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November 20, 2009

383194.AP.PM

Ms. Felicia Miller
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Almond 2 Power Plant (09-AFC-02)
CURE Data Responses Set 1A

Dear Ms. Miller:

Attached please find 13 hard copies and 1 electronic copy on CD-ROM of the Almond 2 Power Plant's CURE Data Responses Set 1A. This Data Response Set was prepared in response to CURE's Data Requests 1 through 106 for the Application for Certification for the Almond 2 Power Plant (09-AFC-02) dated October 14, 2009.

If you have any questions about this matter, please contact me at (916) 286-0249 or contact Susan Strachan at (530) 757-7038.

Sincerely,

CH2M HILL

Sarah Madams
AFC Project Manager

Attachment
cc: S. Strachan, Strachan Consulting
R. Baysinger, TID

Almond 2 Power Plant

(09-AFC-02)

CURE Data Responses, Set 1

(Response to Data Requests 1 to 106)

Submitted to

California Energy Commission

Submitted by

With Assistance from

CH2MHILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833

November 2009

Contents

Introduction

Attached are Turlock Irrigation District's (TID or the Applicant) responses to the California Unions for Reliable Energy (CURE) Data Request Set 1 (numbers 1 through 106) regarding the Almond 2 Power Plant (A2PP) (09-AFC-02) Application for Certification (AFC).

The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as CURE presented them and are keyed to the Data Request numbers (CURE 1 through 106). New or revised graphics or tables are numbered in reference to the CURE Data Request number. For example, the first table used in response to CURE 36 would be numbered Table CURE 36-1. The first figure used in response to CURE 42 would be Figure CURE 42-1, and so on.

Additional tables, figures, or documents submitted in response to a data request or workshop query (supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end of each discipline-specific section and are not sequentially page-numbered consistently with the remainder of the document, though they may have their own internal page numbering system.

Air Quality

Background: Greenhouse Gas Impacts

The Almond 2 Power Project (A2PP) would emit greenhouse gases (GHG) during operation from the turbines and switchyard breakers and from combustion exhaust emissions during construction. The AFC quantifies annual operational greenhouse gas emissions, explains that the Project will provide firming sources for Turlock Irrigation District's (TID) existing and future intermittent renewable resources in support of TID's Renewable Portfolio Standards (RPS) and GHG goals, and concludes that the Project "should not result in a net increase in global GHG emissions because it would operate to replace energy from existing, less efficient peaking power sources in the service territory." In order to qualitatively and quantitatively analyze the additional greenhouse gas emissions of A2PP in the context of the TID service territory, additional general information is needed regarding the emissions and operations of the TID service territory.

Data Request

CURE-1. Please provide the following data regarding GHG emissions after A2PP begins commercial operation:

a. The annual expected GHG emissions from A2PP.

b. The change in GHG emissions from TID-dispatched facilities due to the addition of A2PP to the TID system.

c. The change in GHG emissions from non-TID generators (if any) due to the addition of A2PP to the TID system.

d. Please explain how TID dispatches its system (e.g., cost-minimization, emissions minimization, fuel-use minimization, other) and how TID decides between operation of TID-controlled facilities and purchases from non-TID sources.

e. Please provide the expected quantity (in gwh/year) of annual purchases and sales of energy by TID from non-TID sources, with and without A2PP.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

The fact that power plants operate as part of a large, integrated system means that their operational GHG emissions must be assessed on a systemwide basis, not on an individual plant basis. Power plants serve a variety of functions. Most obviously, they provide energy and capacity. But in order to keep the electric system functioning properly, they must also meet local needs for "ancillary services," such as:

- Intermittent generation support,
- Local capacity requirements,

- Grid operations support,
- Extreme load and system emergencies support, and
- General energy support.

Table CURE 4 illustrates the roles that the A2PP may play in providing ancillary services in four of these five areas.[1]

TABLE CURE 4
A2PP Roles

Description	Role of Plant	A2PP Attributes
Intermittent Generation Support	Support intermittent renewable generation	• Fast start-up capability • Rapid ramping capability • Can provide regulation • Can provide non-spinning reserve
Local Capacity Requirements	Strategically located generation necessary to mitigate grid problems and potentially reduce need for new transmission infrastructure	• Able to satisfy LCA resource requirements • Voltage support
Grid Operations Support	Support specific grid operational needs; plant is not necessarily located in a local capacity area	• Fast start-up capability • Rapid ramping capability • Can provide regulation • Can provide non-spinning reserve
Extreme Load/System Emergencies Support	Meet peak demand under extreme temperature conditions (for example, summer peak demand) or other system emergencies	• Fast start-up capability • Low minimum load levels • Rapid ramping capability • Can provide regulation

In the Presiding Member's Proposed Decision for the Avenal Energy Project ("Avenal PMPD," CEC-800-2009-006-PMPD), the Committee has established a three-part test to ensure that new natural gas-fired power plants approved by the CEC will support the goals and policies of AB 32 and the related parts of California's GHG framework. The elements of this test are as follows:

1. The project must not increase the overall system heat rate for natural gas plants;
2. The project must not interfere with generation from existing renewable facilities nor with the integration of new renewable generation; and
3. Taking into account the factors listed in (1) and (2), the project must reduce system-wide GHG emissions and support the goals and policies of AB 32. [Avenal PMPD, p. 111]

A2PP's consistency with these requirements has been discussed in various previously submitted documents and is summarized below.

[1] After Table ES-1 in "Framework for Evaluating Greenhouse Gas Implications of Natural Gas-Fired Power Plants in California," CEC-700-2009-009.

The A2PP will not increase the overall system heat rate for natural gas plants.

A2PP will be operated as a peaking plant, not a baseload plant, and as such its heat rate and resulting GHG emissions must be compared to other facilities serving a similar role. In the AFC,[2] TID compared the projected CO_2 emission rate from A2PP with the CO_2 emission rate from other, comparable projects. As stated in the Avenal PMPD, "…heat rate is directly correlated with emissions (including GHG emissions)…" [p. 104], so lower CO_2 emissions on a lb/MWh basis correspond to a lower heat rate. Figure 5.1-13 of the AFC, reproduced below, showed that CO_2 emissions in lb/MWh will be much lower from the A2PP than the emissions from existing peaking turbines in California. The project would not increase the overall system heat rate for natural gas plants because it has a lower heat rate than, and would operate to replace energy from, existing, less efficient peaking power sources in the service territory. In the event that the demand for electricity does not reach plants with efficiencies comparable to that of A2PP, only plants more efficient than A2PP will operate. In that case, A2PP will not run and will not emit <u>any</u> GHGs.

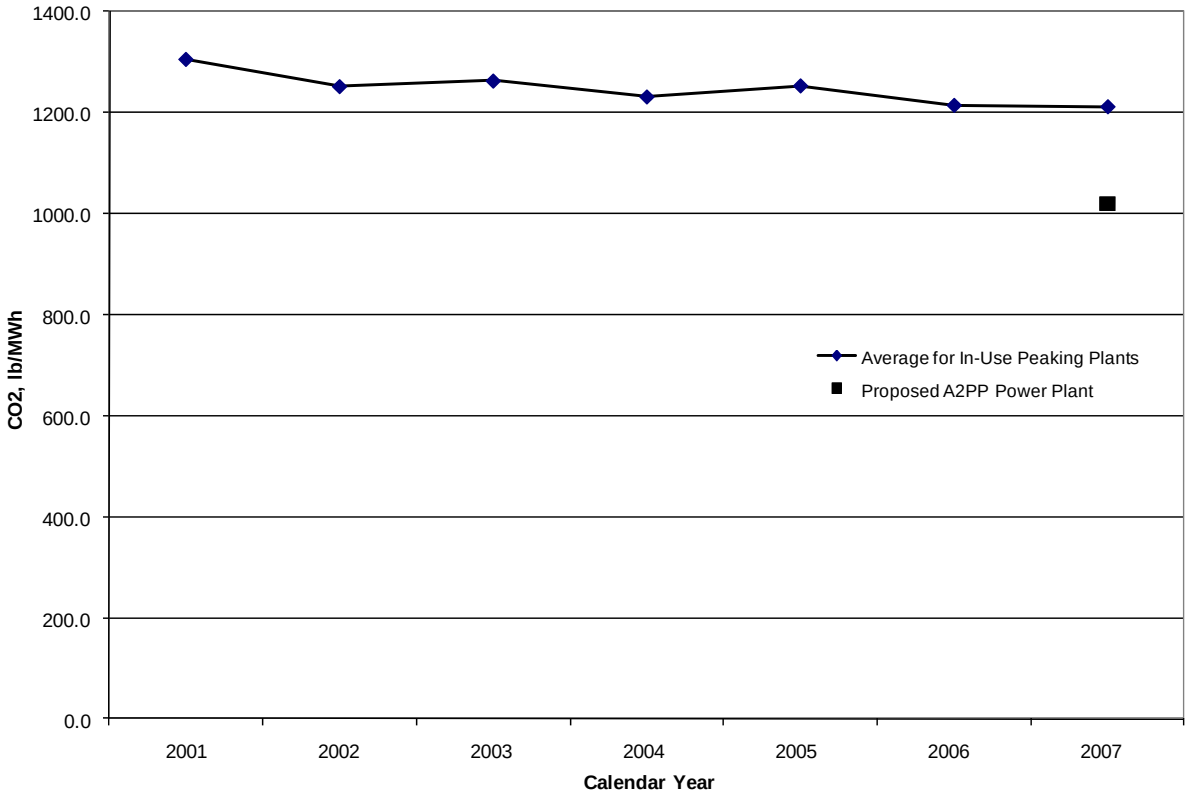

FIGURE 5.1.13
CO_2 Emissions from Peaking Power Plants in California

[2] 09-AFC-02, Section 5.1.7.2.2, pp. 5.1-58 and 59.

The A2PP will not interfere with generation from existing renewable facilities or with the integration of new renewable generation.

The Avenal PMPD acknowledges the need for backup generation to foster renewables integration at p. 109:

> Most new renewable generation in California will be wind and solar generated power… Unfortunately, the wind does not blow, nor does the sun shine, around the clock. As a result, in order to rely on such intermittent sources of power, utilities must have available other generating resources or significant storage that can fill the gap when renewable generation decreases… Indeed, because of this need for backup generation, or if and when utility-scale storage becomes feasible and cost-effective, nonrenewable generation will have to increase in order for the state to meet the 20 percent renewable portfolio standard.

In fact, integration of renewables into the TID generation portfolio is one of the objectives of the A2PP. As discussed extensively in the AFC[3] and in data responses[4], one of the objectives of the A2PP is to "provide fast-starting, flexible generating resources that will allow TID to firm intermittent renewable resources and thus integrate renewable resources into TID's generation portfolio without affecting electric system reliability…as a fast-starting, flexible generating resource, the A2PP will enhance the reliability of existing and future intermittent renewable resources and thus further TID's RPS and GHG goals."

Finally, A2PP will not "crowd out" renewables from the TID system. The TID transmission system is adequate to incorporate A2PP's generation without interfering with TID's ability to accept renewable resource energy when it is available.

Taking into account the factors listed above, the project will reduce systemwide GHG emissions and support the goals and policies of AB 32.

The A2PP will provide quick start, fast ramping and regulation capability for the TID Balancing Authority, allowing TID to make full use of its new northwest wind resource and other renewable resources in the most efficient manner possible. Without A2PP, TID would need to "fill in" during low- or no-wind periods using spinning reserve and/or conventional simple-cycle generation that would result in higher systemwide GHG emissions. Therefore, the project will reduce systemwide GHG emissions and support the goals and policies of AB 32 by furthering TID's RPS goals.[5]

a. Annual operational greenhouse gas emissions from A2PP are provided in units of metric ton per year (mt/yr) and metric tons per megawatt hour (MWh) in Table 5.1-19. Metric tons per year are based on full-time, full-load operation. Section 5.1.2 of the AFC states:

> *The turbines will be available to be operated up to 24 hours per day, 7 days per week; however, the A2PP CTGs will be frequently dispatched and are expected to operate up to approximately 5,000 hours per year on an annual average basis.*

[3] Section 1.1.1 (p. 1-1) and Section 5.1.7.2.2 (p. 5.1-57 and 58), among others.

[4] See, for example, Data Response 15 in 2009-09-14_Data_Response_Set_1A_TN-53225.PDF, available at http://www.energy.ca.gov/sitingcases/almond/documents/applicant

[5] Ibid., p. 16.

Therefore, the information provided in the AFC can be used to estimate the annual expected GHG emissions from A2PP based on 5,000 hours per year of full-load operation per CTG, as follows: 412,335 mt/yr of CO_2, 7 mt/yr of CH_4, and 0.8 mt/yr of N_2O. However, as noted above, the operation of A2PP will displace emissions of less efficient facilities, resulting in a net decrease in overall GHG emissions.

b. The change in GHG emissions from TID-dispatched facilities due to the addition of A2PP to the TID system is discussed in Data Response 15 and Attachment DR15-1 of Data Response Set 1A, submitted to the CEC on September 14, 2009, and available at http://www.energy.ca.gov/sitingcases/almond/documents/applicant/2009-09-14_Data_Response_Set_1A_TN-53225.PDF.

c. Potential changes in GHG emissions from non-TID generators due to the addition of A2PP to the TID system is discussed in Data Response 15 of Data Response Set 1A, submitted to the CEC on September 14, 2009, and available at http://www.energy.ca.gov/sitingcases/almond/documents/applicant/2009-09-14_Data_Response_Set_1A_TN-53225.PDF.

d. See Applicant's letter of November 3, 2009, objecting to this request.

e. See Applicant's letter of November 3, 2009, objecting to this request.

Background: Emissions Offsets for NO_X and VOCs

San Joaquin Valley Air Pollution Control District Rule 2201 requires the project to provide emissions offsets when emissions exceed specified levels on a pollutant-specific basis. A2PP will require valid offsets for particulate matter with aerodynamic diameter less than or equal to 10 microns (PM10), Nitrogen Oxide (NOx), and volatile organic compounds (VOC).[6] The credits offered by TID to offset NOx emissions were generated in 1990, 200 miles away in Tupman, California, from the retrofit of 31 engines. The credits offered by TID to offset SOx were generated in Bakersfield, California, also 200 miles to the South, from the reduction in refinery fuel gas H2S content prior to combustion. The credits offered by TID to offset VOCs were generated in 1992, 100 miles to the South in Fresno, California.

Data Requests

CURE-2. Please provide the status of the air basin (attainment or nonattainment for NOx and VOC) at the time that the NOx, and VOC ERCs were generated.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-3. Please explain how offsets that were generated up to 200 miles away from the Project site and/or are nearly 20 years old can be used to mitigate impacts for the A2PP.

6 AFC Table 5.1-35.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: Ammonia Slip

The Project proposes a 10 ppm ammonia slip limit. A 5 ppm ammonia slip level is technologically and economically feasible and is recommended in the CARB's Guidance for Power Plant Siting and Best Available Control Technology.[7]

Data Request

CURE-4. Please explain why the project's proposed ammonia slip emissions limit does not comply with the CARBs Guidance for Power Plant Siting.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

The background section for this data request does not provide any support for the assertion that "[a] 5 ppm ammonia slip level is technologically and economically feasible" for this specific project. Further, a 5 ppm ammonia slip level is not "recommended" in the CARB guidance cited. The Applicant therefore objected to this background statement as being misleading and without foundation.

Contrary to the premise stated in the data request, the project's proposed ammonia slip limit does, in fact, comply with the CARB guidance. The guidance states, "Given the potential for health impacts and increases in PM_{10} and $PM_{2.5}$, districts should ensure that ammonia emissions are minimized from projects using selective catalytic reduction. Staff *recommends that districts consider* establishing ammonia slip levels below 5 ppmvd at 15 percent oxygen in light of the fact that control equipment vendors have openly guaranteed single-digit levels for ammonia slip."[8] [Emphasis added.] The guidance therefore provides two reasons a district should consider establishing a lower ammonia slip level: health impacts and particulate matter increases. The applicant's screening health risk assessment evaluated ammonia emissions based on a 10 ppm ammonia slip level and determined that health risks from the proposed project were well below levels of concern.[9] Further, the San Joaquin Valley Air Pollution Control District, in which the A2PP is located, has determined that ammonia emissions from power plants in the District do not contribute significantly to particulate formation in the valley.[10] Therefore, the project does not have a potential for health impacts or for increasing regional PM_{10} and $PM_{2.5}$ due to ammonia slip, and so neither of these factors supports an ammonia slip limit at or below 5 ppmvd.

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[7] CARB's Guidance for Power Plant Siting and Best Available Control Technology, p. 7, Approved July 22, 1999. Accessed at http://www.arb.ca.gov/energy/powerpl/guidocfi.pdf on October 11, 2009.

[8] Ibid., p. 27. On p. 63, the recommendation is "at or below 5 ppmvd."

[9] AFC Table 5.1-37 and Appendix 5.1D.

[10] SJVAPCD 2008 $PM_{2.5}$ Plan (see for example Chapter 3, p. 3-8: "Ammonia (NH_3) is abundant throughout the Valley and does not act as a limiting precursor.")

Transmission

Background: Operating Reserves

In the AFC, TID indicates that one purpose of A2PP is to provide operating reserves.[11] In TID's September 14, 2009 data response, set 1A, TID indicates that A2PP will be preferable to both the existing TID combined cycle plant and "less efficient peaking capacity," as a source of spinning reserves.[12] If A2PP were not preferable to existing resources (TID combined cycle and "less efficient peaking capacity"), then it would not usefully serve the project purpose of providing operating reserves. In order to analyze whether A2PP will serve that purpose better than already built resources, additional information is needed regarding the spinning reserves provided by A2PP and TID's hourly need for spinning reserves, which can then be compared to data on the expected operation of A2PP to evaluate how much of the planned operation of A2PP will provide spinning reserve benefits.

Data Request

CURE-5. What is the maximum number of Mw of spinning reserves that each of the three proposed units of A2PP could provide?[13]

a. Please identify the basis used by TID to identify its spinning reserve requirements in order to comply with applicable reliability requirements (e.g., % of thermal generation plus 5% of hydro generation, or, largest single generator).

b. Please provide, in Excel format if possible, for each hour of calendar 2008, in Mw:

i. TID's load plus losses.

ii. TID's hydro generation.

iii. TID's generation from TID-dispatched "less efficient peaking capacity."

iv. TID's generation from the Walnut Energy Center.

v. Other TID-owned generation.

vi. Purchased generation.

vii. Any component of TID's load plus losses (subpart (i) not identified in the responses to subparts (ii) through (vi).

viii. Spinning reserve available from TID's hydro generation.

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[11] AFC p. 1-1.

[12] TID Responses to Energy Commission Staff Data Requests, Set 1A, p. 18 of 758 in the PDF file.

[13] CURE believes it is either 33 MW, consisting of a 58 MW total capacity minus a 25 MW minimum generation requirement, or else 17 MW, consisting of a 58 MW total capacity times 30 percent. See AFC p. 6-28.

ix. Spinning reserve available from TID's Walnut Energy Center.

x. Spinning reserve available from TID's "less efficient peaking capacity."

xi. Spinning reserve (if any) available from purchases.

xii. TID's spinning reserve requirement to comply with applicable reliability requirements.

c. Please identify and describe in detail any reserve-sharing or emergency support agreements TID has with any other utilities or balancing areas, including but not limited to SMUD and the CAISO.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: A2PP Annual Operation Estimates

In TID's data responses to staff data requests, TID asserts that construction of A2PP prior to 2008 would have allowed Walnut Energy Center generation to be optimized in 2008, while requiring only 8550 Mwh of generation at A2PP.[14] TID also indicates that the existing Almond power plant (hereinafter referred to as Almond 1) ran 2846 hours (32.5% of all hours) in 2007, and 2354 hours (26.8% of all hours) in 2008.[15] This data suggests that A2PP will need to run far fewer hours than Almond 1 has been operating, despite being a more efficient powerplant. If so, then either (1) there is a factual discrepancy, since normally less efficient powerplants run less than more efficient ones, or (2) TID is, perhaps unnecessarily, seeking a permit to operate A2PP in many hours when it is not needed to provide reserves, with resultant air quality impacts that could be avoided, or (3) some other reason exists that TID has not explained that will cause the more efficient A2PP to operate less than its adjoining less efficient neighbor Almond 1. To distinguish among these possibilities, additional information is needed regarding the planned and/or historical operation of Almond 1 and A2PP.

Data Requests

CURE-6. Please confirm that 8550 gwh/year corresponds to an annual capacity factor for the A2PP powerplant of about 0.56%, or about one half of one percent.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-7. Please provide the annual capacity factors for the Almond 1 plant in 2007 and 2008 which resulted from operating in 1/4 to 1/3 of all the hours in those years.

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[14] TID Responses to Energy Commission Staff Data Requests, Set 1A, p. 92 of 758 in the PDF file.

[15] *Id.* at p. 30 of 758.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-8. Please confirm that the A2PP powerplant will be more efficient and thus earlier in the TID loading order, than the Almond 1 powerplant.

Response: The Almond 2 Power Plant has a lower expected heat rate compared to the Almond Power Plant, and will therefore be more efficient than the existing Almond Power Plant.

CURE-9. Please confirm that, based on your response to the previous question, TID would expect A2PP to run more than Almond 1.

Response: TID anticipates that A2PP will run more frequently than the existing Almond Power Plant.

CURE-10. To quantify your response to the previous question, please provide your best estimate of (i) how many hours A2PP would have run in each of the years 2007 and 2008 if it had been in service in those years, and (ii) the A2P capacity factor in each of the years 2007 and 2008 if it had been in service in those years.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-11. Does TID consider A2PP to be planned as a "peaking" powerplant, a "baseload" powerplant, or something else (please specify)?

