855 | | | 2550 | 320 |
| % Heavy veh | 10 | | 10 | | | | 10 | 10 | | | 10 | 10 |
| PHF | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (PIA) | A | | A | | | | A | A | | | A | A |
| Start-up lost time | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | |
| Ext. eff. green | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | |
| Arrival type | 5 | | 5 | | | | 5 | 5 | | | 5 | |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | | | | 12.0 | 12.0 | | | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | | 0 | | | | 0 | 0 | | | 0 | |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | |
| Phasing | EB Only | 02 | 03 | 04 | NS Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = | G = | G = | G = 30.0 | G = 67.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 295 | | 295 | | | | 337 | 1953 | | | 3021 | |
| Lane group cap | 490 | | 589 | | | | 735 | 3848 | | | 2504 | |
| v/c ratio | 0.60 | | 0.55 | | | | 0.46 | 0.51 | | | 1.21 | |
| Green ratio | 0.15 | | 0.42 | | | | 0.23 | 0.78 | | | 0.52 | |
| Unif. delay d1 | 51.3 | | 28.1 | | | | 43.0 | 5.2 | | | 31.5 | |
| Delay factor k | 0.19 | | 0.11 | | | | 0.11 | 0.12 | | | 0.60 | |
| Incrmnt. delay d2 | 2.1 | | 0.7 | | | | 0.5 | 0.1 | | | 98.9 | |
| PF factor | 0.879 | | 0.526 | | | | 0.800 | 0.224 | | | 0.439 | |
| Control delay | 47.2 | | 15.4 | | | | 34.9 | 1.3 | | | 110.8 | |
| Lane group LOS | D | | B | | | | C | A | | | F | |
| Approch. delay | 31.3 | | | | | | 6.2 | | | 110.8 | | |
| Approach LOS | C | | | | | | A | | | F | | |
| Intersuc. delay | 62.3 | | | | | | Intersection LOS | | | E | | |

52 A
w
MIT

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|----------------|---------------------------|------------------|-----------------|---------------|----------------------------|
| Analyst: | USA1 | Intersection: | LA MEDIA RD./AVIATOR RD. | Area Type: | All other areas | Jurisdiction: | LAMEDA/VIAT30A3BWLM/NWMT/H |
| Agency or Co.: | USA1 | Analysis Year: | YEAR 2026 ALT.-3B WITH LM | | | | |
| Date Performed: | 03/08/11 | | | | | | |
| Time Period: | AM PEAK HOUR | | | | | | |

| Volume and Timing Input | | | | | | | | | | | | |
|-----------------------------------|----------|-----|------|-----|----------|------------------------|------|------|----|----|------|------|
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 1 |
| Lane group | L | | R | | | | L | T | | | T | R |
| Volume (vph) | 290 | | 280 | | | | 320 | 1855 | | | 2550 | 320 |
| % heavy veh | 10 | | 10 | | | | 10 | 10 | | | 10 | 10 |
| PHF | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | A | | A | | | | A | A | | | A | A |
| Startup lost time | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext eff green | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | 5 | | 5 | | | | 5 | 5 | | | 5 | 3 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | | | | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Phasing | EB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 25.0 | G = | G = | G = | G = 30.0 | G = 57.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 130.0 | | | | | | |

| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
|---|----------------|-----|-------|------------------|--|-------|-------|------|--|-------|-------|-----|
| | EB | | | WB | | | NB | | | SB | | |
| | Adj. flow rate | 290 | | 295 | | | 337 | 1953 | | | 2684 | 337 |
| Lane group cap. | 490 | | 589 | | | 735 | 3848 | | | 2553 | 742 | |
| Wp ratio | 0.60 | | 0.50 | | | 0.46 | 0.51 | | | 1.05 | 0.45 | |
| Green ratio | 0.15 | | 0.42 | | | 0.23 | 0.78 | | | 0.52 | 0.52 | |
| Unif. delay d1 | 51.3 | | 28.1 | | | 43.0 | 5.3 | | | 31.5 | 19.9 | |
| Delay factor k | 0.19 | | 0.11 | | | 0.11 | 0.12 | | | 0.55 | 0.11 | |
| Increment. delay d2 | 2.1 | | 0.7 | | | 0.5 | 2.1 | | | 33.2 | 0.4 | |
| PF factor | 0.879 | | 0.526 | | | 0.800 | 0.224 | | | 0.251 | 1.050 | |
| Control delay | 47.2 | | 15.4 | | | 34.9 | 1.3 | | | 42.3 | 20.4 | |
| Lane group LOS | D | | E | | | C | A | | | D | C | |
| Approch delay | 31.3 | | | | | | 5.2 | | | 39.9 | | |
| Approach LOS | C | | | | | | A | | | D | | |
| Intersec delay | 25.0 | | | Intersection LOS | | | | | | C | | |

528
N
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-------|------------------|----------|------------------------|-----------------------------|-------|----|------|-------|------|
| General Information | | | | | | Site Information | | | | | | |
| Analysis Agency or Co. | USAI | | | | | Intersection | LA MEDIA RD / AVIATOR RD | | | | | |
| Date Performed | 03/08/11 | | | | | Area Type | All other areas | | | | | |
| Time Period | PM PEAK HOUR | | | | | Jurisdiction | LAMEDAVIAT30P3B/W/LM/NO MIT | | | | | |
| | | | | | | Analysis Year | YEAR 2030 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 0 |
| Lane group | L | | R | | | | L | T | | | TR | |
| Volume (vph) | 320 | | 320 | | | | 280 | 2550 | | | 1855 | 280 |
| % Heavy veh | 10 | | 10 | | | | 10 | 10 | | | 10 | 10 |
| PHF | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | A | | A | | | | A | A | | | A | A |
| Startup lost time | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | |
| Ext. eff. green | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | |
| Arrival type | 5 | | 5 | | | | 5 | 5 | | | 5 | |
| Unit Extension | 3.5 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.5 | | | | 12.0 | 12.0 | | | 12.0 | |
| Parking/Grace/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | | 0 | | | | 0 | 0 | | | 0 | |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | |
| Phasing | EB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = | G = | G = | G = 35.0 | G = 52.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 120.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 337 | | 337 | | | | 295 | 2664 | | | 2248 | |
| Lane group cap | 531 | | 699 | | | | 930 | 3756 | | | 2098 | |
| v/c ratio | 5.63 | | 0.48 | | | | 0.32 | 0.71 | | | 1.07 | |
| Green ratio | 0.17 | | 0.49 | | | | 0.29 | 0.76 | | | 0.43 | |
| Unf. delay d1 | 46.6 | | 20.3 | | | | 33.2 | 7.6 | | | 34.9 | |
| Delay factor k | 0.92 | | 0.11 | | | | 0.11 | 0.28 | | | 0.50 | |
| Increment delay d2 | 2.5 | | 0.5 | | | | 0.2 | 0.7 | | | 42.5 | |
| PF factor | 0.867 | | 0.355 | | | | 0.725 | 0.207 | | | 0.490 | |
| Control delay | 42.9 | | 7.7 | | | | 24.3 | 2.2 | | | 58.7 | |
| Lane group LOS | D | | A | | | | C | A | | | E | |
| Approach delay | 25.3 | | | | | | 4.4 | | | 58.7 | | |
| Approach LOS | C | | | | | | A | | | E | | |
| Intersec. delay | 27.5 | | | Intersection LOS | | | | | | C | | |