Response: As explained in section 1.6.1 of the AFC, A2PP will help provide "firming" sources for TID's existing and future intermittent renewable resources in support of TID's RPS and GHG goals. Firming involves the use of fast-starting, flexible generation that is always available under all operating conditions to ramp-up or ramp-down, as necessary, to balance load and generation. Firming power is the cornerstone of system reliability.

CURE-12. Please provide your definition of the range of annual capacity factors associated with "peaking" and "baseload" powerplants, as those terms are used by TID, as well as the range of annual capacity factors associated with plants of the same type as A2PP (if your answer to the previous subpart was anything other than "peaking" or "baseload").

Response: Please refer to Staff Queries, Set 2, response SQ-2, docketed on October 22, 2009.

CURE-13. Please indicate whether TID expects Almond 1 to run fewer hours and/or at a lower capacity factor than A2PP once both are in service.

Response: As stated in CURE-9, once the A2PP is in service, it is anticipated that the existing Almond Power Plant will run fewer hours and/or at a lower capacity factor than the A2PP.

CURE-14. To quantify your response to the previous question, please provide your best estimate, for the first year that Almond 1 and A2PP will both be in service, of their respective number of operating hours and capacity factors.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-15. If any of your answers to the preceding questions have suggested that Almond 1 would operate more than A2PP, please explain in detail why that would occur.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: A2PP Purpose and Need

In the AFC, TID states that two purposes of the A2PP project are to provide firming sources for TID's intermittent renewable resources and to provide generation to meet TID's growing loads.[16] To analyze how A2PP will contribute to these goals, more information is needed regarding the firming capacity that A2PP would provide, the level of renewable resources that might need firming capacity provided, and TID's overall need for firm capacity (if TID has adequate overall firm resources, the fact that some of its renewable resources are not firm would not matter).

Data Requests

CURE-16. How many Mw of firm capacity will the A2PP project provide towards meeting these goals?

Response: The A2PP will provide 174 MW of firm capacity.

CURE-17. Please identify, for each year from 2010 through 2020, in Mw, for each renewable energy project TID intends to have in service that year:

a. The installed capacity of the project.

b. The firm capacity that TID believes it can count on from that project at the time of TID's peak demand.

c. If available, the firm capacity of the project as it would be calculated using the CAISO's methodology for determining NQC, or (net qualifying capacity), for Resource Adequacy purposes.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-18. Please describe how TID determines the firm capacity for reliability purposes that is associated with renewable energy projects.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

[16] AFC p. 6-2.

CURE-19. Please identify any differences between TID's methodology for determining the countable firm capacity from renewable energy projects and the CAISO's NQC methodology.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-20. Please provide any loads and resources data or loads and resource balance for TID which already exists which TID believes shows how A2PP (or a comparable source of 174 Mw of firm capacity) would help to firm TID's intermittent resources and meet load growth. Relevant loads and resources data which should be provided, if available, include the following items (from 2010-2020, in Mw) plus any others TID considers relevant to demonstrating how A2PP would help to firm TID's intermittent resources and meet load growth:

a. TID's annual peak demand under 1-in-10 weather conditions.

b. Losses associated with the peak demand given in response to the previous subpart, if not already included.

c. Reserve requirements associated with the peak loads identified in subparts (a) and (b).

d. Mw of TID-controlled hydro resources available to meet peak loads.

e. Each TID-controlled thermal project (e.g., Almond 1, A2PP, Walnut Energy Center) available to meet peak loads.

f. Firm capacity from renewable projects available to TID to meet peak loads (this number should equal the total of the individual project firm capacities given in response to Data Request 17(b)).

g. Firm capacity from load management or other demand-side measures available to TID.

h. Firm imports available to TID from non-TID sources.

i. Firm reserves available to TID from non-TID sources.

j. Firm export obligations (if any) of TID.

k. Other loads and resources not included in the above subparts.

l. The net surplus or deficit of capacity at the time of one-in-ten-year system peak demand (which should equal the sum of the loads and resources given in response to the preceding subparts of this question).

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: Maintenance of Interconnection Schedule

In the AFC, TID says that one of the purposes of the proposed A2PP project is to "help maintain TID's Balancing Authority tie line (interconnection) schedules with" the CAISO and SMUD.[17] To analyze whether this purpose is distinct from other TID system requirements (such as regulation), to analyze whether this purpose is already met by existing TID resources, and to quantify the degree to which A2PP would meet this purpose, additional data is required, as requested below.

Data Requests

CURE-21. Please indicate how the generation needed to serve this purpose differs (if it does) from the generation needed to provide what is usually called "regulation."

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

The Grayson Substation is part of TID's Hughson-Grayson 115-kV Transmission Line and Substation Project. The substation and the 69-kV and 115-kV transmission lines associated with that project would be constructed regardless of the A2PP project. The reasons for this are described below.

TID utilizes its 69-kV and 115-kV transmission systems to distribute power to substations throughout its service territory. Currently, the Ceres area is only served by the 69-kV system, which is near capacity. However, the existing 69-kV system has not been expanded in more than 20 years, and over that time the Ceres area has experienced increased electrical demand. There is a need to provide voltage support to the west Ceres area to serve forecasted load growth. Beyond increasing supply, the Grayson Substation and the 69-kV and 115-kV transmission lines would increase the safety and reliability of the existing system. When a transmission system operates at or near capacity, the conductors will sag due to increased heat resulting from high amperage in the lines. The sagging impedes the ability to maintain electrical safety clearances (i.e., the required safe distance from the line to ground or other conductors), which can result in reliability and safety concerns. A transmission system operating at or near capacity is more likely to experience local outages. To remedy this issue, TID currently has to institute operating limitations to prevent overloading the 69-kV transmission system in Ceres. These operating limitations include for example, operating the existing Almond Power Plant when it may be uneconomical to do so, in order to reduce the amount of electricity traveling through the 69-kV transmission lines to the Ceres area.

The Hughson-Grayson 115-kV Transmission Line and Substation Project would eliminate these constraints in several ways. First, the new 115-kV transmission line extending from the Hughson Substation to the Grayson Substation will enable the Ceres area to be also served by TID's 115-kV transmission system, increasing system reliability. The 115-kV system and the 69-kV system would interconnect at the Grayson Substation, enabling electricity to flow through either transmission system. This would reduce strain on the existing 69-kV

[17] AFC p. 6-2.

transmission system and increase reliability. Second, the Section One 69-kV transmission line from Morgan Road to the Grayson Substation provides a means of interconnecting the Grayson Substation to TID's existing Gilstrap-Westport 69-kV line (which extends from TID's Gilstrap Substation to its Westport Substation). This provides additional reliability to the TID system by providing another means of bringing electricity in and out of the area. It will also provide voltage support to the west Ceres area to serve forecasted load growth. Third, the Section Two 69-kV transmission line from the existing Almond Power Plant to the Grayson Substation would provide another way of transmitting electricity generated by the existing TID Almond Power Plant to the Ceres Area and the overall TID transmission system. Furthermore, the Hughson-Grayson 115-kV Transmission Line and Substation Project would provide an additional reliability through a dedicated crossing over State Highway 99, allowing TID to move electricity east-to-west and west-to-east as system conditions dictate.

In summary, TID has developed the Hughson-Grayson 115-kV Transmission Line and Substation Project to increase the reliability of the TID system and relieve congestion on TID's existing 69-kV transmission system. The specific objectives of the project include:

- Capacity for future load growth;
- Increased reliability on TID's transmission system;
- Relieving load and congestion on the existing 69-kV system;
- Providing voltage support to the west Ceres area by tying in the existing 69-kV transmission network to serve forecasted load growth in the Ceres area; and
- Providing an additional dedicated transmission crossing of SR 99.

TID has determined the need for the Hughson-Grayson 115-kV Transmission Line and Substation Project by conducting electrical system studies. These studies address electrical load flows, outage contingencies, load growth, and substation loads.

The project objectives for the Hughson-Grayson transmission project line are distinct and independent of the basic project objectives of the A2PP as described in the AFC and related filings. The A2PP would provide needed electric generation capacity with improved efficiency and operational flexibility. A2PP's basic project objectives include, but are not limited to the following:

- Safely construct and operate a 174-MW, natural gas-fired, simple-cycle, peaking generating facility within the TID service territory.
- Provide operating reserves and thus reliability for TID's Balancing Authority requirements.
- Allow for better economic dispatch of TID's existing generation fleet system-wide.
- Provide fast-starting, load-following peaking generating units to help maintain TID's Balancing Authority tie line (interconnection) schedules with neighboring Balancing Authorities (the California Independent System Operator [CAISO] and Sacramento Municipal Utility District [SMUD]).

- Help provide firming sources for TID's existing and future intermittent renewable resources in support of TID RPS and GHG goals. TID's Board has adopted a RPS goal of by 20% by 2017. TID will exceed this goal by the summer of 2009 with 28% of its resources being renewable resources.
- Provide additional generation to meet TID's growing load and meet the demands of customers within TID's service territory.
- Achieve economies of scale and maximize the use of TID assets by locating the project on an industrial site, with the ability to use existing TID assets and power plant infrastructure.
- Minimize environmental and air quality impacts.
- Assist the State of California in developing increased local generation projects, thus reducing dependence on imported power.
- Contribute to the diversification of the City of Ceres and Stanislaus County's economic base by providing increased employment opportunities and a reliable power supply.

Given the very different project objectives, in direct response to this Data Request, the District confirms that, even if the A2PP AFC was denied, TID would proceed with construction of the Hughson-Grayson 115-kV Transmission Line and Substation Project.

CURE-22. For each hour of the year 2008, please indicate the hourly Mw of changes in generation schedules that TID needed to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-23. For the year 2008, please indicate the maximum hourly Mw of changes in generation schedules that TID needed to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-24. For each hour of the year 2008, please indicate the hourly Mw of hydro generation available to TID to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-25. For each hour of the year 2008, please indicate the hourly Mw of thermal generation available to TID to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-26. For each hour of the year 2008, please indicate the hourly Mw of hydro generation used by TID to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-27. For each hour of the year 2008, please indicate the hourly Mw of thermal generation used by TID to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-28. If the A2PP project is not built, how will TID "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO?

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-29. Please explain in detail how A2PP would be used to "maintain TID's Balancing Authority tie line schedules" with SMUD and the CAISO, including a quantitative measure of how many Mw and/or Mw/minute of A2PP output would be available for this purpose.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: Hughson-Grayson Project

According to the Hughson-Grayson Project DEIR, the new Grayson substation will have a single 115 kV line to the Hughson substation and a single 167 MVA 115/69 kV transformer, and will have three 69 kV lines – one each to Westport, Gilstrap, and the Almond 1 powerplant.[18] However, according to the AFC, there will be a second 115 kV line (besides the double-circuit 115 kV line from the A2PP powerplant) leaving the Grayson substation, going to "Tayor" (sic).[19]

Because delivery of A2PP generation to the grid is dependent upon the completion of the not-yet-under-construction Hughson-Grayson project, the CEC needs to have a full understanding of the Hughson-Grayson project and the extent to which it will provide

[18] August 2009 Hughson-Grayson Draft Environmental Impact Report, pp. 3-7, 3-8 and 3-9; Figure 3.2. Downloadable from http://www.tid.org/Power/CurrentProjects/HughsonGraysonProject/index.htm.

[19] AFC Figure 3.1-3B.

needed interconnection services for the A2PP project. Additional information is needed to (1) quantify the intended scope of the Hughson-Grayson project, to (2) quantify whether that scope will be sufficient to deliver A2PP generation under contingency conditions, and to (3) quantify whether the Hughson-Grayson project, by relieving operational stresses on TID's 69 kV system, will allow the existing Almond 1 project to operate less as a must-run generator for local 69 kV reliability and more as a source of spinning reserves, thus reducing the need for and value of A2PP as a source of spinning reserves.

Data Requests

CURE-30. Please reconcile this difference, indicating where the environmental impacts of the Grayson-Tayor (sic) line (if it is going to be built) are being analyzed.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-31. Please explain how, if the DEIR is correct, it will be possible to deliver 174 Mw from A2PP if the Grayson-Hughson line is out of service, given the 115/69 kV transformer rating of 167 MVA.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-32. Please provide the source of the information which led CH2MHill (the author of AFC Figure 3.1-3B) to believe a Grayson-Tayor (sic) 115 kV line is planned.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-33. Please provide the planned rating of the planned Grayson-Westport and Greyson-Gilstrap 69 kV lines (no rating appears to be given for these lines in the DEIR).

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-34. Please provide documentation that an outage of the Grayson-Hughson 115 kV line would not lead to an overload of the Grayson-Westport and/or Grayson-Gilstrap 69 kV lines if the Almond powerplants were both operating at full power, due to generation from both A2PP (via the proposed Almond-Grayson double-circuit 115 kV lines) and Almond 1.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-35. Please provide the rating of the proposed Grayson-Hughson 115 kV line.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-36. Please indicate whether the proposed Grayson-Hughson 115 kV line would be able to deliver the full output of the A2PP powerplant during an outage of the proposed Grayson 115/69 kV transformer.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-37. Please provide any powerflow or other existing studies which form the basis for your responses to the preceding subparts of this question.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: Need for Grayson Substation

The AFC asserts that the Grayson substation project is an independent action that would be pursued whether or not the A2PP is built. It is unclear what TID's basis is for needing the Grayson substation in the absence of A2PP, as well as how the various components of the Grayson substation would be used in the absence of the A2PP project.

Data Requests

CURE-38. Please confirm that, even if the A2PP AFC is denied, TID intends to proceed with construction of the Grayson substation and the associated 69 and 115 kV transmission lines as described in the August 2009 DEIR.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-39. Please provide the underlying studies which indicate a need for the Grayson substation for reasons unrelated to the proposed A2PP powerplant.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-40. Please indicate the maximum Mw of load proposed to be served in the first year after construction completion (via 12 kV feeders) from the Grayson substation, and indicate how this load will be served prior to operation of the Grayson substation.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-41. Please indicate the maximum loading (in both percentage and MVA) expected on the TID 69 kV system west of Highway 99 prior to and after operation of the Grayson substation.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-42. Assuming no A2PP project in service, what would the maximum expected loadings be on each of the following Grayson substation components, in MVA and as a percentage of rated capacity (normal or emergency rating, as appropriate):

a. 115 kV Grayson-Hughson line under N-0 conditions.

b. 115 kV Grayson-Hughson line with the Grayson 115/69 kV transformer out of service.

c. Grayson 115/69 kV transformer under N-0 conditions.

d. Grayson 115/69 kV transformer with the Grayson-Hughson 115 kV line out of service.

e. Grayson-Westport 69 kV line under N-0 conditions.

f. Grayson-Westport 69 kV line under N-1 conditions.

g. Grayson-Gilstrap 69 kV line under N-0 conditions.

h. Grayson-Gilstrap 69 kV line under N-1 conditions.

i. Please provide any powerflow or other studies which form the basis for your responses to the preceding subparts of this question.

j. If TID asserts that there are no data or studies available of the TID system with the Grayson substation in service but A2PP not operating, please explain:

k. How TID can evaluate the Hughson Grayson Project or the A2PP project independently if they have never been studied or analyzed in the absence of the other project.

l. How TID can be sure that the Grayson substation and interconnected lines will not be subject to overloads in the future, even if A2PP is built, if outages occur at a time when the A2PP generator is not running.

m. Are there any transmission contingencies on the TID system for which the proposed solution is to turn on the A2PP generator (if the contingency occurs while A2PP is offline), or to turn off the A2PP generator (if the contingency occurs while A2PP is operating)? If so, please identify them.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: Reconductoring of Almond-Crows Landing Line

The AFC indicates that the existing Almond-Crows Landing 69 kV line will be reconductored as part of the A2PP project.[20] Further information is needed as to the scope of the proposed reconductoring, and what contingency that does not currently exist the reconductoring is intended to address.

Data Requests:

CURE-43. Please provide the MVA rating for the existing line.

Response: The MVA rating for the existing line is as follows:

- Summer normal 637 Amps, 76.1 MVA
- Summer emergency 730 Amps, 87.2 MVA

CURE-44. Please provide the MVA rating for the proposed reconductored line.

Response: The MVA rating for the proposed reconductored line is as follows:

- Summer normal 637 Amps, 76.1 MVA
- Summer emergency 850 Amps, 101.6 MV

CURE-45. Please provide an explanation of why the A2PP project, which will be interconnected at the 115 kV level to the south (A2PP-Grayson lines), will cause increased flows on a 69 kV line to the north (Almond 1-Crows Landing line).

Response: The A2PP project will cause overflows on the Almond 1-Crows Landing 69-kV line if the following contingencies were to occur:

- A2PP is online and fully loaded
- Existing Almond Power Plant is online and fully loaded
- Grayson-Hughson 115-kV and Grayson-Taylor 115-kV double line outage (N-2) occurs

Normally when A2PP is generating, power will travel south to Grayson Substation. However, if the Grayson-Hughson and Grayson-Taylor 115-kV lines were out (N-2), all of the power from A2PP would flow through the 115-kV/69-kV transformer at Grayson Substation. Thus, the full output of A2PP would be injected into the 69-kV system. A portion of this increased load flow would proceed north toward Crows Landing Substation. The A2PP output that would head north, when combined with the existing Almond Power Plant output, would create the Almond 1-Crows Landing 69-kV overload under these contingencies.

CURE-46. Please provide any power flow diagrams or other analyses done prior to the AFC filing showing overloads on the Almond 1-Crows Landing 69 kV line with A2PP in operation.

Response: Please see Attachment CURE 46.

[20] AFC, p. 3-12.

Background: System Impact Study

The AFC indicates that a System Impact Study (SIS) is being prepared by the consultant USE.[21] To examine the nature of the relationship between TID as interconnection applicant, TID as interconnection request reviewer, and USE as technical expert, additional information is needed.

Data Requests:

CURE-47. Please provide copies of any prior interconnection studies done by USE for TID.

Response: USE has not completed any interconnection studies for interconnection for A2PP.

CURE-48. Is TID both the Applicant for A2PP and the regulatory authority reviewing the SIS? If so, how is conflict of interest avoided?

Response: As described in response CURE-5, the Western Electricity Coordinating Council (WECC) and North American Electric Reliability Corporation are the final arbiters of reliability of standards, not TID.

Background: Economic Dispatch

In the AFC, TID indicates that one purpose of the A2PP project is to allow for better economic dispatch of TID's resources.[22] That purpose is quantified in TID's data responses to Staff Data Requests where TID asserts that construction of A2PP would allow Walnut Energy Center generation to be increased by 487 gwh/year (from an actual of 1614 gwh in 2008 to a potential of 2101 gwh with A2PP in service), and generation from inefficient peaking plants (with an average HHV heat rate of 10,269 Btu/kwh) would be decreased by the same 487 gwh per year.[23] TID's data response is unclear in several respects. To clarify the meaning of various terms in the data response, and to clarify the basis for various numbers in the data response, additional information is required, as requested below.

Data Requests

CURE-49. Please identify the specific simple-cycle peaking plants from which TID generated and/or purchased energy in 2008, and the monthly gwh purchased or generated for TID at each of them.

Response: Information regarding specific sources of TID's reserve power purchases is not available. It is a common industry assumption that marginal reserve power is provided by simple cycle gas turbines. However, Table CURE 49 identifies the monthly GWh generated by the simple-cycle turbine at TID's existing Almond Power Plant and Walnut Power Plant.

21 AFC, p. 3-12.

22 AFC, p. 1-1.

23 TID Responses to Energy Commission Staff Data Requests, Set 1A, p. 92 of 758 in the PDF file.

TABLE CURE 49
TID Balancing Authority Monthly Almond and Walnut Simple Cycle GT Generation 2008

Month	Total (GWh)
1	7.28
2	3.09
3	0.98
4	5.81
5	2.31
6	5.29
7	5.44
8	9.74
9	11.39
10	4.65
11	1.97
12	8.73

CURE-50. Please identify the basis for TID's representation that 100% of the "balance Mwh" associated with the Walnut Energy Center was supplied from simple cycle generation (and none from purchased power whose source was something other than simple cycle gas turbines).

Response: It is assumed that 100 percent of the "balance MWh" in the 2008 operating example is purchased from simple cycle generation because this is marginal reserve power that must be available within a short time frame and is subject to frequent fluctuations. This type of power cannot be provided by a typical combined cycle plant because these units are ordinarily operated as base load and are not typically used to provide fast-starting reserve power.

CURE-51. Please indicate how much of the 487 gwh of "balance energy" in 2008 was supplied by the Almond 1 plant, and how much would have been supplied from Almond 1 if A2PP had been in operation in 2008.

Response: Little or none of the "balance energy" in the 2008 operating example was supplied by the existing Almond Power Plant. The existing Almond Power Plant has operating restrictions and operating costs that make it undesirable as a supplier of reserve power. Furthermore, even if TID operated the existing Almond Power Plant to provide "balance energy" in 2008, it would have little effect on the GHG analysis and conclusions because the existing Almond Power Plant is a simple cycle plant with a heat rate close to that assumed for imported simple cycle power.

CURE-52. Please explain how the number of A2PP units "on" was determined, given that the "Required for balance" Mw are average Mw across 24 hours per day, and not the maximum number of Mw.[24]

Response: The number of A2PP units "on" in the 2008 hypothetical operating case was based on the daily average "balance" energy available for quick response dispatch from Walnut Energy Center, calculated on a monthly basis. The number of A2PP units "on" is the number of units necessary to provide this "balance" energy, assuming the maximum capacity of each A2PP engine is 50 MW and the minimum capacity of an "on" unit is 25 MW. Since the actual maximum power output for the A2PP engines is closer to 58 MW, this estimate allows for some variability from the daily average "balance" energy required. Furthermore, any available A2PP engine could meet TID's quick-response reserve energy requirements from a cold start; the calculation of the number of "on" units is simply used as a factor in a conservative estimate of actual miscellaneous operation of the A2PP engines

CURE-53. Please explain why A2PP units are assumed to have to run only 10 percent of the hours of each day to provide reserves for "balance energy" which is based on foregone Walnut Energy Center generation in all 24 hours of each day Walnut Energy Center ran.