528

W
MIT

| SHORT REPORT | | | | | | | | | | | | |
|---|--------------|-----|-------|------------------|----------|------------------------|----------------------------|-------|----|------|-------|-------|
| General Information | | | | | | Site Information | | | | | | |
| Analyst | USA/ | | | | | Intersection | LA MEDIA RD./AVIA TOR RD. | | | | | |
| Agency or Co. | USA/ | | | | | Area Type | All other areas | | | | | |
| Date Performed | 03/06/11 | | | | | Jurisdiction | LAMEDAVIAT30P33RM MVATH | | | | | |
| Time Period | PM PEAK HOUR | | | | | Analysis Year | YEAR: 2036 ALT.-3B WITH LM | | | | | |
| Volume and Timing Input | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num of Lanes | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 1 |
| Lane group | L | | R | | | | L | T | | | T | R |
| Volume (vph) | 320 | | 320 | | | | 290 | 2550 | | | 1855 | 280 |
| % Heavy veh | 10 | | 10 | | | | 10 | 10 | | | 10 | 10 |
| P:IF | 0.95 | | 0.95 | | | | 0.95 | 0.95 | | | 0.95 | 0.95 |
| Actuated (P/A) | A | | A | | | | A | A | | | A | A |
| Startup lag, time | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Ext. eff. green | 2.0 | | 2.0 | | | | 2.0 | 2.0 | | | 2.0 | 2.0 |
| Arrival type | 5 | | 5 | | | | 5 | 5 | | | 5 | 3 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | | | | | | 10 | 5 | 0 |
| Lane Width | 12.0 | | 12.0 | | | | 12.0 | 12.0 | | | 12.0 | 12.0 |
| Parking/Grade/Parking | N | 0 | N | N | | N | N | 0 | N | N | 0 | N |
| Parking/h* | | | | | | | | | | | | |
| Bus stops/h* | 0 | | 0 | | | | 0 | 0 | | | 0 | 0 |
| Unit Extension | 3.0 | | 3.0 | | | | 3.0 | 3.0 | | | 3.0 | 3.0 |
| Phasing | EB Only | 02 | 03 | 04 | NB Only | Thru & RT | 07 | 08 | | | | |
| Timing | G = 20.0 | G = | G = | G = | G = 35.5 | G = 52.0 | G = | G = | | | | |
| | Y = 4 | Y = | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | Cycle Length C = 120.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Adj. flow rate | 337 | | 337 | | | | 295 | 2654 | | | 1953 | 295 |
| Lane group cap. | 531 | | 899 | | | | 930 | 3756 | | | 2145 | 623 |
| w/o rate | 0.63 | | 0.46 | | | | 0.32 | 0.71 | | | 0.91 | 0.47 |
| Green ratio | 0.17 | | 0.49 | | | | 0.29 | 0.76 | | | 0.43 | 0.43 |
| Unf. delay d1 | 45.6 | | 20.3 | | | | 33.2 | 7.6 | | | 31.8 | 24.2 |
| Delay factor k | 0.22 | | 0.11 | | | | 0.11 | 0.28 | | | 0.43 | 0.11 |
| Incem. delay d2 | 2.5 | | 0.5 | | | | 0.2 | 0.7 | | | 0.3 | 0.6 |
| PF factor | 0.867 | | 0.355 | | | | 0.725 | 0.207 | | | 0.490 | 1.090 |
| Control delay | 42.9 | | 1.7 | | | | 24.3 | 2.2 | | | 21.5 | 24.9 |
| Lane group LOS | D | | A | | | | C | A | | | C | C |
| Approch. delay | 25.3 | | | | | | 4.4 | | | 22.3 | | |
| Approach LOS | C | | | | | | A | | | C | | |
| Intersec. delay | 13.6 | | | Intersection LOS | | | | | | B | | |