Response: The A2PP units can meet the quick response "balance" energy requirements identified in the 2008 operating scenario from a cold start. However, it was conservatively assumed that there would be some amount of turbine operation despite the ability to provide quick-response reserve power from a cold start. To account for this miscellaneous operation, it was assumed that each "on" unit would operate 10 percent of the time at minimum load.

CURE-54. Please confirm whether the 10 percent "CF" assumption for A2PP is actually an assumption that only certain A2PP units would run each month, and that those units would only run in 10% of the hours that Walnut Energy Center ran in, each month, at an output of only 25 Mw in each of those hours, for a capacity factor of about 8550 Mwh/(174 Mwx 8760 hours) = .0056, or less than 1 percent.[25] If not, please explain what annual capacity factor for A2PP the 8550 Mwh represents.[26]

Response: The "10% CF" notation represents the assumption that each of the A2PP "on" units would operate 10 percent of the time (2.4 hours) on each Walnut Energy Center monthly operating day. These "on" units are assumed to operate at minimum load of 25 MW. As discussed in the response to CURE-6, the referenced 8,550 value is not a total annual MWh value, but rather the A2PP turbine heat rate in Btu/kWh, LHV. Therefore, it does not represent any annual capacity factor.

24 *Id.*
25 *Id.*
26 *Id.*

CURE-55. Please quantify the monthly potential generation at Walnut Energy Center on "Op Days"[27] which did not occur because the Walnut Energy Center was either turned off, forced off, or partially forced off, and thus was not "balance" energy that could have been dispatched even if A2PP had been available.

Response: The hypothetical case provided for the GHG emissions reduction calculations was based on typical operation of the Walnut Energy Center. The Walnut Energy Center did not start up and shut down frequently, but rather was operated as a base load plant that was shut down for planned maintenance periods. The few fractions of an operating day that occurred at the beginning and ending of planned outages will not significantly affect the estimated GHG emissions reductions nor will they affect the conclusion that the A2PP would have resulted in lower GHG emissions from TID's facilities if A2PP were available in 2008.

CURE-56. Please provide hourly data for Walnut Energy Center, in Excel format if available, showing Mw output and Mw of partial and/or full forced outage for each hour.

Response: Please see Attachment CURE-56.

CURE-57. Please provide copies of the load flow studies referenced on p. 6-7 of the AFC, and any memos or other reports based on those studies.

Response: Please see the response provided in CURE 46.

Background: Internal Combustion Engines

The AFC identifies internal combustion engines as a potential alternative quick-start technology, and gives no reason for rejecting this technology.[28] The CEC has previously approved a 163 Mw powerplant using 10 internal combustion engines.[29]

Data Request

CURE-58. In order to better understand why TID rejected this potential alternative quick-start technology which it identified in the AFC, please provide any quantitative analysis in TID's possession of the cost and/or emissions differences between the proposed A2PP project and a project meeting the same goals using internal combustion technology.

Response: The A2PP project will use 58-MW General Electric (GE) LM6000PG turbines with SPRINT (spray intercooling), an internal combustion technology. As discussed in Section 6.6.1.4 of the AFC, a qualitative analysis was conducted for other generation technologies.

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[27] As the term "Op Days" is used. *Id.*

[28] AFC p. 6-27.

[29] Humboldt Bay Generating Station; see www.energy.ca.gov/sitingcases/humboldt/index.html.

Background: Output Turndown Rate

The AFC says that the proposed NOx control technology will allow "an output turndown rate of 30 percent.[30] This turndown is necessary to meet variable load demand." TID is correct that meeting variable load demand requires varying the output of generation resources. The degree to which A2PP would be capable of changing its output in response to changes in load is constrained by both emissions limits and the physical capabilities of the proposed gas turbines. In order to quantify the amount of change in A2PP output which will be possible, further information is needed on A2PP minimum generation and maximum ramp rates while meeting environmental constraints as well as physical constraints.

Data Requests

CURE-59. Please provide further clarification – does the quoted language mean that each 58 Mw A2PP unit will be capable of being turned down no more than 17 Mw (30%), to 41 Mw, when operating at full power? If not, what does the 30 percent figure mean?

Response: Each turbine can be operated between 17 MW (30%) and 58 MW (100%).

CURE-60. What will the limit be on ramping up generation at A2PP while complying with emissions limits?

Response: During the 10-minute ramp up from cold start to full load, the project will comply with the start-up emissions limit as provided in Section 5.1, Air Quality, of the AFC.

CURE-61. What is the minimum steady-state operating level at which each A2PP generating unit will be able to operate while complying with emissions limits and maintaining stable operation?

Response: The minimum steady-state operating level that complies with emission limits and maintains stable operation is 17 MW per unit.

CURE-62. When operating at the level identified in response to the previous subpart, what is the maximum increase in Mw output that will be physically possible over a ten minute period without violating any emissions limits?

Response: The maximum increase in MW output without violating any emissions limits over a ten minute period is 41 MW per unit (i.e., 58 MW - 17 MW = 41 MW).

[30] AFC p. 6-28.

Soil and Water Contamination

Background: Inadequacy of Soil Sampling

A February 2009 Phase I Environmental Site Assessment (ESA)[31] documented that the Site was used for agriculture and "was previously in alfalfa and possibly corn prior to 2004."[32] It further describes that WinCo, the former owners of the Site, used the Site as a burrow pit for construction of a new facility adjacent to the Site and then filled it with imported fill material.

The Phase I Environmental Site Assessment documented that the imported fill, approximately 30,000 cubic yards, came from agricultural land in Turlock that was excavated for construction of a stormwater pond. The Phase I stated:

It was not known if the fill material was sampled for potential contaminants related to its agricultural use prior to being placed at the site.[33]

Sampling of the imported fill, as emplaced at the Site, was conducted in April 2009 to investigate the potential for the presence of pesticides.[34] The sampling effort involved the collection of a total of six samples from the fill at the site at a maximum depth of 5 feet bgs. The maximum depth of the fill was reported to be 6.5 feet and therefore the sampling targeted only imported fill.

To justify the collection of six soil samples, the report cited DTSC's Information Advisory on Clean Imported Fill Material.[35] The soil investigation report did not state the size of the area that was sampled. From Figure 2 of the Report of Findings on Soil Sampling and Analysis,[36] it appears that soil samples were collected on approximately 3.5 acres for which, according to the DTSC guidance cited in the soil investigation report, between 6 and 7 samples would be required. However, the investigation did not include soil sampling at the existing retention pond at the Almond Power Plant that will be filled as part of the project and which may contain residual pesticides. Soils in the retention pond may also contain pesticides from past agricultural use or from usage at the power plant and heavy metals and other pollutants

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[31] Phase I Environmental Site Assessment – Almond 2 Power Plant, Ceres, Stanislaus County, California. Prepared for Turlock Irrigation District, Turlock, California. Prepared by Wallace-Kuhl & Associates, Inc. February 9, 2009. Included as Appendix 5.14A to the AFC. http://www.energy.ca.gov/sitingcases/almond/documents/applicant/afc/Volume 2/A2PP Appendix 5.1 4A Phase%201%20ESA.pdf

[32] Phase I ESA, p. 5.

[33] Phase I ESA, p. 1.

[34] Report of Findings on Soil Sampling and Analysis: Almond 2 Power Plant. Prepared for Turlock Irrigation District, Turlock, California. Prepared by Wallace-Kuhl & Associates, Inc. April 17, 2009. Included as Appendix 5.14B to the AFC. http://www.energy.ca.gov/sitingcases/almond/documents/applicant/afc/Volume 2/A2PP Appendix 5.1 4B Phase%202%20ESA.pdf

[35] Information Advisory: Clean Imported Fill Material. Department of Toxic Substances Control. October 2001. http://www.dtsc.ca.gov/Schools/upload/SMP FS Cleanfill-Schools.pdf

[36] Report of Findings on Soil Sampling and Analysis: Almond 2 Power Plant. Prepared for Turlock Irrigation District, Turlock, California. Prepared by Wallace-Kuhl & Associates, Inc. April 17, 2009. Included as Appendix 5.14B to the AFC. http://www.energy.ca.gov/sitingcases/almond/documents/applicant/afc/Volume 2/A2PP Appendix 5.1 4B Phase%202%20ESA.pdf

associated with the existing power plant. The entire Site, to include the area of the retention pond, is approximately 4.6 acres, for which the cited DTSC advisory recommends a minimum of eight samples for an area of four to ten acres.

In addition to use of the DTSC clean fill advisory guidance document, another DTSC guidance document should be followed, the 2002 DTSC Interim Guidance for Sampling Agricultural Fields for School Sites, for reference in sampling. CEC staff specifically recommended the use of this DTSC guidance document for sampling agricultural fields for school sites for another site undergoing certification.[37]

The minimum sampling locations suggested in the 2002 DTSC Interim Guidance for Sampling Agricultural Fields for School Sites for areas "greater than four (4) up to twenty (20) acres" is as follows: "discrete samples should be collected on 1/2 acre centers."[38] Therefore, for a site approximately 4.6 acres, approximately 10 samples would be required to be taken on half-acre centers.

As depicted in Figure 2 of the Report of Findings on Soil Sampling and Analysis, the distance between sampling points ranges from 75 feet between S1 and S2 to nearly 200 feet between S3 and S4, not on half-acre centers as the guidance recommends. Therefore, the six discrete samples collected at apparently random locations by the project proponent are inadequate. Instead, discrete samples should be collected on evenly spaced half-acre centers as recommended in the DTSC guidance.

Furthermore, the depth of the six samples collected also varied, without apparent justification, inconsistent with guidance. Samples were collected from depths ranging from six inches below ground surface (bgs) in sample S-2 to five feet bgs in sample S-5.

The DTSC guidance that is recommended by CEC staff states:

Each location should be sampled to include one surface sample (0 to 6 inches) and one subsurface sample (2 to 3 foot range).[39]

Data Requests

CURE-63. Please conduct additional soil sampling to include the appropriate number of samples, appropriately spaced and at appropriate depths, consistent with DTSC guidance and with CEC recommendations. Sampling should also be conducted at the area of the retention pond at the existing power plant.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

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[37] San Joaquin Solar 1 & 2 Hybrid Project (08-AFC-12) Data Request Set 1 (#s 1-148). California Energy Commission. April 30, 2009, p. 48. http://www.energy.ca.gov/sitingcases/sjsolar/documents/2009-05-01 Staff Data Request Set 01.pdf

[38] Interim Guidance for Sampling Agricultural Fields for School Sites (Second Revision). California Department of Toxic Substances Control, California Environmental Protection Agency. August 26, 2002. http://www.dtsc.ca.gov/Schools/upload/interim-ag-soils-guidance.pdf

[39] Interim Guidance for Sampling Agricultural Fields for School Sites (Second Revision). California Department of Toxic Substances Control, California Environmental Protection Agency, p. 4, August 26, 2002. http://www.dtsc.ca.gov/Schools/upload/interim-ag-soils-guidance.pdf

Although additional soil sampling will not be conducted at the site, it is the Applicant's intent to provide a safe working environment for both construction and operational staff. Therefore, the Applicant anticipates a Condition of Certification similar to the following:

> If potentially contaminated soil is identified during site characterization, demolition, excavation, or grading at either the proposed site or linear facilities, as evidenced by discoloration, odor, detection by handheld instruments, or other signs, the professional engineer or professional geologist shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and provide a written report to the project owner, representatives of Department of Toxic Substances Control or Regional Water quality Control Board, and the CPM stating the recommended course of action. Depending on the nature and extent of contamination, the professional engineer or professional geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If, in the opinion of the professional engineer or professional geologist, significant remediation may be required, the project owner shall contact the CPM and representatives of the Department of Toxic Substances Control or the Regional Water Quality Control Board for guidance and possible oversight.

In addition, Data Response Set 1D provides a detailed list of pesticides applied alongside the gas line route, as well as a Phase I Environmental Site Assessment equivalent for the gas line route which per CEC Staff will address any potential contamination concerns along the gas line route. Data Response Set 1D will be docketed in mid-November.

CURE-64. Please evaluate the need to collect samples below the depth of the imported fill (e.g. 6.5 feet bgs) to ensure that native soil material is not contaminated with pesticides.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. Please see the response to CURE 63.

Background: Soil Sampling on Natural Gas Route

The proposed project includes construction of a natural gas pipeline. The AFC presents two alternative routes for the pipeline:

- Alternate route A is approximately 9.1-miles long. It exits the Site at the southwest corner, turns west for approximately 0.6 mile along the access road to the Almond Power Plant, and continues south along Crows Landing Road for approximately 8.5 miles.
- Alternate route B is approximately 11.1-miles long. It exits the Site at the southwest corner along the access road to the Almond Power Plant and continues for approximately 2.6 miles, and finally turns south and continues along Carpenter Road.

Neither of the natural gas pipeline alternate routes are evaluated in the ESA. The Phase I ESA report does not refer to the location of the proposed natural gas pipeline or the

electricity transmission line. The excavations for the natural gas pipeline are proposed to be to a depth of 54 inches.[40]

The proposed alternate routes for the natural gas pipeline are located within areas of past agricultural activities as shown in Figure 4.1-1 of the AFC.

Soil sampling is necessary in order to ensure that the health of construction workers is not put at risk. In response to CEC Data Request Number 77, the applicant is planning to conduct a Phase I ESA for the proposed routes.[41] However, such an investigation will not include soil testing for the potential presence of residual pesticides in soil.

Data Request

CURE-65. Please conduct a Phase II site investigation along the pipeline and electric transmission routes to include sampling for pesticides. Please ensure soil sampling is consistent with DTSC guidance.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. Please see the response to CURE 63.

Background: Construction and Laydown Areas Need Sampling

A 1.85-acre property adjacent to the proposed project site will be used as construction laydown and parking area.[42] Vehicle and heavy equipment movement is likely to result in dust and therefore the exposure of construction workers to potential contamination in the soil. However, when the soil investigation was conducted in 2009, no soil samples were collected in this area to investigate the potential for the presence of pesticides.

Additionally, the maintenance shop/warehouse building at the existing Almond Power Plant will be expanded to be used jointly by the existing plant and the proposed A2PP.[43] No soil sampling has been conducted in this area.

Data Requests

CURE-66. Please conduct soil sampling in the proposed laydown area to include the appropriate locations and number of samples consistent with DTSC guidance.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. Please see the response to CURE 63.

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40 AFC, p. 4-1.

41 Almond 2 Power Plant (09-AFC-02) – Data Responses, Set 1A, (Response to Data Requests 1 to 84, and Staff Query 1). Submitted to the California Energy Commission by Turlock Irrigation District with Assistance from CH2M HILL, Inc. September 2009. http://www.energy.ca.gov/sitingcases/almond/documents/applicant/2009-09-14 Data Response Set 1A TN-53225.PDF

42 AFC, p. 1-1.

43 AFC p. 2-2 and Figure 2.1-2 on pp. 2-3, 2-4.

CURE-67. Please conduct soil sampling in the proposed construction area that is located on the existing Almond Power Plant. This area is depicted and labeled “Proposed Expansion of Existing Building” in Figure 2.1-1 of the AFC.

Response: See Applicant’s letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. Please see the response to CURE 63.

Biological Resources

Background: Impacts to Special-status Plants

The AFC indicates the applicant would be conducting focused surveys for special-status plant species in 2009. Results from the surveys would then be used to determine if any special-status plants occur in the Project impact area, and to further characterize available habitat in the Project vicinity.[44] Results of the surveys are necessary before the applicant can conclude the Project will not cause any adverse impacts to biological resources.[45]

Data Request

CURE-68. Please provide the results of the special-status plant surveys or provide the estimated schedule for their release.

Response: A special-status plant survey was conducted by Virginia Dains, professional botanist, on October 12 and 17, 2009 and will be provided in Data Response Set 1D to be submitted in late November 2009.

Background: Impacts to Vernal Pool Crustaceans

The AFC indicates protocol surveys for listed vernal pool crustaceans would be conducted in spring 2009. If listed vernal pool crustaceans are not identified during the first season of dry season sampling, the applicant proposes to consult with the U.S. Fish and Wildlife Service (USFWS) to negotiate the possibility of avoiding further sampling.[46] The survey guidelines established by the USFWS indicate a complete survey consists of either: 1) two full wet season surveys done within a 5-year period; or 2) two consecutive seasons of one full wet season survey and one dry season survey (or one dry season survey and one full wet season survey).[47] Any deviations from the methods prescribed by the guidelines must be approved by the USFWS before surveys are conducted.[48] Furthermore, permission to conduct only dry season surveys for the listed vernal pool branchiopods requires the completion of both the full wet season survey and the dry season survey, including the complete analysis of all dry soil samples.[49]

The applicant justifies the proposal to avoid a wet season survey by stating vernal pool crustaceans were not present at the nearby Walnut Energy Center, and the closest documented occurrence of vernal pool crustaceans is more than 10 miles from the Project site.[50] In general, vernal pool crustaceans have a sporadic distribution, with a species

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[44] AFC, p. 5.2-17.

[45] AFC, p. 5.2-47.

[46] AFC, p. 5.2-18.

[47] United States Fish and Wildlife Service. 1996. Interim survey guidelines to permittees for recovery permits under Section 10(a)(1)(A) of the Endangered Species Act for the listed vernal pool Branchiopods [internet]. Sacramento (CA): United States Fish and Wildlife Service, Sacramento Fish and Wildlife Office. Available from: http://www.fws.gov/sacramento/es/protocol.htm

[48] *Id.*

[49] *Id.*

[50] AFC, p. 5.2-18.

inhabiting only one or a few vernal pools in otherwise more widespread vernal pool complexes.[51] [52] For example, studies on occupancy detected vernal pool fairy shrimp in only 5%[53] to 16%[54] of the pools sampled. As a result, the USFWS concluded the thermal and chemical properties of vernal pool waters are two of the primary factors affecting the distributions of specific fairy shrimp species, or their appearance from year to year.[55]

The distance of the Project site from the nearest documented occurrence of vernal pool crustaceans is not a reliable predictor for likelihood of occurrence in the Project area. The four listed species of concern are known to have disjunct and discrete populations throughout their respective geographic ranges, with some populations existing within a single isolated pool.[56] Several populations are many miles (i.e., >10) away from the next nearest population.[57] Furthermore, existing scientific information on shrimp dispersal does not support distance as factor in likelihood of occurrence. Crustaceans such as the vernal pool fairy shrimp and vernal pool tadpole shrimp produce cysts (or eggs) that lie buried in the soil.[58] The combination of winter rains and appropriate water temperatures trigger the hatching of these cysts. Long-distance dispersal of cysts is thought to be enabled by waterfowl and other migratory birds that ingest cysts, and by animals that provide for movement of mud and cysts on feathers, fur, and hooves.[59] As a result, in listing the species, the U.S. Fish and Wildlife Service concluded that "environmental requirements, not dispersal, is likely the limiting factor in the distribution of the fairy shrimp and the vernal pool tadpole shrimp."[60]

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[51] United States Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants; determination of endangered status for the conservancy fairy shrimp, longhorn fairy shrimp, and the vernal pool tadpole shrimp; and threatened status for the vernal pool fairy shrimp. 59 FR 48153 (1994).

[52] United States Fish and Wildlife Service. 2007. Vernal pool tadpole shrimp (*Lepidurus packardi),* 5- year review: summary and evaluation [internet]. Sacramento, CA, 49 pp. Available from: http://www.fws.gov/cno/es/images/graphics/vp%20tadpole%20shrimp_5%20yr%20review%20final%2 0cno%2027sept07.pdf

[53] U.S. Fish and Wildlife Service. 2005. Recovery plan for vernal pools ecosystems of California and Southern Oregon. U.S. Fish and Wildlife Service, Portland, Oregon. 606+ pp.

[54] Helm, B. 1998. Biogeography of eight large branchiopods endemic to California. Pages 124-139. *In* Ecology, conservation, and management of vernal pool ecosystems – proceedings from a 1996 conference, C. W. Witham, E.T. Bauder, D. Belk, W.R. Ferren,Jr., and R. Ornduff, eds. California Native Plant Society, Sacramento, California. 285 pp.

[55] United States Fish and Wildlife Service. 2007. Vernal pool fairy shrimp (*Branchinecta lynchi),* 5- year review: summary and evaluation [internet]. Sacramento, CA, 74 pp. Available from: http://www.fws.gov/cno/es/images/Graphics/VPFS_5- yr%20review%20CNO%20FINAL%2027Sept07.pdf

[56] United States Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants; determination of endangered status for the conservancy fairy shrimp, longhorn fairy shrimp, and the vernal pool tadpole shrimp; and threatened status for the vernal pool fairy shrimp. 59 FR 48153 (1994).

[57] California Natural Diversity Database. 2009. Rarefind [computer program]. Version 3.1.0. 2009 Aug 30. Sacramento (CA): Wildlife & Habitat Data Analysis Branch. California Department of Fish and Game.

[58] United States Fish and Wildlife Service. 2007. Vernal pool fairy shrimp (*Branchinecta lynchi),* 5- year review: summary and evaluation [internet]. Sacramento, CA, 74 pp. Available from: http://www.fws.gov/cno/es/images/Graphics/VPFS_5- yr%20review%20CNO%20FINAL%2027Sept07.pdf

[59] United States Fish and Wildlife Service. 2007. Vernal pool tadpole shrimp (*Lepidurus packardi),* 5- year review: summary and evaluation [internet]. Sacramento, CA, 49 pp. Available from: http://www.fws.gov/cno/es/images/graphics/vp%20tadpole%20shrimp_5%20yr%20review%20final%20cno%2027sept07.pdf

[60] United States Fish and Wildlife Service. 1994. Endangered and threatened wildlife and plants; determination of endangered status for the conservancy fairy shrimp, longhorn fairy shrimp, and the vernal pool tadpole shrimp; and threatened status for the vernal pool fairy shrimp. 59 FR 48153 (1994).

Data Requests

CURE-69. Please provide any empirical evidence the applicant has that supports:

a. distance to nearest documented occurrence as a good predictor of vernal pool crustacean presence; and,

b. a single survey effort as sufficient in predicting vernal pool crustacean absence.

Response: To avoid impacts to vernal pool crustaceans, TID will avoid any identified pools, puddles, or other potential vernal pool habitats. Therefore, no protocol sampling of vernal pool crustaceans will be required.

CURE-70. Please provide the results of the vernal pool crustacean surveys or provide the estimated schedule for their release.

Response: Please see response to CURE-69.

CURE-71. Please indicate whether the USFWS approved the proposed deviations from the survey guidelines (i.e., only a single dry season survey) before surveys were conducted.

Response: Please see response to CURE-69.

CURE-72. Please indicate whether the applicant continues to propose conducting only a single dry season survey. If the answer is yes, please provide the USFWS's response, if any, to the applicant's intent to avoid further sampling.

Response: Please see response to CURE-69.

Background: Impacts to San Joaquin Kit Fox

The AFC identifies the potential for San Joaquin kit fox to occur in the Project area. The USFWS has developed recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance.[61] The mitigation and monitoring measures listed in the AFC do not incorporate these recommendations.

Data Requests

CURE-73. Please indicate whether the applicant will implement the kit fox protection measures recommended by the USFWS. Specifically, please state whether the applicant will:

a. Use plywood or similar materials to cover all excavated, steep-walled holes or trenches more than 2 feet deep, or provide them with one or more escape ramps constructed of earth fill or wooden planks at the close of each working day.

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[61] United States Fish and Wildlife Service. 1999. Standardized recommendations for protection of the San Joaquin Kit Fox prior to or during ground disturbance. Prepared by the Sacramento Fish and Wildlife Office, June 1999. Available at: www.fws.gov/sacramento/es/documents/kitfox_standard_rec.PDF

b. Thoroughly inspect all holes or trenches for trapped animals before they are filled.

c. Thoroughly inspect all construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that have been stored at the construction site for one or more overnight periods before the pipe is subsequently buried, capped, or otherwise used or moved in any way.

d. Assign a representative to serve as the contact source for any kit foxes that are inadvertently killed or injured, or for a kit fox that is found dead, injured, or entrapped.

e. Immediately report any inadvertently killed or injured kit fox to the USFWS and California Department of Fish and Game (CDFG).

f. Implement an employee education program.

g. Conduct preconstruction/preactivity surveys no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities that may impact the kit fox.

Response: Additional details on tpotential kit fox issues will be provided in Data Response Set 1D to be submitted in late November 2009.

Background: Impacts to Burrowing Owl

The AFC identified a high potential for burrowing owls to occur in the Project area.[62] To mitigate potential impacts to the species the AFC indicates "Preconstruction field surveys (conducted under CDFG guidelines) to identify active nest sites will be conducted in the spring (February, March, April, May, and June) before construction begins (CBOC, 1993)."[63] Although they are similar, the survey guidelines issued by CDFG differ from those issued by the California Burrowing Owl Consortium (i.e., CBOC 1993).[64] [65] As a result, it's unclear which guidelines the applicant intends to follow in conducting burrowing owl surveys. Regardless, both survey guidelines state that burrowing owl and burrow surveys should be conducted during both the wintering and nesting seasons.[66] Winter season surveys should be conducted between December 1 and January 31, and nesting season surveys should be conducted between April 15 and July 15 (the peak of the breeding season).[67] The applicant's proposed survey periods do not include a winter season survey, and they only partially encompass the recommended timeframe for breeding season surveys.

Data Requests

CURE-74. Please specify whether burrowing owl surveys will adhere to the guidelines issued by CDFG, or to the guidelines issued by the California Burrowing Owl

62 AFC, Table 5.2-1.

63 AFC, p. 5.2-38.

64 *See* The California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Available online at: http://www.dfg.ca.gov/wildlife/species/docs/boconsortium.pdf

65 *See* California Department of Fish and Game. 1995. Staff report on burrowing owl mitigation. Available at: www.dfg.ca.gov/wildlife/nongame/docs/burowlmit.pdf

66 *Id.*

67 *Id.*

Consortium (CBOC). If the CBOC guidelines will be followed, please confirm that the surveys will include four separate site visits during which the Project area and potential burrows are observed from multiple fixed locations.

Response: TID conducted burrowing owl surveys using the California Burrowing Owl Consortium guidelines. A Phase 1 habitat assessment and Phase 2 burrow survey were conducted of the plant site, transmission lines, and laydown area on January 15, 2008 and June 30, 2009, respectively.

CURE-75. Please clarify whether the applicant will conduct a winter season survey for burrowing owls.

Response: Please see response to CURE-74.

CURE-76. Please clarify how many burrowing owl surveys will be conducted during the recommended timeframe of April 15 to July 15 (for breeding season surveys).

Response: Please see response to CURE-74.

Cumulative Impact Analysis

Background: Cumulative Impacts of Hughson-Grayson Project and Additional Analysis

Turlock Irrigation District (TID) has proposed a new double-circuit 115-kV transmission line and substation known as the Hughson-Grayson 115-kV Transmission Line and Substation Project. TID would construct a 10 mile 115-kV transmission line and a 7.35-acre Grayson substation. The substation will sit approximately 3,300 feet from the A2PP.[68] In the Draft EIR for the Hughson-Grayson project released on August 10, 2009, TID discussed several potential cumulative impacts that were not analyzed in the Almond 2 AFC. These include hazards from electromagnetic fields, noise, and transmission impacts to agricultural equipment operation and crop dusting.[69]

Data Requests

CURE-77. Please discuss potential cumulative electromagnetic fields impacts from the Hughson Grayson project and the A2PP.

Response: A discussion of electromagnetic fields impacts is provided in Section 3.4.2.1, Electric and Magnetic Fields, in the AFC.

CURE-78. Please discuss the potential cumulative noise impacts from the Hughson Grayson project and the A2PP.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-79. Please describe how the cumulative impacts from the A2PP and the Hughson-Grayson project may limit agricultural equipment operation and crop dusting.

Response: The transmission corridors for the A2PP and the Hughson-Grayson project are separate, and therefore there are no anticipated cumulative impacts.

CURE-80. What additional cumulative impacts will be discussed that are not currently analyzed in the AFC? When will the additional cumulative impacts analysis be docketed?

Response: There are no additional cumulative impacts to be discussed that are not already addressed and analyzed in the AFC.

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[68] Energy Commission Staff July 15, 2009 Issues Identification Report.

[69] Hughson Grayson DEIR p. 6-5.

Traffic

Background: Existing AM and PM Peak Hour Count Data

Page 5.12-7 of the AFC states "Existing morning peak period (7:00 AM to 9:00 AM) and evening peak period (4:00 PM to 6:00 PM) turning movement volumes at the study intersections were obtained from the West Ceres Specific Plan Opportunities and Constraints Analysis Report, May 2008 and are illustrated in Figure 5.12-3."

Data Request

CURE-81. Please provide the count data referenced on Page 5.12-7 of the AFC.

Response: The count data referenced on page 5.12-7 of the AFC is taken from the appendices to the West Ceres Specific Plan Opportunities and Constraints, which can be found on the City's website: http://www.ci.ceres.ca.us/40634.html#WestCeresSpecificPlan

The 14 intersections studied in this study are provided in Table CURE-81.

TABLE CURE 81
Intersections Studied in the West Ceres Specific Plan Opportunities and Constraints

Intersection Number in AFC, Figure 5.12-3	Intersection Number in West Ceres Specific Plan*
1	12
2	10
3	5
4	2
5	1
6	11
7	13
8	14
9	15
10	16
11	3
12	6
13	7
14	4

Note:

* Intersections studied are found on Figure 2, (page 11) of the appendices to the West Ceres Specific Plan Opportunities and Constraints which can be found on the City's website: http://www.ci.ceres.ca.us/40634.html#WestCeresSpecificPlan

Background: Traffic Lanes for Existing Conditions

Section 5.12 of the AFC does not include a figure showing left turn, through, and right turn lanes at each study intersection for existing conditions.

Data Request

CURE-82. Please provide either a figure or a listing showing left turn, through, and right turn lanes on each approach for existing conditions at each of the study intersections.

Response: The existing lane configurations at the study intersections may be found in Figure 2 (page 11) of the appendices to the West Ceres Specific Plan Opportunities and Constraints, which can be found on the City's website:
http://www.ci.ceres.ca.us/40634.html#WestCeresSpecificPlan

Background: Delay/LOS Calculations for Existing Conditions

Table 5.12-2 of the AFC summarizes the delay and LOS values for the study intersection operations for existing conditions.

Data Request

CURE-83. Please provide the supporting calculations for the delay and LOS values for the study intersection operations for existing conditions (Table 5.12- 2).

Response: Intersection operating conditions were evaluated using the TRAFFIX simulation software (version 7.7). The outputs are presented as Attachment CURE-83.

Background: Passenger Car Equivalents for Heavy Vehicles

Page 5.12-17 of the AFC states "...the truck trips were converted to passenger car equivalent units (PCEs) at a ratio of 1.5 passenger cars for each truck, consistent with the 2000 HCM guidelines." Page 16-10 of the Highway Capacity Manual 2000 states "Heavy vehicles are defined as those with more than four tires touching the pavement" and "The passenger car equivalent for each heavy vehicle is 2.0 passenger car units..."

Data Request

CURE-84. Please justify the use of 1.5 passenger car equivalents rather than 2.0 passenger car units as indicated in the Highway Capacity Manual 2000.

Response: The Highway Capacity Manual (HCM) has different truck equivalency values. Chapter 21 - Multilane Highways recommends the use of a PCE of 1.5 for trucks on level terrain.

Background: Workforce Carpool Estimate

Page 5.12-17 states "Based on experience with similar projects, it is estimated that 20 percent of the workforce will carpool..." No data is provided in Section 5.12 to support this estimate.

Data Request

CURE-85. Please provide data and support for the estimate that "...20 percent of the workforce will carpool."

Response: The 2000 US Census Data indicates that about 17 percent of people carpool in the vicinity of Ceres.

Background: AM and PM Peak Hour Construction Trips

Page 5.12-18 of the AFC states "The peak hour traffic generated during the construction period was added to the existing turning movement counts..."

Data Request

CURE-86. Please provide either a figure or a listing showing left turn, through, and right turn construction traffic volumes forecast in the AM and PM peak hours at each of the study intersections.

Response: Please see Figure CURE-86.

Background: Delay/LOS Calculations for Existing Plus Project

Table 5.12-8 of the AFC summarizes the delay and LOS values for the study intersection operations for existing plus construction traffic conditions.

Data Request

CURE-87. Please provide supporting calculations for delay and LOS values for existing plus construction traffic conditions (Table 5.12-8).

Response: Intersection operating conditions were evaluated using the TRAFFIX simulation software (version 7.7). The outputs are presented in Attachment CURE-87.

Background: Unexplained Reductions in Delay

Page 5.12-18 of the AFC compares Tables 5.12-2 and 5.12-8, indicating "all of the study intersections will operate at the same LOS as existing conditions."

Data Request

CURE-88. Please explain how Intersection #1 (Crows Landing Road/Service Road in both peak hours), Intersection #2 (Crows Landing Road/Hackett Road in the AM peak hour), and Intersection #3 (Crows Landing Road/Whitmore Avenue in the AM peak hour) will operate with less delay with project construction traffic added than they do with only existing traffic volumes.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: Significant Project Traffic Impact/Mitigation Measures at Crows Landing Road/Northbound SR 99 Ramps

Page 5.12-18 of the AFC compares Tables 5.12-2 and 5.12-8, indicating "all of the study intersections will operate at the same LOS as existing conditions." Intersection 5, Crows Landing Road/Northbound SR 99 Ramps, operates at LOS E in the PM peak hour with 43 seconds of delay under existing traffic volumes and degrades to 46 seconds of delay with construction traffic from the Almond 2 Power Plant added. LOS E does not satisfy Caltrans LOS C/D standard. A three second increase in delay at an intersection operating at LOS E must be considered as a significant traffic impact that requires mitigation.

Data Requests

CURE-89. Please explain why the three second increase in delay in the PM peak hour at the Crows Landing Road/Northbound SR 99 Ramps caused by the addition of construction traffic from the A2PP does not constitute a significant project traffic impact.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-90. Please develop measures to mitigate the significant traffic impact in the PM peak hour caused by A2PP construction traffic at the stop-controlled intersection of Crows Landing Road/Northbound SR 99 Ramps.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. In addition, there is no impact as A2PP construction traffic will occur outside of peak hours as described in Section 5.12.5.1.

CURE-91. Is the A2PP willing to pay its fair share of improvements (such as traffic signal installation) at the stop-controlled intersection of Crows Landing Road/Northbound SR 99 Ramps?

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. In addition, there is no impact as A2PP construction traffic will occur outside of peak hours as described in Section 5.12.5.1.

Background: Traffic Lanes for Year 2011 Conditions

Section 5.12 of the AFC does not include a figure showing left turn, through, and right turn lanes at each study intersection in the first quarter of Year 2011.

Data Requests

CURE-92. Please provide a figure or a listing showing the left turn, through, and right turn lanes on each approach at each of the study intersections for future conditions in the first quarter of Year 2011 (month 6 of construction).

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: Trip Forecasts for Nearby Approved Projects

Page 5.12-28 of the AFC identifies three approved industrial projects and three approved residential projects within one mile of the project site, with a total of 30 approved project applications in the City of Ceres. It is reasonably foreseeable that these approved projects will be constructed, occupied, and generate additional AM and PM peak hour trips in the first quarter of Year 2011.

Data Request

CURE-93. Please provide a figure or a listing showing left turn, through, and right turn volumes on each approach at each of the study intersections in the AM and PM peak hours for the 30 approved project applications in the City of Ceres.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. In addition, there is no impact as A2PP construction traffic will occur outside of peak hours as described in Section 5.12.5.1.

Background: Hughson-Grayson Traffic Volumes in 2011

Page 5.12-28 of the AFC states "TID is preparing an Environmental Impact Report (EIR) for the TID Hughson-Grayson 115-kV Transmission Line and Substation Project" which includes a 69-kV transmission line from the existing Almond 1 with construction beginning in late fall 2010. While the construction schedule for the Hughson-Grayson 115-kV Transmission Line and Substation Project was not known earlier this year, the A2PP will likely be under construction at the same time as the Hughson-Grayson Project.

Data Request

CURE-94. Please provide a figure or a listing showing left turn, through, and right turn volumes on each approach at each of the study intersections in the AM and PM peak hours for construction traffic in Year 2011 for the Hughson-Grayson 1 15-kV Transmission Line and Substation Project.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. In addition, there is no impact as A2PP construction traffic will occur outside of peak hours as described in Section 5.12.5.1.

Background: Cumulative Baseline Traffic Volumes in 2011

When the A2PP is under construction in Year 2011, traffic already passing through the study intersections in the AM and PM peak hours will include existing traffic volumes, trips to and from the 30 approved project applications in the City of Ceres, and trips to and from Hughson-Grayson 115-kV Transmission Line and Substation Project.

Data Request

CURE-95. Please provide a figure or a listing showing left turn, through, and right turn volumes on each approach at each of the study intersections in the AM and PM peak hours for existing conditions plus trips for the 30 approved project

applications in the City of Ceres plus forecast construction trips in 2011 for the Hughson-Grayson Project.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. In addition, there is no impact as A2PP construction traffic will occur outside of peak hours as described in Section 5.12.5.1.

Background: Calculations for 2011 Conditions without A2PP

To properly establish Year 2011 baseline conditions, it is necessary to calculate delay and LOS for cumulative traffic conditions for AM and PM peak hours in 2011 at all study intersections including existing traffic volumes plus trips for the 30 approved project applications in the City of Ceres plus forecast construction trips for the Hughson-Grayson Transmission Line and Substation Project.

Data Request

CURE-96. Please provide delay and LOS calculations for baseline cumulative traffic conditions for AM and PM peak hours in 2011 at all study intersections including existing traffic volumes, trips for the 30 approved projects in the City of Ceres, and construction trips for the Hughson-Grayson Project.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests. In addition, there is no impact as A2PP construction traffic will occur outside of peak hours as described in Section 5.12.5.1.

Background: Delay/LOS for 2011 Conditions with A2PP

Section 5.12 of the AFC does not identify delay or LOS at the study intersections in Year 2011 with A2PP construction traffic added.

Data Request

CURE-97. To properly determine intersection operating conditions in Year 2011 when peak construction activity for the A2PP will occur, please provide LOS and delay calculations for Year 2011 traffic conditions with construction traffic added for the A2PP.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: Significant Traffic Impacts/Mitigation Measures for Year 2011 Conditions with A2PP

Section 5.12 of the AFC does not identify significant traffic impacts by comparing delay and LOS at the study intersections under cumulative baseline conditions in Year 2011 to those that will occur with construction traffic added from the A2PP. With the Crows Landing Road/Northbound SR 99 Ramps already significantly impacted in the PM peak hour by

A2PP construction traffic under the AFC analysis of existing conditions, it is probable that this intersection will also be significantly impacted in the Year 2011 analysis.

Data Requests

CURE-98. Please compare delay and LOS at the study intersections under cumulative baseline conditions in Year 2011 to those that will occur with construction traffic added from the A2PP.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-99. Please develop measures to mitigate the significant traffic impact in the PM peak hour caused by A2PP construction traffic at the stop-controlled intersection of Crows Landing Road/Northbound SR 99 Ramps.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-100. Is the A2PP willing to pay its fair share of improvements (such as traffic signal installation) at the stop-controlled intersection of Crows Landing Road/Northbound SR 99 Ramps?

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

CURE-101. Please describe what mitigation measures will be taken at other intersections if significant traffic impacts are found to reduce the impacts to a level that is less than significant.

Response: See Applicant's letter of November 3, 2009, objecting to this request. Without waiving any of these objections, Applicant reserves the right to provide responses, in whole or in part, to some or all of these requests.

Background: Impacts to Bikeways

Figure 5.12-2 indicates Crows Landing Road and Grayson Road have designated bikeways. Section 5.12 does not disclose, analyze, and mitigate any potentially significant impacts to these bikeways caused by the additional traffic during construction.

Data Request

CURE-102. Please disclose and analyze any potentially significant impacts to the bikeways on Crows Landing Road and Grayson Road caused by the additional traffic during construction. If a significant impact is found, please describe what mitigation measures will be taken to reduce the impact to less than significant.

Response: Construction traffic is not expected to circulate on Grayson Road, and therefore, will not cause any impacts on bikeways along the street. Along Crows Landing Road, about

140 vehicles are added to the roadway in the vicinity of the project site entrance. There is no dedicated bike lane, so the bicyclists travel on the shoulders. While traffic volumes will increase, the vehicle speeds will not increase, and there are no significant impacts expected for bicyclists.

Background: Gas Line Construction Impacts

Page 1-2 of the AFC indicates that the project includes a new natural gas supply along Crows Landing Road for 9.1 miles or along Carpenter Road for 11.1 miles. The gas line will probably be constructed within the traveled way on either route.

Data Requests

CURE-103. Please disclose, analyze, and mitigate any potentially significant impacts to traffic during construction of the gas line on either route.

Response: An additional discussion of the Preferred Alignment for the natural gas pipeline will be provided in Data Response Set 1D to be provided in late November 2009.

Pipeline construction typically involves trenching, stringing, welding, radiographic inspection, coating, lowering-in, backfilling, street repair, hydrostatic testing, and clean-up activities. These will each be completed as a single, sequenced construction effort. As stated in Section 5.12.3.7 of the AFC, there is a potential for minor, short-term increases in hazards due to the nature of pipeline construction and operation of construction equipment. For example, there may be temporary lane closures and detours necessary to complete construction. The application of standard construction practices as delineated in the Manual on Uniform Traffic Control Devices (e.g., warning signs and lights, cones, speed reduction notices, etc.) and the Work Area Traffic Control Handbook will reduce these hazards. Traffic control, including signage and flag persons, will be required on all road segments during construction; details will be provided in the Traffic Control Plan that the contractor will establish. Construction damage to the existing roads will be repaired to original condition. There will be no long-term or permanent construction impacts from the gas pipeline construction. No impacts are planned during operations.

CURE-104. Please disclose, analyze, and mitigate any potentially significant impacts to the bikeways caused by construction of the gas line on either route.

Response: Please see the response to CURE-103.

Background: Construction Access and Parking

The AFC does not analyze the level of traffic control at the vehicle access point or the amount of parking proposed during construction.