| SHORT REPORT | | | | | | | | | | | | | |
|---|--------------|-----------|------|------------------|-------|------------------|-------------------------------|-------|-----------|-----------|-------|------|----|
| General Information | | | | | | Site Information | | | | | | | |
| Analyst | USA | | | | | Intersection | OTAY VALLEY JAV DE LAS VISTAS | | | | | | |
| Agency or Co. | USA | | | | | Area Type | All other areas | | | | | | |
| Date Performed | 03/08/11 | | | | | Jurisdiction | OVAVOLV30A3BWLWNO | | | | | | |
| Time Period | AM PEAK HOUR | | | | | Analysts Year | YEAR 2030 ALT.-3B WITH LM | | | | | | |
| Volume and Timing Input | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Num of Lanes | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 3 | 0 | 1 | 3 | 0 | |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | | |
| Volume (vph) | 300 | 15 | 275 | 80 | 5 | 55 | 70 | 2480 | 140 | 360 | 4995 | 75 | |
| % Heavy veh | 2 | 2 | 2 | 10 | 2 | 10 | 2 | 10 | 10 | 10 | 10 | 2 | |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | |
| Actuated (PIA) | A | A | A | A | A | A | A | A | A | A | A | A | |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Ext eff green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | |
| Arrival type | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | | |
| Unit Extensior | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Ped/Bike/RTOR Volume | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 | |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | | |
| Parking/Grace/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N | |
| Parking/hr | | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | |
| Unit Extensior | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Phasing | Excl Left | Thru & RT | 03 | | | 04 | | | Excl Left | Thru & RT | 07 | | 08 |
| Timing | G = 25.0 | G = 30.0 | G = | G = | | | G = 30.0 | | | G = 57.0 | G = | | |
| | Y = 4 | Y = 5 | Y = | Y = | | | Y = 4 | | | Y = 5 | Y = | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle Length C = 160.0 | | | | | | |
| Lane Group Capacity, Control Delay, and LOS Determination | | | | | | | | | | | | | |
| | EB | | | WB | | | NB | | | SB | | | |
| | LT | TR | RT | LT | TR | RT | LT | TR | RT | LT | TR | RT | |
| Adj. flow rate | 316 | 300 | | 63 | 5 | 58 | 74 | 2758 | | 379 | 5337 | | |
| Lane group cap | 277 | 304 | | 256 | 369 | 256 | 332 | 1747 | | 308 | 1761 | | |
| w/c ratio | 1.14 | 0.69 | | 0.75 | 0.01 | 0.26 | 0.22 | 1.56 | | 1.23 | 3.03 | | |
| Green ratio | 0.16 | 0.13 | | 0.15 | 0.19 | 0.19 | 0.19 | 0.35 | | 0.19 | 0.36 | | |
| Unit delay d1 | 67.5 | 54.8 | | 59.2 | 52.9 | 55.5 | 55.1 | 51.5 | | 65.0 | 51.5 | | |
| Delay factor k | 0.50 | 0.49 | | 0.11 | 0.11 | 0.11 | 0.11 | 0.50 | | 0.50 | 0.50 | | |
| Increm. delay d2 | 87.6 | 47.9 | | 0.5 | 0.0 | 0.5 | 0.3 | 263.2 | | 125.8 | 815.3 | | |
| PF factor | 0.877 | 0.846 | | 0.877 | 0.846 | 0.846 | 0.846 | 0.631 | | 0.846 | 1.000 | | |
| Control delay | 156.7 | 102.7 | | 52.4 | 44.8 | 47.4 | 47.0 | 295.7 | | 183.8 | 966.8 | | |
| Lane group LOS | F | F | | D | D | D | D | F | | F | F | | |
| Approch. delay | 130.4 | | | 49.7 | | | 289.2 | | | 914.9 | | | |
| Approach LOS | F | | | D | | | F | | | F | | | |
| Intersec. delay | 659.5 | | | Intersection LOS | | | | | | | | | F |

527
N
MTJ

SHORT REPORT

| General Information | | | | Site Information | | | |
|---------------------|--------------|---------------|-------------------------------|------------------|-----------------|--------------|--------------------|
| Analyst | USA1 | Intersection | OTAY VALLEY AV. DE LAS VISTAS | Area Type | All other areas | Jurisdiction | OVAVDLV30P3BWLM NO |
| Agency or Co. | USA1 | Analysis Year | YEAR 2035 ALT.-3B WITH LM | | | | |
| Date Performed | 03/08/11 | | | | | | |
| Time Period | PM PEAK HOUR | | | | | | |