Data Requests

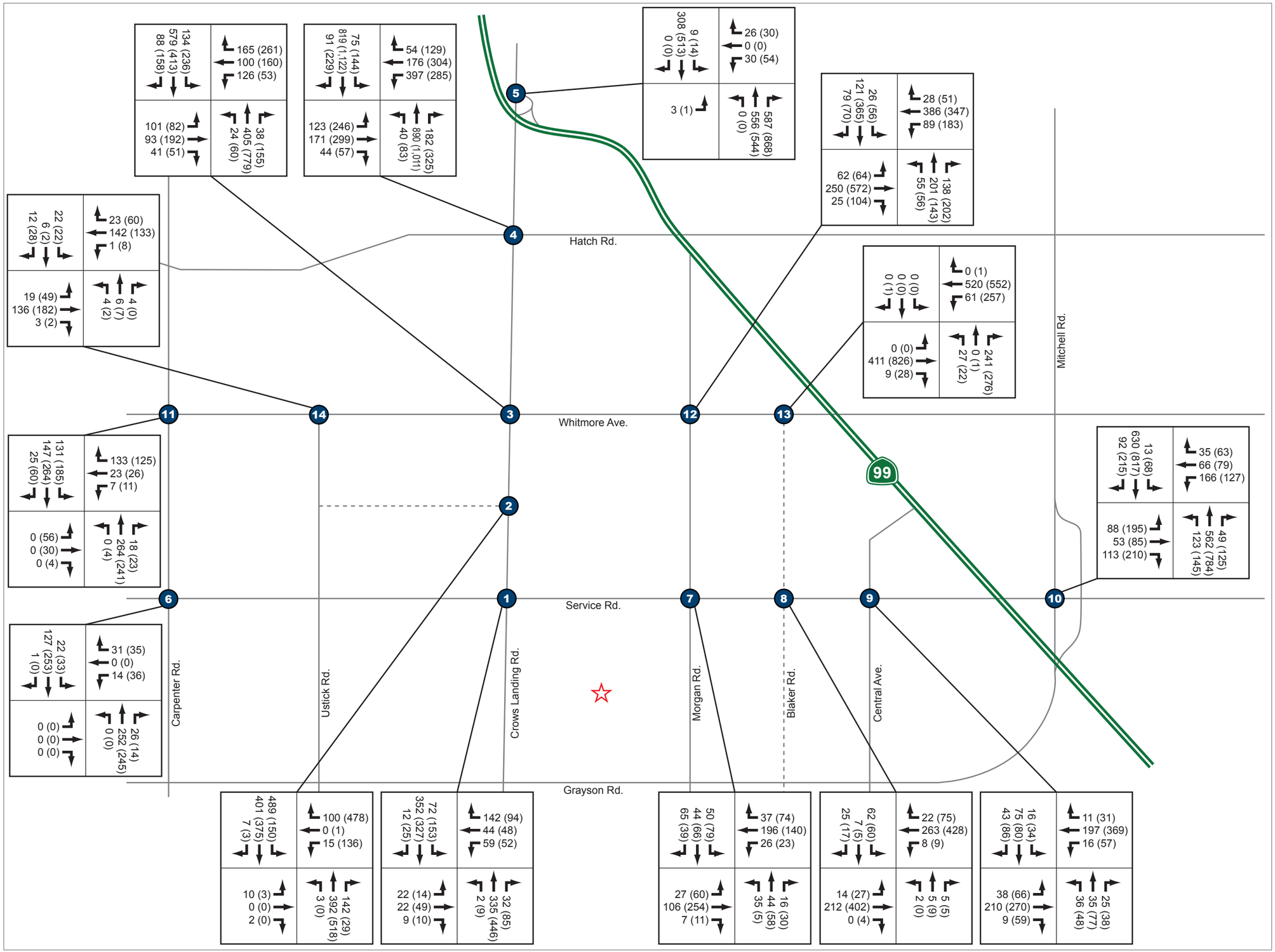
CURE-105. Please disclose, analyze, and mitigate any potentially significant impacts to traffic at the proposed vehicle access point connecting to Morgan Road during construction.

Response: No site access point connecting to Morgan Road is planned. Therefore, no impact is expected to occur on Morgan Road from construction traffic.

CURE-106. Please disclose, analyze, and mitigate any potentially significant impacts regarding the parking supply that will be provided during construction.

Response: Specific construction worker parking areas have been designated onsite, so the project will not result in inadequate parking capacity during construction. No impacts to public parking spaces are anticipated.

Figure



LEGEND

- # (#) AM(PM) Peak Hour Volume
- Project Location
- 6 Study Intersection

FIGURE CURE 86
CONSTRUCTION PEAK HOUR INTERSECTION VOLUMES
ALMOND 2 POWER PLANT
CERES, CALIFORNIA

CH2MHILL

Attachment CURE 46
Almond - Crows Landing Reconductor Analysis

Before Almond and Grayson Online

FROM	FNAME	FKV	TO	TNAME	TKV	CK	P	Q	MVA	AMPS	%RATE	RATE	UNIT	AF	AT	AREA	ZF	ZT	ZONE	PLOSS	QLOSS
38492	ALMOND	69	38494	CROWSLND	69	1	30.3	2.7	30.4	**248.4**	**39**	**636.8**	Amp	30	30	30	324	324	324	0.09	0.27

After Almond and Grayson Online

FROM	FNAME	FKV	TO	TNAME	TKV	CK	P	Q	MVA	AMPS	%RATE	RATE	UNIT	AF	AT	AREA	ZF	ZT	ZONE	PLOSS	QLOSS
38492	ALMOND	69	38564	ALMONDCT	13.8	1	-43.4	-4	43.6	352.4	79.2	56	Mva	30	30	30	324	324	324	0.08	4.61
38492	ALMOND	69	38494	CROWSLND	69	1	55.3	0.8	55.3	**446.9**	**70.2**	**636.8**	Amp	30	30	30	324	324	324	0.29	1.09
38493	ALMOND	115	38544	ALMCT2	13.5	1	-55.9	-2.9	56	268.9	47.1	120	Mva	30	30	30	324	324	324	0.09	4.93
38493	ALMOND	115	38545	ALMCT3	13.5	1	-55.9	-2.9	56	268.9	47.1	120	Mva	30	30	30	324	324	324	0.09	4.93
38493	ALMOND	115	38546	ALMCT4	13.5	1	-55.9	-2.9	56	268.9	47.1	120	Mva	30	30	30	324	324	324	0.09	4.93
38493	ALMOND	115	38534	GRAY115	115	2	83.9	4.3	84	403.3	49.4	816.8	Amp	30	30	30	324	324	324	0.49	2.21
38493	ALMOND	115	38534	GRAY115	115	1	83.9	4.3	84	403.3	49.4	816.8	Amp	30	30	30	324	324	324	0.49	2.21

Grayson-Hughson and Grayson-Taylor Out (N-2)

FROM	FNAME	FKV	TO	TNAME	TKV	CK	P	Q	MVA	AMPS	%RATE	RATE	UNIT	AF	AT	AREA	ZF	ZT	ZONE	PLOSS	QLOSS
38492	ALMOND	69	38564	ALMONDCT	13.8	1	-43.4	-5.1	43.7	354.2	79.6	56	Mva	30	30	30	324	324	324	0.08	4.66
38492	ALMOND	69	38494	CROWSLND	69	1	104.7	-3.4	104.8	**848.8**	**133.3**	**636.8**	Amp	30	30	30	324	324	324	1.05	4.2
38493	ALMOND	115	38544	ALMCT2	13.5	1	-55.9	-3.2	56	269.1	47.2	120	Mva	30	30	30	324	324	324	0.09	4.93
38493	ALMOND	115	38545	ALMCT3	13.5	1	-55.9	-3.2	56	269.1	47.2	120	Mva	30	30	30	324	324	324	0.09	4.93
38493	ALMOND	115	38546	ALMCT4	13.5	1	-55.9	-3.2	56	269.1	47.2	120	Mva	30	30	30	324	324	324	0.09	4.93
38493	ALMOND	115	38534	GRAY115	115	1	83.9	4.8	84	403.7	49.4	816.8	Amp	30	30	30	324	324	324	0.49	2.22
38493	ALMOND	115	38534	GRAY115	115	2	83.9	4.8	84	403.7	49.4	816.8	Amp	30	30	30	324	324	324	0.49	2.22

Notes:

Software Used for Analysis:	*GE Positive Sequence Load Flow 16.3_02*
PSLF Base Case Used:	*09hs3a.sav (2009 Heavy Summer Loads Used)*
PSLF Epcl Used:	*aaaGE_MACRO_PROCESSOR.p*
PSLF Change File Used:	*Grayson Sub Scenario.m (Created by Joseph Gillette Dated 12/11/2008)*

FNAME = Beginning of Line Segment
FKV= Voltage on Line Segment
TNAME= End of Line Segment
TKV= Voltage on Line Segment
MVA= Summer Normal Load in MVA
AMPS= Measured Amperage on that line segment
%RATE = % Difference between RATE and AMPS
RATE= Summer Normal Rating on that conductor (636 AA)

Ratings on 636 AA	
Summer Normal	637A
Summer 4-Hour Emergency	731A
Summer 30-Minute Emergency	811A

Attachment CURE-56
Walnut Energy Center Metered Generation 2008

WEC Metered Generation (EMS Reads)

Date	Type	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01/01/08	Gen	4675.1	197.2	195.1	192.75	190.35	184.9	179.75	180.45	180.6	189.4	191.4	191.2	190.1	183.65	181.6	180.1	180.3	185.8	205.95	215.65	215.75	215.95	219.05	221.65	206.45
01/02/08	Gen	5222.6	187.65	187.75	186.4	190.55	198.35	207.5	225.2	244.05	233.85	225.9	231.1	230.65	226.65	224.4	219.85	215.85	216.55	229.4	235.85	228.15	228.7	223	217	208.25
01/03/08	Gen	4980.65	184.55	184.3	184.65	180.8	181.95	195.95	200.35	201.7	210.75	221.9	210.85	212.75	211.75	211.85	205.05	207.15	221.45	237.8	229.65	231.05	218.8	218.35	209.65	207.6
01/04/08	Gen	5120.45	187.95	178.95	174.65	174.55	175.6	184.8	194.6	212.8	227.15	239.6	238.7	231.5	248.15	246.2	239.2	238.55	238.25	232.7	227.55	225.25	207.95	195.65	205	195.15
01/05/08	Gen	4782.95	182.9	178.9	173.9	175.25	182.75	185.1	173.95	173.8	181.95	189.15	205.9	221.65	216.05	223.95	224.2	219.25	226.25	228.45	227.15	214.05	195.6	193.6	198.4	190.8
01/06/08	Gen	4808.2	193	183.3	176.35	180.2	188.1	180.35	177.65	180.15	182.35	190.3	199.2	202.6	212.45	215.7	208.15	219.45	212.6	209.25	214.05	218.45	213.15	220.25	221.7	209.45
01/07/08	Gen	5190.2	194.55	189.8	188.1	185.95	190.95	209.45	214.1	205.95	197.45	213.9	225.85	228.4	230.1	239.7	232.5	224.4	222.75	234.5	235.9	224.45	222.8	224.9	232.65	221.1
01/08/08	Gen	5080.8	195	189.1	186.25	187.6	193.5	202.55	215.05	217.95	206.15	210.8	226.65	232.7	232	228.85	230.8	229.1	221.7	223.75	225.8	223.9	207.3	201	200.05	193.25
01/09/08	Gen	5174.5	207.8	199.65	196.1	193.5	196.3	212.55	220.8	219.95	210.45	224.6	230.75	229.7	224.2	221.85	220.55	220.5	218.3	219.7	219.55	213.15	216.45	223.25	226.65	208.2
01/10/08	Gen	5034.3	200.7	200.25	198.1	184	192.65	193.65	207.4	211.5	204.15	209.85	220.75	229.5	225.5	218.65	218.7	207.05	200.95	215.35	217	214.2	216.25	225.55	215.85	206.75
01/11/08	Gen	5172	213.95	209.25	203.1	199.55	200.55	209.85	203.15	209.3	216.25	216.8	224.9	231.75	223.15	221.6	220	218.5	217.75	227.25	223	212.45	204.4	217.5	231.3	216.7
01/12/08	Gen	4956.7	207.5	200.1	195.7	187.95	186.35	196.2	203.35	205.95	215.05	216	215.85	218.1	204.95	205.65	195	192.65	202.05	218.75	220.3	219	224.95	213.15	213.95	198.2
01/13/08	Gen	4609	177.3	169.45	162.5	162.05	162.05	160.75	181.1	187.75	192.4	186.45	186.15	186.55	189.55	196.2	194.85	190.9	190.55	220.9	220.5	223.3	230.9	230.75	212.5	193.6
01/14/08	Gen	4960.05	179.85	167.15	167.5	172.65	191.5	201	210.2	221.95	228.55	215.5	213.4	204.2	201.65	214.7	209.65	194.9	209.25	238.65	240.65	238.05	225.15	210	206.7	197.25
01/15/08	Gen	5093.7	198.15	197.1	193.55	196.15	191.25	185.85	194	208.05	212.2	204	221.2	215.9	210.35	217.3	215.85	224.45	235.85	245.6	236.2	219.9	222.95	220.75	215.7	211.4
01/16/08	Gen	5332.3	200.85	196.05	195.55	197.3	210.55	214.85	218.45	228.45	232.8	237.45	236.35	237.85	241.45	238.9	233.3	217.95	218.65	227.1	227.5	230.1	219.25	225.25	230	216.35
01/17/08	Gen	5246.7	204.9	202.05	198.9	203.05	203.1	212.65	214.75	219.75	222.9	214.1	207.8	213.15	232.1	232.75	225.2	219.75	223.7	239.2	238.55	233.65	221	222.2	226.1	215.4
01/18/08	Gen	5359.2	206.1	203.9	196.4	198.1	213.35	211.85	223.85	230.6	226.9	233.8	233.55	228.35	226.2	229.4	224.3	220.2	225.35	236.2	238.65	235.7	228.45	231.2	231.4	225.4
01/19/08	Gen	4806.6	194.7	202.2	188.3	195.45	207.45	211.1	204.1	207.95	206.2	207.1	202	201	212.7	169.6	145.85	181.25	196.25	231	212	207.95	216.35	217.7	201.7	186.7
01/20/08	Gen	4844.3	177.9	177.5	177.5	188.65	219.3	216	218.7	212.8	199.55	203.5	199.65	195	190.55	187.85	187.8	189.45	190.25	216.75	226.05	229.45	226.65	216.95	203.3	193.2
01/21/08	Gen	5005	187.55	181.7	179.4	180.3	197.35	213.45	201.55	208.35	201.95	211.65	218.65	217.75	218.1	230.8	232.05	198.8	197.5	221.05	225.4	225.35	219.95	204.15	223.5	208.7
01/22/08	Gen	5305.85	198.45	194.75	190.1	197.9	203.05	205.55	219.6	228.15	222.75	229.95	234	239.2	244.2	231.2	228.4	220.25	223.9	232.05	237.5	237.3	232.8	234.6	217.05	203.15
01/23/08	Gen	5467.1	200.55	197.6	192.9	194.75	206.65	202.1	219.45	237.65	232.9	240.15	244	246.45	245.55	248.85	251.1	239.55	239	246.7	237.35	233.6	236.55	239.3	223.8	210.6
01/24/08	Gen	5305.7	196.35	193.25	193.75	203.15	222	219.55	227.7	225.95	226.5	222.5	224.55	234.3	227.05	218.75	215.9	220.2	225.9	233.65	228.2	238.35	237.85	230.85	228.6	210.85
01/25/08	Gen	5180.05	199.9	192.85	185.55	183.6	188.2	198.05	219.45	223.9	229.45	238.45	241.95	236.4	229.45	228.65	226.6	231.95	223.55	226.2	227.55	215.15	209.5	215.3	207.75	200.65
01/26/08	Gen	4454.65	185.45	176.4	172.3	170.85	171.5	182.4	178.25	168.55	174.25	186.15	189.05	190.4	192.8	204.5	190.25	190.7	185.4	183.7	198.1	204.7	204.45	194.35	182.75	177.4
01/27/08	Gen	4466.6	175.15	169.55	165.05	164.6	171.05	166.35	158.5	160.15	169.35	172.1	188.55	211.1	208.4	202.7	194.65	184.4	180.2	199	203.25	204.1	218.1	213.3	200.4	186.6
01/28/08	Gen	5194.65	190.9	188.6	184.5	191.8	194.7	207.25	221.15	236.8	236.35	236.45	234.45	228.95	233	229.45	223.5	221.55	202.1	217.35	219.65	234.7	234.75	213.1	214.7	198.9
01/29/08	Gen	5300.85	199.05	196.15	194	193.9	195.4	212.65	220.2	231.3	231.9	237.65	232.05	227.6	230.95	231.55	236.25	240.45	229.95	233.7	235.75	232.55	219.85	221.25	216.75	200
01/30/08	Gen	5324.6	202.3	197.4	196.2	194.9	189.45	201.6	231.85	231.1	228.35	232	227.9	234.45	232	235.7	235.3	228.9	216.55	231.65	240.65	238.15	225.2	232.25	232.55	208.2
01/31/08	Gen	5235.5	195.35	190.15	189.25	182.35	191.5	211.1	237.5	225.6	222.2	237.65	241.8	244.85	235.6	224.45	228.55	229.5	229.5	230.9	225.9	214.65	212.4	221.25	211.35	202.15
02/01/08	Gen	5047.65	185.5	175	171.4	176.25	182.6	194.5	216.25	221.3	231.35	217.6	224.95	230.65	227.9	220.85	224.15	220.4	220.55	218.35	226.25	222.7	215.75	221.2	208.2	194
02/02/08	Gen	5120.8	182.2	185.1	186.4	181.45	178.15	186.6	198.7	212.95	227.7	229.75	234.5	234.95	232.3	230.5	228.4	228.95	217.1	232.75	235.15	237.2	232.95	222.25	194.15	190.65
02/03/08	Gen	4767.45	208.25	215.75	208.3	202.7	198.45	194.25	175.3	173.95	185.35	191.65	202	207.6	208.45	210.65	211.95	184.8	186.05	196.1	205.6	212.75	207.9	208.85	192.75	178.05
02/04/08	Gen	5217.9	177.8	176.05	176.25	178.15	190.2	195.9	215.25	215.7	220.8	234.35	241.8	240.8	233.95	234	229.35	226.15	225.95	229.2	241.95	237.45	231.35	227.35	225.75	212.4
02/05/08	Gen	5168.75	187.7	187.55	187.75	194.25	199.7	205.6	215.55	229.45	236.15	236.45	232.1	226.1	225.45	225.85	222.7	223.7	221	220	227.75	226.5	226.25	213.55	204.05	193.6
02/06/08	Gen	5212.85	179.75	176.6	179	175.95	187.85	203.85	224.7	234.4	233.9	236.05	234.55	238.25	236.7	230	234.1	233.95	228.95	234.25	225.85	226.75	223.3	216.5	218.85	198.8
02/07/08	Gen	5105.2	178	172.75	170.15	171.5	172	201.55	220.2	230.1	231.35	232.6	243.2	233.75	227.3	228	227.25	227	229.55	229.1	225.4	225.35	224.35	215.05	203.95	185.75
02/08/08	Gen	4935.25	171.95	173.65	173.25	169.6	168.6	199.8	223.3	222.15	221.3	220.25	219.85	222.6	233.75	228.45	218.45	192.7	196.1	215.75	214.8	213.05	217.1	217.2	208.95	192.65
02/09/08	Gen	4490.3	178.4	180.05	180.8	182.5	176.95	175.1	169.3	175.05	183.5	185.4	198.55	190.4	197.45	208.5	182.1	178.9	188.25	199.8	210.75	195.85	204.8	188	180.85	179.05
02/10/08	Gen	4413.7	175.25	168.7	176.55	173.6	167.3	169.7	180	178.4	172.7	182.15	182.35	182.6	194.2	204.45	173.9	173.25	178.6	195.45	202.95	202.75	196.4	199.4	197.5	185.55
02/11/08	Gen	4878.05	181.15	178.3	178.1	178.35	181	196.3	197.8	204.45	215.75	234.15	228.2	224.85	202.2	192.75	204.2	198.5	196.8	203	224.25	223.8	213.4	210.5	217.25	193
02/12/08	Gen	4880.1	173.35	164.85	162.95	163.25	179.95	197.3	208.45	227.9	224	213.5	214.5	223.95	208.25	222.35	215.9	206.15	216.65	210.85	227.1	226.25	218.3	204.9	186.3	183.15
02/13/08	Gen	4784.5	175.7	173.95	166.9	161.5	176.85	199.5	214.5	218.2	197.9	199.3	205.8	209.85	207.65	200.5	201.15	200.45	200.4	203.8	232.65	227.8	216.6	198.65	203.05	191.85
02/14/08	Gen	4802.85	177.3	181.3	181.5	180.5	184.1	197.1	208.5	214.65	206.8	207.55	203.95	205.1	201.15	195.8	192.9	197.9	209.5	202.95	226.1	223.3	212.15	212.6	195.55	184.6
02/15/08	Gen	5168.6	178.8	179.7	179.5	180.3	184.6	203.55	214	210.45	231.45	231.35	236.9	232.75	233.45	234.65	228.45	220.2	212	220.1	230	233.1	230.45	226.65	225.75	210.45
02/16/08	Gen	4791.15	186.35	177.6	176.7	179.45	180.85	180.45	191.3	195.6	210.45	218.8	219.15	214.7	207.9	208.6	211.55	193.75	188.95	205.5	215.45	219.85	227.65	205.5	187.9	187.15
02/17/08	Gen	4486.4	190.3	182.4	181.15	181.05	184.1	185.95	177.05	179	194.85	191.95	179.95	177.95	186.4	199.5	175.5	173.4	164.1	177	196.25	206	216.75	207.3	195	183.5
02/18/08	Gen	4933.4	174.85	170.3	174.3	175.95	192.3	193.2	180.95	191.55	205.45	219.4	227.3	227.5	227.25	227	221.05	212.9	213.05	217.1	226.8	221.2	217.9	218.8	208.6	188.7
02/19/08	Gen	5053.85	168.4	161.6	161.85	165.75	169.8	188.1	204.05	220.65	223.4	243.05	240.05	238.1	237.4	235.05	233.55	233.55	224.65	213.2	222.7	230	222.9	213.9	207.45	194.7
02/20/08	Gen	5073.75	184.55	183.2	179.95	177.35	173.45	181.45	204.5	224.15	218.5	220.85	228.35	234.25	233.85	233.75	227.9	223.05	212.25	215.35	225.5	225.45	223.5	224.4	215.35	202.85
02/21/08	Gen	5193.15	186.6	180.6	179.65	191.75	203.05	203.65	214.3	221.25	221.8	224.15	231.75	232.55	232.45	238.05	239.75	234.55	225.25	235.65	242.1	229.05	226.35	203.45	207.2	188.2
02/22/08	Gen	5141.4	170.4	167.2	169	185.2	201.8	205.15	212.85	222.05	229.05	231.65	240.1	233.8	226.15	236.7	234.5	229.45	232.35	236.5	235.5	231.35	218.65	201.95	196.5	193.55
02/23/08	Gen	4960.65	196.45	192.75	192.1	192.25	188.6	191.5	200.85	199.75	207.35	220.05	223.2	221.9	218.8	216.65	218.15	219.6	209.1	203	225.85	215.6	208.2	208.3	200.2	190.45
02/24/08	Gen	4673.95	198.8	190.75	182.95	183.25	197.15	198.7	190.8	180.1	190.1	203.35	202.95	196.85	198.25	198.45	193.55	191.35	181.4	179.55	201	202.4	209.65	203.9	206.35	192.35
02/25/08	Gen	5178.85	182.9	178.8	176.55	182.8	197.85	193.6	200.4	222.55	229.75	231.85	233.55	237.05	234.7	232.8	225.55	222.4	217.8	226.15	240.25	228.75	229.7	224.1	221.95	207.05
02/26/08	Gen	5013.25	188.15	179.35	183.15	184.45	186.8	206.65	221.15	233.7	226.85	218.9	210.5	205.4	215.85	215.3	213.9	211.2	208.55	227	230.9	236.45	232.7	207.6	187.7	181.05
02/27/08	Gen	5253	174.7	180.75	177.75	182.2	196.55	204.1	206.6	232.25	237.25	236.9	241.7	239.65	234.3	233.9	239.9	228.65	225.8	226.3	235.8	238.1	233.3	224.75	218	203.8
02/28/08	Gen	5217.5	181.45	184.45	181.95	178.7	183.4	204.8	229.75	226.15	234.55	234.05	234.3	234.4	232.35	233.9	240.4	239.75	229.05	227.15	230	231.9	229.45	222.7	207.95	184.95
02/29/08	Gen	5051.7	170.5	165.1	168.6	169.55	181.25	203.25	219.65	232.4	232.15	235.2	235.05	236.95	234.6	236.85	234.65	225.45	215.6	208.45	223	224.45	218.25	209.8	192.55	178.4
03/01/08	Gen	4694.6	183.6	180.25	174.7	172.3	165.9	166.15	169.75	189.85	215.35	221.1	231.15	223.2	205.45	197.45	193.2	197.15	194.2	198.1	210.55	205.9	210.85	202.1	196.35	190

WEC Metered Generation (EMS Reads)

Date	Type	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
03/02/08	Gen	4726.2	194	188.45	185.5	182.9	183.05	203.65	205.25	209.35	204	210.35	223.1	218.55	215	208.2	193.7	176.2	170.5	182.65	216.6	211.2	190.1	188.65	181.4	183.85
03/03/08	Gen	5113.1	183.8	179.8	179.65	181.3	188.1	204.75	209.5	210.9	221.15	229.55	239.55	236.6	234.3	230.4	239.4	228.3	214.55	202.45	230.65	235.85	219.25	192.4	215.95	204.95
03/04/08	Gen	5093.85	185.6	179.25	179.6	179	185.95	199.4	216.8	230.25	227.9	219.9	218.55	231	226.7	231.75	239.6	205.95	217.55	214.55	235.8	237.5	221.05	211.9	206.4	191.9
03/05/08	Gen	5224.8	181.5	178.8	177.25	176.65	180.45	212.6	229.35	235.1	235	237.35	240.05	239.45	238.95	238.2	235.5	230.05	222.95	216.3	231.9	234.5	228.55	223.15	205.85	195.35
03/06/08	Gen	5300.45	183.75	180	177.7	177.75	186.2	216.65	241.45	236.25	232.5	232.55	227.75	232.25	232.2	230.45	228.45	237.45	236.35	240.1	244.75	246.55	243.6	231.5	212.7	191.55
03/07/08	Gen	5254.1	184.35	177.8	174.35	175.3	183.55	211.45	232.4	234.95	234.95	236.35	237.65	239.35	243.45	242.3	240.65	238.45	230.25	229.15	232.7	235.75	237.5	225.55	191.75	184.15
03/08/08	Gen	4920.15	183.3	179.85	176.85	171.25	170.85	180.4	203.05	213.2	208.55	222.65	227.05	224.25	220.7	226.45	223.15	217.7	212.5	222.35	226.9	228.4	221	210.7	173.4	175.65
03/09/08	Gen	4840.55	183.15	[illegible]	184.3	182.55	171.55	173.55	188.75	187.65	202.95	220.1	225.05	226.65	224.45	221.3	234.1	233.5	235.1	232.65	222.75	232.3	227.35	224	216.1	190.7
03/10/08	Gen	5224.2	167.05	169.45	169.5	169.6	173.85	208.95	232.2	229.25	226.55	235.15	239	233.15	236.1	242.1	242.05	242.1	239.05	230.1	229.45	226.55	231.25	232.75	227.35	191.65
03/11/08	Gen	5061.42	173.3	175.55	172.4	166.35	166.9	194.8	222.3	222.7	220.65	229.6	230.1	233.95	232.5	237.65	237.4	235.2	229.55	220.67	211.65	221.35	216	215.45	204.3	191.1
03/12/08	Gen	4931.1	204.65	195.75	185.85	185.7	194.85	208.25	235.9	226.55	198.2	198.65	198.45	202.95	202.8	203.45	200.9	203.4	202.6	203.55	202.4	203.35	221.15	234.4	212.15	205.2
03/13/08	Gen	4918.35	196	188.45	193.05	192.95	190.7	196.55	220.25	210.7	203.05	203.05	203.2	203.1	203.7	203.5	206.55	212.35	217.45	206.45	203.85	215	215.15	215.9	210.7	206.7
03/14/08	Gen	4994.45	184.85	178.35	173.45	178.1	190.4	209.2	219.25	220.8	232.55	241.25	235.4	227.7	221.45	212.1	209.4	203.4	200.85	199.5	195.25	213	218.45	219	210.25	200.5
03/15/08	Gen	4994.8	180.35	171.6	166.55	175.05	205.75	213.85	209.1	200.3	214	214.35	219.65	226.1	225.8	224.2	219	212.75	214.95	216.6	218.05	227.15	234.55	219.2	196.2	189.7
03/16/08	Gen	4919.9	189.3	182.05	173.95	173.4	181.5	205.55	236.7	213.85	224.9	224.85	225.4	223.6	220.45	211.25	209.7	207.8	199.7	197.4	193.35	224.95	220.3	208.7	186.25	185
03/17/08	Gen	4857.35	192.6	188.5	187.6	190.75	198.65	203.45	195.75	211.6	222.2	211.2	223.65	216.2	206.9	231.05	221.6	184.75	182.45	190.7	189.45	207.9	206.15	196.3	202.75	195.2
03/18/08	Gen	5260.6	208.15	214.35	213.35	221.8	213.75	213.45	221.45	222.95	217.65	229.65	231.2	233.35	238.2	238.9	241.95	242.6	236.65	208	186	213.55	210.7	206.5	203.2	193.25
03/19/08	Gen	5040.15	211.95	210.45	201.25	196.35	179.9	189.4	214.45	215.65	223.1	224.5	209.8	210.3	207.75	208.3	207.65	202.9	207.1	211.55	206.25	228.65	233.25	228.5	212.5	198.65
03/20/08	Gen	5126.55	204.9	203.5	198.45	196.5	192.5	190.35	210.4	209.7	214.4	224.2	229.4	230	229.55	228.4	228	225.2	218.65	206.7	201	224.65	224.5	213.85	210.25	211.5
03/21/08	Gen	4865.805	208.45	190.7	188.55	183.45	184.3	193.2	210.5	217.5	210.505	213	215.55	220.85	226.95	216.6	216.8	221.65	208.1	181.25	177.1	197.05	199.15	200.5	197.4	186.7
03/22/08	Gen	4852.1	200.85	188.55	194.9	194.3	196.55	203.1	209.4	218.4	209.7	209.35	198.8	204.85	218.65	218.25	212.6	212.6	212.95	208.55	192.05	181.7	189.6	197.65	192.3	186.45
03/23/08	Gen	4685.8	184.65	181.95	177.65	173.05	171.05	190.4	199.3	196.35	202.35	203.3	209.55	208.3	205.1	212.8	199.45	196.55	195.7	188.55	190.15	211.5	220.45	211.6	185.05	171
03/24/08	Gen	4916.75	176.85	172.6	172.25	176.7	182.6	187.5	200	207.75	222.55	223.4	221.25	223.6	224.35	228.85	231.2	222.1	209.95	203.05	201.25	218.75	223.45	211.75	185.15	189.85
03/25/08	Gen	5008.65	208.9	220.2	216.9	213.1	213.3	216.95	177.7	171.2	202.8	215.55	237.1	230.15	230.45	222.1	213.25	213.4	204.75	204.9	198.5	199.9	206.9	202.1	187.7	200.85
03/26/08	Gen	5144.85	235.35	228.8	225	220	219.95	211.7	197.85	201.3	208.7	216.9	217	217.65	217.5	216.2	215.15	210.3	204	203.1	194.55	209.55	215.35	208.25	227.2	223.5
03/27/08	Gen	5178.35	209.35	209.35	205.85	202.6	208.95	219.45	211.45	226.55	216.55	226.1	235.55	228.45	225.45	224.35	219.4	212.6	205.85	192.9	190.55	209.05	221.35	218.85	222.3	235.5
03/28/08	Gen	5370.45	237.35	233.4	228.35	225.7	228	239.25	219.45	230.6	225.7	219.3	216.95	217.7	222.05	220.55	214.75	215	213.9	209.6	203.9	211.6	231.05	233.4	237.95	234.95
03/29/08	Gen	5403.65	233.15	221.85	215.3	213.15	214.4	215.85	205.45	206.15	225.25	244.45	242.3	233.1	227.15	226.3	229.6	225.05	220	227.65	231.3	233.55	239.65	236.5	218.4	218.1
03/30/08	Gen	5391.25	212.5	210.15	214.75	214.4	215.2	223.15	231.2	230.85	234.15	239.2	231.25	232.05	227.85	227.55	228.35	218.55	217.7	222.2	218.1	228	231	231.75	233.3	218.05
03/31/08	Gen	5505.95	209.2	207.35	202.75	193.45	190.2	233.1	236.6	235.35	238.25	234.35	238.7	239.15	243.25	243.25	236.8	232.65	237.4	242.1	232.15	235.9	241.3	238.45	232.85	231.4
04/01/08	Gen	5671	229	226.95	235.35	236.5	242.25	234.45	228.1	237.65	237.65	239.2	241.8	239.5	241.85	241.45	241.8	245.35	244.55	243.3	228.55	230.05	235.55	242.5	224.9	222.75
04/02/08	Gen	5578.95	227.95	222.35	219.55	215.05	216.85	240.8	244.4	243.45	243.25	243.1	241.55	241.75	240.95	244.75	242.4	238.35	234.45	223.9	212.75	230.5	234.1	236.8	225.45	214.5
04/03/08	Gen	5457.9	193.6	194	193.75	193.95	194.45	206.4	224.5	232.9	241.85	241.45	241.8	241.65	241.95	241.8	241.6	241.6	241.3	240.8	241.25	240.7	241.25	236.2	228.75	220.4
04/04/08	Gen	5621.1	224.35	210.9	206.25	198.4	222.95	233.85	237.1	242.95	244.3	244.25	244.75	242.35	244.45	239.35	236.35	231.75	236.8	239.75	235.6	239.9	239.1	243.7	246.35	235.6
04/05/08	Gen	5602.55	234.25	219.35	216.15	211.45	214.6	211.8	231.95	238.55	242.35	245.55	241.65	235.45	233.75	241.55	241.45	240.75	233.75	229.25	231.8	246.8	247.5	236.25	240.2	236.4
04/06/08	Gen	5487.9	218.6	219.9	221.55	218.7	216.55	220.75	221.35	225.4	220.85	243.4	242.85	243.15	233.4	233.3	233.5	233.55	233.55	234	221.7	242.45	236.75	232.85	223.25	216.55
04/07/08	Gen	5592.3	199.65	194.55	194.7	196.55	204.6	217.7	247.1	247.15	246.25	246.15	246.35	246.5	246.1	246.25	246.05	246.1	245.6	239.3	245	245.55	242.85	244.9	233	224.35
04/08/08	Gen	5619.9	218.15	218.55	221	220.9	229.75	230.3	237.55	246.5	233.25	244.25	241.1	242.8	238.1	234.7	230.8	227.5	227.9	238.45	245.8	247.65	240	239.05	237.55	228.3
04/09/08	Gen	5579.85	227.4	218.75	214.9	215	220.65	238.4	237.65	238.15	240.75	240.6	235.95	238.85	235.5	237.95	234.9	232.75	230.3	224.5	227.6	242.5	240.7	238.1	239.65	228.35
04/10/08	Gen	5597.55	215.9	211.9	207.75	200.5	201.65	223.6	240.55	242.75	238.35	244.4	239.85	239.4	245.6	243.7	243.3	242.95	239.3	241.6	237.75	244.05	244.1	235.1	236.9	236.6
04/11/08	Gen	5665.6	219.95	222.85	219.7	214	220.3	238.35	246.55	246.55	242	242.6	237.95	233.95	242.5	242.85	243.8	245.1	245.45	244.9	240.15	237.75	231.75	240.3	236.4	229.9
04/12/08	Gen	5683.3	227.1	231.3	219	216.85	216.35	224.65	229.1	233.05	231.2	243.2	242.3	245.65	246.2	246	246.15	246.4	245.95	246.8	246.2	246.4	246.45	246.6	242.95	217.45
04/13/08	Gen	5494.55	191.5	193	204.3	200.45	198.9	214.8	227.35	233.7	244.55	240.55	244.3	246.75	246.4	246.2	246	246.3	246.3	246.55	246.05	246.35	246.2	236.55	209.3	192.2
04/14/08	Gen	5360.25	192.5	180.15	179.2	172.1	178.75	201.45	214	235.25	246.2	246.35	246.05	246	246.2	245.9	246.2	246.6	243.15	235.95	235.2	224.8	230.35	232.85	229.25	205.8
04/15/08	Gen	5428.85	205.25	197.5	192.9	189	193.2	212.95	227.4	245.15	242.3	241.85	239.9	238.3	233.95	241.7	240.3	233.6	234	227.35	229.4	238.4	243.55	233.5	229.25	218.15
04/16/08	Gen	5256.05	210.05	200.6	193.45	195.7	205.25	226.95	227.5	225.65	226	207.95	215.3	209.55	190.65	209.05	219.65	222.85	229.1	220.15	227.95	244.75	245.5	241.85	236.3	224.3
04/17/08	Gen	5703.2	229.4	224.5	217.2	215.05	223.75	235.3	231.2	244.3	239.5	240.2	240	238.15	242.1	238.15	241.9	242.55	244.1	245.9	246	245.85	246.05	246.05	246.25	239.75
04/18/08	Gen	5584.15	229.05	215.95	204	199.6	211.95	233.1	237.7	241.05	242.95	245.9	242.95	243.2	239.8	234.55	241.8	241.7	238.45	229.8	236.75	233.15	231.7	236.6	240.75	231.7
04/19/08	Gen	5136.1	217.1	218.15	214.8	212.2	214.05	212.5	175.95	177.6	195.95	210.05	221	214.2	216.65	225.95	229.05	228	227.6	224.2	216.3	214.25	219.85	228.35	221.85	200.5
04/20/08	Gen	5341.25	200.35	194.55	191.9	186.15	195	207.55	228.4	233.1	233.25	236.55	237.1	237.15	238	237.9	233.4	230.3	229.5	233.9	230.15	226.9	237	241.8	223.65	197.7
04/21/08	Gen	5361.2	193.95	190.6	194.2	197.4	201.5	218.7	221.7	240.1	237.6	237.05	233.75	230.1	229.15	232.8	223.05	220.5	231.4	222.1	226.95	242.8	243.55	240.4	231.3	220.55
04/22/08	Gen	5461.1	206.5	205.15	200.25	203	209.9	216.15	216.8	233.9	231.2	235.45	236.9	236.4	236.55	238.25	235.25	233.65	229.15	225.05	238.95	241.85	243.15	248.9	236	222.75
04/23/08	Gen	5556.9	208.95	202.65	198.65	194.75	203.25	220.75	228.1	244.6	247.35	247.1	247.2	247.05	246.15	246.15	246.85	239.15	242.3	233.95	226.15	236.2	245.3	241.35	239.2	223.75
04/24/08	Gen	5663.65	235.95	237	237.95	236.55	229.9	229.15	231.25	246.5	245.85	238.55	241.6	242	235.9	240.8	234.15	231.05	229.2	225.9	225.1	239	233.25	240.3	242.15	234.6
04/25/08	Gen	5702.3	239.6	232.45	228.95	227.6	240.75	236.25	226.45	241.35	237.75	236.55	234.6	238.35	246.3	242.3	243.6	240.3	240.9	243.65	239.7	243.8	234.35	231.5	240.15	235.1
04/26/08	Gen	5577.45	232.35	235.95	230.15	223.1	231.05	230.1	214.05	227.8	243.4	234.95	236.05	233.6	229.1	222.55	227.85	233.9	239.15	241.35	237.1	225.85	235.55	238.6	243.1	230.8
04/27/08	Gen	5544.05	218.55	220.9	214.25	214.05	216.25	208.65	193.3	221.75	207.1	232	238.95	241.1	240.7	237.8	240.05	245.1	244.15	245.6	244.45	241.7	252.75	250	238	236.9
04/28/08	Gen	5651.1	235.6	225.55	218.9	226.65	233.9	228.1	223.2	233.1	236.45	247.15	247.6	246.1	246.95	241.65	240.6	236	239.05	235.4	241	244.75	228.1	218.3	238.05	238.95
04/29/08	Gen	5691.3	244.3	240.6	221.9	222.95	237.9	242.45	231.25	236.95	246.25	237.25	235.6	245.2	241	245.85	244	239.3	239.9	234.1	226.85	230.1	241	241.55	238.45	226.6
04/30/08	Gen	5389.55	210.4	215.25	206.6	199.8	201.05	223.5	239.5	237.85	238.55	236.45	224.2	231.8	232.55	226.95	222.1	223.15	220.75	222.05	221.75	231.55	237.35	238.25	230.95	217.2
05/01/08	Gen	5050.25	216.85	210.05	207.55	207.45	208.15	213.5	197.45	219.7	234.45	231.1	219.8	210.7	210.6	206.85	214.35	211.05	205.3	201.15	195.65	193.85	193.35	209.75	216.1	215.5

WEC Metered Generation (EMS Reads)