Volume and Timing Input

| | EB | | | WB | | | NB | | | SB | | |
|-----------------------------------|------------|-----------|------|------|-----------|-----------|------------------------|------|------|------|------|------|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT |
| Num. of Lanes | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 3 | 0 | 1 | 3 | 0 |
| Lane group | L | TR | | L | T | R | L | TR | | L | TR | |
| Volume (vph) | 75 | 5 | 70 | 140 | 10 | 360 | 275 | 4565 | 60 | 65 | 2875 | 350 |
| % heavy veh | 2 | 2 | 2 | 10 | 2 | 19 | 2 | 10 | 10 | 10 | 10 | 2 |
| PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Actuated (P/A) | A | A | A | A | A | A | A | A | A | A | A | A |
| Startup lost time | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Ext. eff. green | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Arrival type | 5 | 5 | | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Ped/Bike/RTOR Volume | 10 | 5 | 5 | 10 | 5 | 0 | 10 | 5 | 0 | 10 | 5 | 0 |
| Lane Width | 12.0 | 12.0 | | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | | 12.0 | 12.0 | |
| Parking/Grade/Parking | N | 0 | N | N | 0 | N | N | 0 | N | N | 0 | N |
| Parking/hr | | | | | | | | | | | | |
| Bus stops/hr | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Unit Extension | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Phasing | Excl. Left | Thru & RT | 03 | 04 | Exc. Left | Thru & RT | 07 | 08 | | | | |
| Timing | G = 15.0 | G = 15.0 | G = | G = | G = 20.0 | G = 82.0 | G = | G = | | | | |
| | Y = 4 | Y = 5 | Y = | Y = | Y = 4 | Y = 5 | Y = | Y = | | | | |
| Duration of Analysis (hrs) = 0.25 | | | | | | | Cycle length C = 150.0 | | | | | |

Lane Group Capacity, Control Delay, and LOS Determination

| | EB | | | WB | | | NB | | | SB | | | |
|------------------|-------|-------|----|------------------|-------|-------|-------|-------|----|-------|-------|----|---|
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | |
| Adj. flow rate | 79 | 79 | | 147 | 11 | 379 | 289 | 4868 | | 68 | 3132 | | |
| Lane group cap. | 177 | 160 | | 164 | 196 | 139 | 236 | 2701 | | 219 | 2678 | | |
| v/c ratio | 0.45 | 0.49 | | 0.90 | 0.06 | 2.73 | 1.22 | 1.80 | | 0.31 | 1.17 | | |
| Green ratio | 0.10 | 0.10 | | 0.10 | 0.10 | 0.10 | 0.13 | 0.55 | | 0.13 | 0.55 | | |
| U-f. delay d1 | 63.6 | 63.9 | | 60.7 | 61.1 | 61.5 | 35.0 | 34.0 | | 58.8 | 34.0 | | |
| Delay factor d | 0.11 | 0.11 | | 0.42 | 0.11 | 0.50 | 0.50 | 0.50 | | 0.11 | 0.50 | | |
| Interm. delay d2 | 1.8 | 2.4 | | 41.9 | 0.1 | 796.9 | 132.7 | 362.5 | | 0.8 | 80.7 | | |
| PF factor | 0.926 | 0.326 | | 0.926 | 0.926 | 0.926 | 0.897 | 1.000 | | 0.897 | 0.413 | | |
| Control delay | 60.7 | 61.6 | | 103.7 | 56.7 | 659.4 | 191.1 | 396.5 | | 53.6 | 94.7 | | |
| Lane group LOS | E | E | | F | E | F | F | F | | D | F | | |
| Approch. delay | 61.1 | | | 103.1 | | | 385.9 | | | 93.8 | | | |
| Approach LOS | E | | | F | | | F | | | F | | | |
| Intersec. delay | 221.3 | | | Intersection LOS | | | | | | | | | F |