Date	Type	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
05/02/08	Gen	5236.1	215.95	201.75	198.55	198.2	207.5	221.85	229.05	233.9	233.8	238.25	237.3	232.75	238.85	238.55	233.55	224	216.75	206.05	177.15	203.65	214.75	221.75	211.6	200.6
05/03/08	Gen	5141.25	196.25	180.5	174.05	187.05	206	223.4	224.25	222.9	216.5	219.55	216.8	216.7	216	208.95	215.6	208.7	208.2	209.35	221.2	239	244.3	237	227.2	221.8
05/04/08	Gen	5072.2	209.9	212	211.7	211.85	211.65	214.25	218.75	218.65	217.15	221.45	220.6	218.05	215.25	215.4	217.55	215.75	219.05	210.2	198.75	205.15	204.4	205.95	192.95	185.8
05/05/08	Gen	4979.05	177.45	179	178.5	180.6	185.85	208.55	216.6	226.15	220.9	221.35	219.9	210.75	206.75	209.45	215.5	217.55	218.05	212.3	199.05	202.35	210.8	217.9	222.45	221.3
05/06/08	Gen	5005.25	215.15	211.7	185	180.8	200.25	206.35	205.05	218.3	218	221.4	219.7	207.1	203.9	222.7	227.8	228.85	221.6	216.3	201.85	196.05	205.9	193.9	197.35	200.25
05/07/08	Gen	4868.9	203.3	183.75	179.85	176.9	185.25	203.6	212.45	214.8	213	212.7	207.65	209.35	210.35	216.65	219.45	210.35	212.45	219.6	218.9	207.15	192.5	190.35	184.25	184.3
05/08/08	Gen	4590.05	192.55	181.55	169.9	167.2	171.65	178.75	185.25	196.6	186.85	182.1	181	185.85	202.95	211.1	212.1	216.75	207.65	208.3	200.2	196.85	209.1	185.7	189.6	170.5
05/09/08	Gen	4062.3	169.2	170.5	162.85	161.1	164.05	180	212.4	225.15	214.25	213.6	202.95	197.55	187.4	190.4	193.55	185.25	182.6	186.45	183.3	160.25	144.85	99.5	58.15	17
05/10/08	Gen																									
05/11/08	Gen																									
05/12/08	Gen																									
05/13/08	Gen																									
05/14/08	Gen																									
05/15/08	Gen																									
05/16/08	Gen																									
05/17/08	Gen																									
05/18/08	Gen																									
05/19/08	Gen																									
05/20/08	Gen																									
05/21/08	Gen																									
05/22/08	Gen																									
05/23/08	Gen																									
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05/26/08	Gen																									
05/27/08	Gen																									
05/28/08	Gen																									
05/29/08	Gen																									
05/30/08	Gen																									
05/31/08	Gen																									
06/01/08	Gen																									
06/02/08	Gen																									
06/03/08	Gen																									
06/04/08	Gen																									
06/05/08	Gen																									
06/06/08	Gen																									
06/07/08	Gen																									
06/08/08	Gen																									
06/09/08	Gen	995.65									6.15	12.4	11.45	11.45	13.3	20	36.75	58.15	102	155.7	45.6	66.55	114.85	114.2	113.3	113.8
06/10/08	Gen	1198.15	115.15	115.65	108.4	105.85	106.8	107.65	104.9	100.45	81.35	80.15	73.55	72.35	25.9											
06/11/08	Gen																									
06/12/08	Gen	1915.4											8.1	11.25	10.9	30.2	78.4	109.8	158.25	201.3	191.65	219.2	238.2	232.1	220.65	205.4
06/13/08	Gen	4579	224.45	189.05	185.85	176.95	167.05	167.25	160.05	169.95	181.9	196.75	204.9	196.5	200.9	201.3	192.3	195.95	198.5	197.6	197	202.95	215.5	186.45	177.65	192.25
06/14/08	Gen	4438.9	196.8	173.4	160.35	167.3	170.9	174.1	183.05	174.15	165.3	168.95	197.05	186.2	167.75	167.85	171	191.35	206.45	197	198.6	199.05	212.9	225.1	207.15	177.15
06/15/08	Gen	4464.2	189.55	190.2	188.65	181.65	180.15	183	185.7	178.6	173.85	168.95	168.7	172.8	208.55	216.4	185.85	194.8	197.9	200.25	195.7	185.55	187.85	178.75	176.8	174
06/16/08	Gen	4694.05	175.9	170.5	188.25	183.55	187.3	180	184.95	210.75	229	215.15	214	204.85	179.1	183.65	203.85	208.2	215	214.7	191.65	188.9	215.05	210.15	170.85	168.75
06/17/08	Gen	4467.1	175.05	165.45	153.9	156.75	161	160.4	159.55	160.9	178.45	204.85	215.25	226.85	221.3	208.25	192.4	187.05	192.25	196.85	194.95	190.4	184	185.55	201.45	194.25
06/18/08	Gen	4461.5	199.6	177.4	155.8	154.4	153.4	154.65	172.75	165.45	167.65	188.35	189.35	196.05	223.3	227.5	222	217.65	215.55	200.1	196.25	182.1	174.95	171.5	187.6	168.15
06/19/08	Gen	4531.4	178.3	168.6	154.3	158.35	157.4	158.55	166.2	184.1	208.2	203	205.45	203	210.7	214.4	197.65	203.3	196	204.95	200.3	193.3	188.6	191.6	195.8	189.35
06/20/08	Gen	4891.9	195.8	182.45	171.25	164.85	169.7	171.65	188	193.1	184.85	186.65	199.35	205.95	202.35	202.95	210.55	218.95	219.05	222.2	226.15	231.75	241.45	236.6	229.55	236.75
06/21/08	Gen	4937.2	234.25	226.6	215.35	215.25	206.2	202.1	199.9	213.5	217.65	227.5	229.45	233	222.75	215.35	193.4	179.2	167.3	186.8	176.9	172.85	202.15	214.05	208.25	177.45
06/22/08	Gen	5128.65	170.5	177.95	190.45	182.15	181.45	180.3	192.4	205.2	229.6	243	230.6	223.1	231.6	236.7	236.95	236.35	234.9	230.1	217.9	208.2	229	230.2	227.65	202.4
06/23/08	Gen	4758.3	202.65	200.8	179.65	160.7	174.45	173.75	179.2	188.15	185.25	177.65	175.5	182.3	189.95	198.45	217.3	230.8	226.2	221.95	208.2	204.1	214.55	210.9	226.15	229.7
06/24/08	Gen	5116.35	208.15	220.9	209.15	195.4	199.6	195.6	186.3	184.55	204.3	234.85	229.3	229.6	226.5	226.4	232	233.6	229	222.25	219.2	209.4	215.1	201.6	206.3	197.3
06/25/08	Gen	4615.9	178.3	176.8	173.25	170.1	175	174	166.5	173.75	189	198.65	218.4	214.8	193.75	187.55	197.65	213.8	215.95	207.55	202.55	178.2	187	203.45	214.05	205.85
06/26/08	Gen	4738.1	190	176.5	175.35	171.95	176.6	180.95	189.95	202.6	215	203.9	198	196	179.1	179.6	201.1	206.1	211.6	204.6	198.75	197.6	217.65	228.15	212.3	224.75
06/27/08	Gen	5544.25	242.8	239.15	233.35	229.1	230.35	231.75	212.7	224.9	231.9	241.4	236.05	231.6	237.45	238.15	237.65	241.4	234.75	231.45	224.6	215.85	230.4	225.75	228.95	212.8
06/28/08	Gen	5140.4	226.3	232.2	246.05	246.65	245.6	232.5	197.1	191.25	200.65	169.45	182.75	195.25	189.2	205.2	220.75	231.45	229.35	225.05	208.55	197.9	214.15	213.55	228.05	211.45
06/29/08	Gen	5153.35	214.7	200.65	198.7	196.75	196.7	200.35	213.7	212.75	223.85	230.9	217.7	222.5	209.5	231.9	233.6	235.35	242.6	243	233.2	208	203.9	195.95	190.55	196.55
06/30/08	Gen	5005.7	195.6	181.6	179.85	178.15	180.1	179.3	165.55	181.6	225.75	228.4	230.9	234.95	233.65	228.05	229.95	231.1	223.55	226.75	212.3	202.2	197.45	206.9	233.45	218.6
07/01/08	Gen	4961.8	179.65	180.35	172.15	164.1	168.45	182	193.55	178.8	192.9	213.2	224.75	225.35	224.7	219.6	213.9	226.8	234.35	242.9	233	215.8	231.95	227	213.2	203.35

WEC Metered Generation (EMS Reads)

Date	Type	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
07/02/08	Gen	4967.6	191.55	192.1	179.6	176.25	176.1	175.95	178	180.2	203.6	234	243.2	242.4	245.65	240.25	235.25	228.9	229.8	222.75	207.55	196.7	193.05	185.8	202.65	206.3
07/03/08	Gen	4992.7	224.45	200.9	188.95	185.35	196.15	202.9	181.7	180.65	212.65	242.6	242.55	242.55	237.5	230.55	223.25	216.9	216.7	212.45	203.8	202.95	186.5	177.75	196.25	186.7
07/04/08	Gen	4717.45	188.8	190.7	189	189.25	187.8	184.9	182.35	197.75	197.4	191.45	188	219.7	222.65	205.15	184.35	188.55	213.85	221.7	186	193.5	192.75	191.55	207	203.3
07/05/08	Gen	4790.65	186	192.3	192.2	189.8	190	184.6	170.4	170.25	181	185.5	194.3	201	193.95	207.2	207	204.4	211.75	219.05	219.1	229.55	237.7	210.35	209.75	203.5
07/06/08	Gen	4647.25	175.4	168.9	168.6	169.6	168.5	176.8	170.35	169.55	183.1	216.75	219.95	212.8	214.05	223.1	222.1	208.35	200.4	199.65	193.7	192.55	198.9	193.4	197.9	202.85
07/07/08	Gen	4663.7	192.75	181.7	179.3	190.1	198.35	199.5	188.15	194.9	214.5	215.4	221.15	211.45	184.4	209.75	188.55	186.5	190.65	183.7	188.25	201.5	209	186.35	170.05	177.75
07/08/08	Gen	4746.45	217.6	201.35	174.15	175	174.6	182.15	169.85	184.4	220.55	221.75	207.6	202.2	181.85	196.85	202.5	203.5	203.25	210.4	202.9	199.1	206.4	204.55	205.3	198.65
07/09/08	Gen	4515.35	198.5	194.6	180.6	165.5	165.65	167.75	170.25	170.65	188.1	213.95	205.9	187.4	181.1	182.6	185	205.4	213.05	202.85	193.75	184.3	189.55	186.7	190.7	191.5
07/10/08	Gen	4727.4	179.55	187.65	177.9	168.6	170	172.35	184.95	196.85	220.65	229.7	228	221.8	222.75	222.65	217.95	214.95	210.3	198.4	198.15	198.85	179.2	182.55	172.05	171.6
07/11/08	Gen	4415.95	186.85	185.15	168.9	164.25	169.75	176.75	172.3	163.6	163.4	163.1	173.45	177.45	176	183.6	215.2	216.5	213.65	205.3	201.5	193.45	201.35	182.3	182.55	179.6
07/12/08	Gen	4336.15	175.5	164.75	175.1	165.15	163.45	163.95	162.6	198.8	167.3	177.6	189.25	209.7	200.3	187.5	186.75	189.5	191.85	188.75	182.25	172.95	183.55	184.45	177.55	177.6
07/13/08	Gen	4973.75	170.5	177.05	183.4	185.8	186.5	182.75	179.75	177.65	188.5	216.85	213.9	205.5	219.55	219.6	221.45	228	233.25	239.75	232.15	221.15	229.7	223.15	223.05	214.8
07/14/08	Gen	4738.25	198.9	198.55	193.55	186.35	186.1	197.5	191.9	203.95	191.3	200.15	213.1	215.9	196.1	183.5	188.6	190.45	193.9	198	183.65	185.65	214.3	213.45	210.3	203.1
07/15/08	Gen	4514.1	173.05	171.7	177.95	172.2	171.15	176.2	175.15	160.75	158.65	173.7	211.55	198.3	175.75	171.25	182.85	211.15	225.2	218.75	198.75	186.1	208.6	213.5	216.95	184.9
07/16/08	Gen	4721.25	177.55	176.55	166.3	179.05	177.3	172.8	165.95	176.75	204.05	197.4	173	156.65	174.05	213.6	222.2	236.7	235.25	236.75	227.55	205.6	203.7	224.15	217.05	201.3
07/17/08	Gen	4962.3	204.9	191.45	190.5	182.3	193.75	190.7	177.75	182.9	205.6	234.55	234.9	228.35	230.65	242.5	243	233.55	217.7	212.55	197.25	195.35	201.75	198.7	189.5	182.15
07/18/08	Gen	4944.9	174.95	175.45	173.3	166.15	166.45	175.35	179.25	154.3	191.15	222.6	233.15	227.8	228.05	235.55	233.15	234.2	230.05	229.15	228.75	234.2	245	226.9	197.15	182.85
07/19/08	Gen	4572.85	181.45	173.95	173.5	164.3	164.4	160.1	164.15	169.6	181.2	202.8	216.3	216.25	209.5	208.9	207.4	213.55	210.05	213.5	207.8	193.2	197.85	188.8	181.35	172.95
07/20/08	Gen	4351.6	174.2	175	178.35	165.5	161	164.75	165.25	167.8	161.05	164.85	201.8	208.9	202.85	188.7	197.3	189.1	202.8	204.1	200.35	180.7	179.65	189.7	172.2	155.7
07/21/08	Gen	4322.95	163.25	158.75	168.65	168.95	168.95	159.05	160.65	161.2	158.3	158.35	180	213.85	197.45	175.35	187.1	200.85	209.15	202	196.5	189.3	185.1	179.45	194.05	186.7
07/22/08	Gen	4817.05	176.2	168.7	173.4	182.2	188.8	188.3	173.6	177.45	192.1	218.95	210.3	200.9	199.2	198.15	197.9	209.3	230.8	236.7	231.45	220.85	220.5	208.45	213.35	199.5
07/23/08	Gen	4889.3	191.35	183.8	182.15	177.5	182.9	191.05	186.7	186.25	199.6	217.5	227.5	214.15	191.05	188.65	210.05	220.2	224.7	224	213.2	213.45	221.2	223.1	210.25	209
07/24/08	Gen	4946.95	208.9	208.15	185.6	178.5	184.15	195.45	189.6	202.1	197.9	210.85	206	199.55	189	212.15	219.15	218.05	221.9	227	232	211.65	218.55	216.75	206.2	207.8
07/25/08	Gen	4796.55	191.25	178.15	171.65	167.55	169.9	171.85	167.5	183.4	207.05	222	231.1	228.1	211.6	219.9	221.55	224.4	218.45	217.8	209.1	202.3	182	191.8	205.25	202.9
07/26/08	Gen	4749.7	179.45	172.55	166.35	170.5	167.55	171.6	176.6	162.8	188.3	211.8	210.1	198.1	196.85	205.5	219.6	222.6	230.9	227.75	225.2	221.35	214.45	202.5	205.65	201.65
07/27/08	Gen	4392.3	177.25	169.05	174.05	167.1	164.7	164.2	167.3	172.45	182.7	199.7	214.7	214.25	203.15	183.65	192.25	186.55	184.25	195.45	174.4	162.5	168.05	185.15	201.05	188.4
07/28/08	Gen	4801.9	183.65	180.6	187.85	186.15	177.1	160.45	159.8	171.45	179.4	208.05	214.55	221.25	241.55	229.35	213.45	213.95	214.05	215.6	207.5	202.75	215.6	203.3	206	208.5
07/29/08	Gen	4861.55	197.25	179.85	183.7	183.8	185.25	192.15	189.05	190.9	223.75	218.6	204.55	196.65	197.9	203.2	206.55	222.95	233.5	227.05	204.25	196.65	216.85	205.55	207.2	194.4
07/30/08	Gen	5023.4	184.3	176.05	170	168.4	164.5	173.5	172.6	190.15	202.15	235.7	237.95	220.2	212.8	210.4	232.45	238.65	241.65	239.6	234.95	231.25	235.45	223.55	211.55	215.6
07/31/08	Gen	5081.7	215.35	210.4	197.2	190.45	193.6	206.85	214	216.7	243.35	239.1	236.75	223.85	215.9	216.1	218	226.65	222	210.9	197.65	193.15	195.7	188.1	198.2	211.75
08/01/08	Gen	4983.1	199.9	199.35	188.85	183.25	187.9	188.15	168.75	175.4	218.6	217.65	216.65	226.05	229.9	228.2	220.25	216.85	211.35	203.5	206.4	208.9	211.7	218.4	233.1	224.05
08/02/08	Gen	4927	210.75	195.7	193.9	193.3	188.9	190.2	175.8	185.65	202.15	214.5	233.65	226.05	205.7	210.4	221.4	227.15	217.55	214.75	202.1	192.85	200.3	206.3	209.5	208.45
08/03/08	Gen	4807.05	211.1	198.2	187.95	183.2	181.2	180.85	181.4	194.8	210.35	219.85	224.75	213.9	189.75	190.1	192.25	198.65	211.7	216.05	212.65	205.05	200.15	200.6	201.85	200.7
08/04/08	Gen	5090.35	206.4	212.55	213.05	207.5	200.65	177.85	165.45	183.55	183.9	206.25	220.15	225	217.2	221.1	220.05	218.15	231.4	228.15	226.1	222.45	231.85	231.1	220.1	220.4
08/05/08	Gen	4919.8	197.6	196.8	193.15	183.8	188.55	199.5	193.2	197.1	192.95	183.4	198	224.5	224.45	213.15	206.3	196.2	210.45	202.85	206.5	216.9	222.75	221.3	219.9	230.5
08/06/08	Gen	5243.55	205.25	197.1	197.7	190.55	202.35	234.85	232.35	232	232.6	223.7	229.25	213.75	213.65	210.9	212.55	216.8	217.15	219.4	213.1	216	238.4	231.55	236.25	226.35
08/07/08	Gen	5067.8	229.45	209	206.7	206.3	207.15	210.5	192.8	192.6	193.1	188.65	233.95	237.2	223.15	218.95	224.4	237.3	235.3	228.35	214.4	185.4	198.6	191.65	193.25	209.65
08/08/08	Gen	5023.04	241.3	233.7	226.35	218.15	214.05	205.75	193.69	177.35	179.85	191.5	211	223.25	204.6	200.1	208.55	215.55	228.35	224.1	208.35	198.05	220.45	210	202.4	186.6
08/09/08	Gen	4656.95	198.55	183.9	197.7	191.2	191.25	191.55	173.4	172.5	176.85	173.5	183.5	217.2	204.25	177.65	186.3	194.75	192.8	197	203.45	202.05	210.25	215.6	212.65	209.1
08/10/08	Gen	4930.15	197.9	193.55	187.25	183.85	184	183.55	182.45	177.85	178.95	187.2	193.15	217.6	236.85	233.15	218.15	216.75	215.1	217.05	215.95	214.25	220	237.2	225.55	212.85
08/11/08	Gen	5050.2	177.1	186.6	179.75	174.25	179.4	189.6	183.05	193	223.1	223.15	228.35	244.6	242.8	236.25	222.25	220.75	219.8	221.65	218.1	209.9	222.6	220.5	222.3	211.35
08/12/08	Gen	5171.15	219.05	210.5	197.7	185.25	190.3	201.75	197.7	186.6	197.25	221.65	222.55	221.8	225.6	231	231.3	233.75	233.8	233.9	225.55	209.7	231.05	230.7	223.55	209.15
08/13/08	Gen	5015.1	199	191	195.8	189.5	189.65	197.9	184.35	175.5	186.35	208.15	222.3	210.4	190.2	205.05	216.35	233.55	237.05	233.5	222.45	223.2	230.8	219.8	232.4	220.85
08/14/08	Gen	3168.5	229.6	219.3	207.85	199.1	196.45	206.25	197.4	202.05	221.85	227.05	225.05	224.1						2.3	15.55	31.55	78.2	128.85	169.35	186.65
08/15/08	Gen	4871.25	209.2	188.95	182.7	173.05	173.9	180.35	174.1	197.25	223.1	232.85	231.9	221.65	194.75	181.6	217.95	216.5	218.55	213.2	201.7	201.05	214	211.7	204.35	206.9
08/16/08	Gen	5186.5	219.95	204.9	198.7	193.9	202.95	204.5	196.6	214.75	206.05	205.85	242.4	239.7	235.7	239.25	230.65	225.7	231.55	216.4	203.45	198.7	228.55	214.45	216.75	215.1
08/17/08	Gen	5093.3	233.4	214.8	204.3	195.1	190.4	190.05	178.6	179.9	195.3	216.1	228.45	225.2	227.1	225.35	232.9	224.7	224.6	218.45	209.9	212.5	230.55	223.9	203.2	208.55
08/18/08	Gen	4896.85	211.9	197.3	181.5	174.85	179.7	191.85	196	199.3	196.85	203.9	212.9	229.55	218.8	210.45	205.95	221.3	228.15	218.4	200.6	213.3	222.35	200.35	190.15	191.45
08/19/08	Gen	4929.3	183.35	177.5	192.7	190.05	187.9	188.3	214.65	223.55	225.7	218.95	220.45	228.8	220.45	211.4	204.6	215.6	217.2	215.2	200.85	187.45	193.15	209.1	214.7	187.7
08/20/08	Gen	4970.6	178.2	180.5	170.7	174.1	178.95	183.1	179.3	189.2	190.65	212	223.95	213.4	209.75	215.85	231.15	235.15	237	235.1	225.3	210.2	241.4	233.55	218.45	203.65
08/21/08	Gen	4903.7	192.45	185.6	185.35	181	183.05	191.9	192.75	202	201	204.5	201.4	211.7	208.15	219.75	217.7	218.9	212.9	229.4	232.45	225.1	213.6	215	197.75	180.3
08/22/08	Gen	4765.1	196.6	195.45	184.35	179.4	179.2	190.3	196.5	199.45	205.95	219.7	241.65	245.9	224.6	206.7	227.3	230.85	240.45	241	234.9	223.2	159.6	124	110.8	107.25
08/23/08	Gen	2437	100.15	105.55	103.35	93.2	91.35	97.95	99.85	81.8	81.9	84.15	100.6	101.55	104.7	110.4	110.75	107.75	108.9	103.2	102.3	107.25	111.25	114.25	109.05	105.8
08/24/08	Gen	3166.7	104.9	106.85	105.55	98.4	92.65	94	82.5	82.5	78.35	97.1	109.85	97.4	93.8	111.7	117.75	115.55	117.2	183.4	204.95	216.55	238.85	220.8	197.95	198.15
08/25/08	Gen	5058.7	205.55	201.7	189.35	187.55	191.7	197.9	189.7	201.6	219.5	229.25	239.85	235.3	218.45	232.8	238.2	241.8	238.15	221.9	197	181.3	207.25	205.95	203.55	183.4
08/26/08	Gen	5121.8	191.55	182.45	168.5	165.35	185.5	202.45	195.45	182	210.1	221.35	219.55	220.1	203.35	220.6	231.3	234.75	236.2	237.75	237.9	237.35	246.05	241.5	235.2	215.5
08/27/08	Gen	4177.6	192	182.85	173.3	171.55	170.4	172.5	178.4	199.6	210.8	205.1	214	216.3	205.2	179.05	109.75	109.55	109.7	109.3	116.25	154.35	187.4	186.75	209.4	214.1
08/28/08	Gen	4962.85	205.35	176.9	173.1	164.7	169.8	183.65	175.95	188.2	197.2	208.65	208.95	219.7	220.95	217.45	227.35	228.1	225.9	231.75	223.15	227.7	225.55	228.25	220.9	213.65
08/29/08	Gen	5310.55	211.85	190.6	186.6	197.45	192.45	205.7	236.75	235.05	234.5	240.7	234.8	227.5	224.8	225.95	225.7	226.15	225.55	222	232.5	225.6	226.8	224	237.3	220.25
08/30/08	Gen	4699.5	204.2	188.8	192.45	177.15	172.15	173.1	169.35	170.35	176.7	187.05	209.2	234.45	218.1	212.5	224.6	237.95	227.2	212	196.95	194.7	192.8	176.95	170.9	179.9
08/31/08	Gen	4659.65	194	190	189.6	182.75	178.7	177.1	170.75	168.85	176.75	203.75	219.35	209.9	207.5	211.45	197.25	188.75	188.85	192.05	193.75	202.55	214.9	212.15	198.45	190.5

WEC Metered Generation (EMS Reads)

Date	Type	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
09/01/08	Gen	4758.2	184.3	183.35	181.85	182	182.2	189.7	183.25	175.65	185.65	187.2	219.9	199.7	172	180.4	201.75	206.55	227	226.5	218.75	209.25	226.75	222.2	212.25	200.05
09/02/08	Gen	5053.75	203.3	197.45	191.6	190.9	189.5	187.2	199	205.2	211.65	219	226.85	230.25	221.85	208.55	201.15	212.55	210.2	215.85	214.75	217.4	227.85	229.65	223.65	218.4
09/03/08	Gen	5142.4	219.55	209.85	202.15	199.8	196	185.1	191.75	195.25	210.7	222.8	225.45	216.75	218.35	223.35	221.7	224.4	227.85	228.45	228.9	231.05	226.15	208.2	219.7	209.15
09/04/08	Gen	5113	203.4	199.3	196.25	192.45	189.25	185.9	176.35	185.05	208.15	224.05	222.25	221.15	208.2	220.05	227	227.55	229.65	236.45	239.1	233.65	232.6	229.85	220.05	205.3
09/05/08	Gen	4648.15	207.5	207.75	206.85	197.85	195.4	191	189.95	189.9	221	223.6	215.3	208.15	201.85	216.1	221.95	224.25	229.25	224.25	201.9	182.25	153.95	117.95	108.95	111.25
09/06/08	Gen	2324.25	112.75	90	86.6	90.95	95.35	96.8	86.85	81.5	87.35	93.95	95.5	103.45	96.55	95.15	105.75	100.1	103.8	100.05	102.3	102.6	100.25	100.95	98.9	96.8
09/07/08	Gen	3384.3	100.6	103	101.4	100.45	91.5	97	93.1	92.2	89.75	102.9	112.45	109.25	107.5	115.75	139.7	179	208.75	221.05	221.6	218.55	211.75	199.75	189	178.3
09/08/08	Gen	4954.245	180.15	171.2	164.25	168.05	167.4	178.05	197.795	207.05	209.15	217	207.2	212.5	210.15	217.45	233.05	237.25	224.65	230.2	230.6	232.2	232.7	221.15	208.5	196.55
09/09/08	Gen	4810.7	194.35	194.15	186.6	179	182.95	193.1	202.6	207.85	218.95	216.35	209.55	210.95	214.75	210.5	203.95	199.6	184.95	182.15	194	210.15	207.9	207.1	205.95	193.3
09/10/08	Gen	5071.65	183.1	176.05	177.4	175.1	178.65	188.15	199.45	208.95	217.9	225.35	222.2	219.85	220.2	218.8	220.9	227.55	227.2	234.6	223.45	225.85	237.25	239.65	220.2	203.85
09/11/08	Gen	5161.05	194.1	191.15	189.85	188.5	185.45	189.35	205.05	212.75	222.35	225.85	227.3	221.4	216.15	232.9	236.25	234.85	237.35	227.2	222.75	232.35	237.05	237.2	202.85	191.05
09/12/08	Gen	5124.45	188.6	197.65	195.95	192.7	191.45	192.85	203.9	209	225.65	225.1	230.1	230.55	216.9	224.6	236.3	235.35	231	222.95	206.05	214.8	223.65	230.1	210.3	188.95
09/13/08	Gen	4456.3	205.45	193.5	186.4	180.2	178.1	177.75	167.95	168.65	185.05	201.6	217.15	203.85	184.65	187.15	178.4	183.5	183.15	184.1	171	177.45	194.25	194.5	180.95	171.55
09/14/08	Gen	4701.65	175.75	167.05	169.05	169.2	174.6	174.65	170.7	166.2	163.8	171.3	181.9	203.2	225.8	223.3	222.45	219.55	231.45	234.8	222.2	229.15	211.95	198.9	201.55	193.15
09/15/08	Gen	5222.75	196.65	187.9	187.75	187.5	190	200.85	197.9	217.2	230.8	239.8	242.6	240.85	243.25	243.1	241.1	233.5	218.55	227.2	219.3	214.3	213.1	218.8	222.55	208.2
09/16/08	Gen	4964	197.6	187.95	183.55	180.05	182.1	192.15	203.9	203.6	206.85	206.25	202.35	225.15	224	221.35	219.1	216.85	220.05	220.7	217.6	218.85	216.8	214.1	211.1	192
09/17/08	Gen	4619.5	185.05	177.95	181.25	181.35	184.7	178.1	183.15	181.3	185.65	191.65	197.95	213.7	211.2	208.1	202.55	196.9	188.95	185.25	181.65	212.85	213.2	203.25	188.3	185.5
09/18/08	Gen	4780.45	187.55	186.3	181.05	179.3	174.6	168.65	176.4	175.1	180.3	196.35	208.5	220.05	219.15	212.7	211.25	214.45	214.6	218.5	218	228.2	222	213.75	188.65	185.05
09/19/08	Gen	3557.55	171.05	170.45	169.15	167.05	171.15	162.6	173.75	185.4	185.3	189.95	208.95	217.25	206.55	212.7	206.1	195.05	184.5	148.9	106.85	90.05	34.8			
09/20/08	Gen																									
09/21/08	Gen																									
09/22/08	Gen																									
09/23/08	Gen																									
09/24/08	Gen	3503.25			8.45	11.85	11.4	34.25	65.3	97.9	119.55	167.05	202.95	220.15	218.75	231.95	225.65	224.6	222.05	220.95	213.15	218	216.25	204.25	183.7	185.1
09/25/08	Gen	5138.8	203	199.7	191.7	186.7	185.25	190.95	182.7	181.95	202.45	244.8	251.9	251.5	235.6	235.9	240.85	226.8	226.4	224.95	229.2	223.7	213.2	201.75	210.25	197.6
09/26/08	Gen	5173.05	206.95	192.95	184.1	180.3	181.75	189.1	192.95	210.85	217.9	230	222.85	220.55	226.05	237.55	241.3	239.65	240.45	227.45	213.05	224.2	226.65	224.95	231.2	210.3
09/27/08	Gen	4836.4	199.4	187.75	190.3	190	187.1	179.65	176.85	183.25	188.8	191	202.8	223.5	222.05	219.8	210.6	219.4	225.35	209.75	182.5	204.4	220.65	213.4	206.7	201.4
09/28/08	Gen	4822.15	190.8	186.3	182	187	187.55	182.65	183	186.9	190.35	185.2	186.85	191.4	203.35	203.7	213.95	228.55	223.55	223.3	213.55	225.5	220.8	219.1	213.8	193
09/29/08	Gen	5130.45	189.25	185.6	179.05	176.45	174.55	184.9	192.3	199.85	196.5	210.8	234.5	232.9	223.35	240.05	238.1	234.4	225.85	228.15	233.55	232.55	238.8	229.4	226.05	223.55
09/30/08	Gen	5436.45	236.55	222.7	213.95	210.15	211.2	215.85	215.45	225.55	233.85	234.9	237.65	234.15	221.55	226.9	229.9	241.6	225.1	222.15	217.1	229	243.05	236.35	229.1	222.7
10/01/08	Gen	4653.445	196.85	188.05	178.55	172.65	175.6	184.85	197.2	205.35	219.7	234.845	233.5	230.95	224.1	235.4	158.3	98.65	124.8	174.2	211.3	230.8	208.8	199.25	185.05	184.7
10/02/08	Gen	5122.5	209.95	206.3	195.5	188.65	190.3	190.25	197.3	201.75	212.9	228.35	238	232.1	226.75	220.9	222.1	215.15	214.45	206.2	209.4	235.4	234.9	227.5	218.25	200.15
10/03/08	Gen	4862.75	199.1	192.25	183.35	176.65	180.15	182.2	199.05	189.95	198.3	208.3	216.3	216.4	223.4	217.65	209.35	207.1	203.35	203.45	217.9	222.2	214	214.75	204.05	183.55
10/04/08	Gen	4519.6	186.3	181.15	187.9	184.55	182.75	175	169.7	174.35	185.3	199.65	197.85	203.95	214.35	211.65	198.8	198.85	193.55	179.6	175.65	186.6	189.35	183.9	177.45	181.4
10/05/08	Gen	4431.85	194.35	190.9	182.75	180.25	180.85	179.7	173.05	177.4	182.3	176.25	181.4	181.6	181.4	182.75	183.05	183.45	184.15	185.05	195.35	209.15	200.3	193.45	180.65	172.3
10/06/08	Gen	4618	178.25	183.9	178.1	164	163.4	165.6	170	170.45	178.05	190.75	219.6	216.75	213.9	200.35	197.3	190.75	189.4	194.7	213.15	223.1	206.95	198.55	216.3	194.7
10/07/08	Gen	4634.9	171.75	167	160.65	156.75	166.35	170.05	166.9	187.7	201.15	205.95	216.2	198.2	200.2	209.4	213.15	224.15	222.4	214.3	209.6	223.85	204.8	182.35	191.6	170.45
10/08/08	Gen	4646.7	177.45	170.6	172.8	172.4	172.25	179.25	193.9	185.95	187.7	199.7	210.8	218.3	203.3	188.1	197.5	191.95	188.5	184.75	211.2	216	226.2	214.3	204.3	179.5
10/09/08	Gen	4660.35	166.25	168.1	172	168.15	165.25	183.85	209.1	209.05	220.8	219.65	219.05	221.2	206.35	190.75	189.6	184.45	176.25	176.05	196.85	223.75	227.4	197.75	186.5	182.2
10/10/08	Gen	4586.15	179.8	171.4	166.65	163.85	165.7	178.5	190.45	202.35	205.75	213.2	219.25	210.8	205.75	206	198.1	194.35	189.55	185.8	188.55	189.65	201.05	191.65	183.85	184.15
10/11/08	Gen	4411.25	182.05	177.4	178.85	179.05	175.5	170.55	172.4	181.4	192.65	208.3	217.25	211.5	190.4	186.65	185.25	183.7	183.5	174.95	178.1	181.6	179.25	173.85	172	175.1
10/12/08	Gen	4610.55	177.9	177.55	177.6	173.1	173.05	176.45	176.9	181.75	198.15	214.75	211.75	202.7	196.8	193.7	192.2	192.25	194.85	197.65	210	212.65	210	196.15	189.05	183.6
10/13/08	Gen	4682.4	171.55	170.05	172.1	172.35	178.95	184.35	179.2	188.55	192.35	195.65	195.6	203.65	218.1	213.45	206.4	206.2	199.5	198.9	215.55	220.15	199.05	194.9	205.7	200.15
10/14/08	Gen	4508.05	182.3	184.7	184.8	182.5	173.3	171.1	169.7	184.65	182.65	200.6	221.3	210.15	185.05	189.05	192.85	198.95	183	171.5	179.05	192.15	200.9	193.7	191.7	182.4
10/15/08	Gen	4598.6	173.35	171	166.75	165.9	172.65	178.6	181.5	183.35	186.65	190.7	192.85	188	211.45	207.95	205.6	207.85	196.7	189.65	197.55	214.9	215.85	207.1	205.3	187.4
10/16/08	Gen	4563.75	179.65	172.8	166.3	164.8	165.7	178.15	179.65	178.55	182.05	196	212.65	212.5	198.6	199.6	204.6	206.2	197.35	181.35	191.95	208.55	210.4	199.05	194.3	183
10/17/08	Gen	4718.65	179.25	178.75	172.1	173.95	172.65	165.25	167.85	185.75	188.75	196.05	208.15	210.65	200.8	208.85	207.25	208.75	210.7	191.05	207	205.7	219.15	215.05	222	223.2
10/18/08	Gen	4721.7	206.95	195.25	192.75	187.45	187.75	188.2	183.05	177.6	163.5	185.85	210.1	207.9	190.95	199.25	208.6	209.2	204.6	190.35	197.6	206.05	205.35	204.7	215.2	203.5
10/19/08	Gen	3036.2	173.95	154	120.7	97.05	96.2	92.5	90.15	91.35	87.85	86.5	88.6	84	85.4	85.4	83.5	104.25	126.75	148.95	174.25	193.35	196	202.35	191.8	181.35
10/20/08	Gen	4658.45	198.35	192.2	192.65	194.9	192.05	193	183.1	182.25	190.7	206.85	214.95	207.9	198.7	202.25	213.05	191.75	186.05	171.8	171.6	190.95	197.8	191.35	199.05	195.2
10/21/08	Gen	4830.6	181.3	182.3	184.25	182.7	178.35	176.4	183.05	211	209.4	210.5	213.4	218.8	225.25	233.8	226.45	207.95	206.15	195.85	186.05	199.45	216.6	203.95	201.1	196.55
10/22/08	Gen	5142.85	204.8	199.55	194.1	188	181.75	182.25	206.4	228.4	217.6	224.9	227.95	227.35	226.5	228.85	228.8	225.85	227.35	220.4	230.4	234.5	220.3	214	206.4	196.45
10/23/08	Gen	4982.15	204.9	196.1	190.35	187.75	184.35	175.85	191.1	195.6	203.75	210.2	214.85	223.6	230.1	237.65	232.95	219.6	213.25	201.95	212.2	215.35	207.05	214.15	214.7	204.8
10/24/08	Gen	4766.85	197.2	181.85	179.25	176.65	177.2	187.35	205	199.25	210.65	215	226.7	227.25	224.65	220.3	219.3	212.6	203.65	188.4	196.35	190.5	175	171.9	194.95	185.9
10/25/08	Gen	4713.95	181.95	188.8	190.8	194.2	202.05	189.35	176.45	177.45	178.85	196.9	207.2	220.15	210.45	193.75	198.65	203.9	209.45	203.8	199.9	197.15	197.55	200.35	202.45	192.4
10/26/08	Gen	4725.25	169.1	184.7	181.85	183.4	180.35	177.75	177.35	165.9	160.35	171.8	175.9	186.95	208.45	210.75	216.2	228.1	235.15	223.05	223.55	225.7	218.7	223.45	201.4	195.35
10/27/08	Gen	4476.25	183.2	178.35	179.4	176.9	183.8	176	180.45	180.1	176.05	172.45	178.75	192.65	210.1	212.95	207.3	188.35	182.5	178.4	196.45	196.8	185.6	187.6	191.3	180.8
10/28/08	Gen	5072.75	180.7	177.5	182.1	180.95	180.5	198.75	234	225.6	220.95	223.25	227.85	232.55	236	240.85	231.8	209.4	211.25	211.7	229.95	227.7	202.25	205.1	202.15	199.9
10/29/08	Gen	5171.55	211.25	203.2	200.1	197.3	192.6	179.15	205.15	224.05	212.8	219.2	225.55	224.3	233.6	228.8	220.05	202.4	219.15	216.65	238	228.5	215.7	226.5	226.6	220.95
10/30/08	Gen	4919.5	202.15	199.6	194.55	192.1	193.75	214.7	212.35	217.7	217.45	222.4	231.15	224.25	207.7	205.25	196.6	179.75	181.3	176.35	188.5	206.55	222.4	221.45	209.7	201.8
10/31/08	Gen	4995.25	206.55	198.9	197.35	196.15	198.95	208.9	208.55	213.5	202.1	224.75	219.7	221.15	221.9	224.4	221	211.35	209.15	205.6	202.9	190.95	201.4	207.2	210.2	192.65

WEC Metered Generation (EMS Reads)

Date	Type	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
11/01/08	Gen	4708.6	178.55	179.1	179	178.45	174.25	174.4	187.4	191.1	195.45	195.9	194.95	208	228.75	218.7	204.05	207.9	210.25	216.55	216.5	207.1	207.8	186.8	181.45	186.2	
11/02/08	Gen	4797.5	185.65	182.8	170.85	174.1	180.55	174.05	180.05	176.5	172.7	181.8	191.15	201.8	201.4	199.5	196.15	197.1	203.6	222.45	221.3	219.75	198.9	199.45	195.9	192.15	177.85
11/03/08	Gen	4983.8	186.1	183	182.35	177.15	172.15	177.65	181.35	209.45	217	221.7	230.8	231.25	231.1	232.35	226.25	210.5	205.1	222.35	227.55	220.75	218.3	216.5	203.5	199.6	
11/04/08	Gen	5147.15	202.45	200.3	195.7	198.45	201.65	210.85	215.6	219.95	229.3	233.25	231.7	217.3	212.75	224.05	219.8	211.25	206.4	222.85	226.55	219.7	224.6	224.2	201.85	196.65	
11/05/08	Gen	5149.9	206.75	193.45	191	202.1	207.05	216.75	224.2	231.6	229.1	233.2	231.9	220.65	215.1	226.9	217.05	189.25	192.35	233.85	237.9	229.35	203.6	209.55	209.3	197.95	
11/06/08	Gen	4886.2	203.55	195.8	193.15	192.95	198.5	197.85	202.5	196.7	207.85	226.35	226.65	217	216.3	216.4	211.5	202.75	190.75	194	196.5	195.25	209.55	196.65	198.55	199.15	
11/07/08	Gen	4837.4	206.1	200.95	197.3	194.35	195.8	192.1	196.8	214.05	217.9	209.4	210.05	210.55	217.05	216.75	206	186.55	188.35	204.75	197.05	190.75	186.35	196.35	204.15	197.95	
11/08/08	Gen	4791.2	206	200.55	195.4	192.55	191.15	194.4	186.35	185.65	189.95	204.3	217.05	214.65	213.05	209.05	204	191.05	186.95	209.7	208.95	200.4	202.3	195.45	199.6	192.7	
11/09/08	Gen	4814.8	195.8	193.55	190.75	190.25	188.85	185.9	181.6	173.8	176.8	179.6	199	203.75	214.95	221.95	212.7	196.8	208.1	225	228.6	223.2	217.1	211.85	198.4	196.5	
11/10/08	Gen	4932	191.65	190.25	187.7	191.5	195.7	192.4	184.65	198.25	201.65	215.85	221.35	221.95	221.9	220.35	219.65	209.95	195.1	209.45	204.8	200.35	207.55	217	223.2	209.8	
11/11/08	Gen	4997.5	188.95	186.3	186.3	184.45	184.9	193.8	187.4	191.95	201.65	197.5	224.9	230.95	224.4	228.6	226	216.2	203.3	224.9	227.1	227.65	224.75	215.5	216.6	203.45	
11/12/08	Gen	5036.4	195.55	191.5	186.55	184.8	179.9	183.3	206.3	214.45	216.45	220.15	215.4	222.05	224	230.95	222.65	219.25	210.2	227.3	224.15	223.55	212.75	214.2	211.65	199.35	
11/13/08	Gen	4920.2	187.65	181.5	180	178.75	169.45	167.7	186.25	214.9	216.95	220.5	234.4	231.25	232.7	233.1	233	218.55	190.2	203.05	196.7	206.2	217.35	211.55	210.95	197.55	
11/14/08	Gen	4963.9	184.55	173.45	168.75	168.3	170.9	177.05	193.4	216.55	220.05	223.3	232.1	229.9	229.3	230.55	223.95	224.3	215.25	221.45	220.5	219.6	210.3	203.55	213.2	193.65	
11/15/08	Gen	4507.35	180.75	180.55	180.45	181.45	184.15	184.85	185.5	188.1	198.8	201.85	206.1	190.55	176.35	181.7	183.3	178.75	186.15	206.75	196	185.4	195.95	187.85	183.85	182.2	
11/16/08	Gen	4453.7	183.1	182.3	186.15	184.85	182.15	178.15	174.15	175.55	179.05	185.2	185.6	185.35	178.15	180.95	187.6	187.25	183.65	211.1	203.65	200.65	180.4	185.05	185.5	188.15	
11/17/08	Gen	4769.3	190.7	187.45	182.15	185.5	193.35	189.8	168.6	175.2	192.75	196.8	200.4	211.25	223.1	226.55	207.25	203.55	201.7	208.65	206.9	204.15	203.5	195.4	213.65	200.95	
11/18/08	Gen	4686.3	192.25	190.3	186.15	186.75	175.55	174.15	176.3	201.65	212.5	208.65	210.1	213.65	217.85	225.65	218.2	196.05	183.6	191.6	188	182.3	185	189.65	191.55	188.85	
11/19/08	Gen	4750.95	194.8	190	189.2	179.65	179.65	187.65	196.2	213.5	222.55	205.25	209.8	213.9	213.8	211.55	197.6	188.15	190.45	192.55	189.95	199.6	202.9	196.6	199.9	185.75	
11/20/08	Gen	4767.65	194.25	186.6	185	184.15	179.25	195.2	193.5	186.95	199.55	212.7	227.5	228.05	218.9	205.4	200.9	191.95	176.15	196.65	207.1	216.75	207.7	193.55	194.15	185.75	
11/21/08	Gen	4939.6	196.35	192.8	182.15	179.35	181.3	192.45	199.6	209.45	216.15	223.2	222.85	220.65	219.9	220.15	206.2	191	216.75	241.85	236.75	221.65	198.6	188.15	189.45	192.85	
11/22/08	Gen	4497.4	198.15	192.45	185.45	184.8	185.35	181.9	181.95	182.65	176.15	190.05	189.65	185.35	181.75	177.3	171.75	175.5	189.9	213.3	209.5	200.1	188.4	186.35	186.55	183.1	
11/23/08	Gen	4537.8	182.55	178.25	176.1	176.5	172.85	173.3	168.9	171.2	180	184.35	183.95	183.8	184	182.55	179.65	182.1	211.85	235.8	235.5	223.35	202.35	197.35	183.9	187.65	
11/24/08	Gen	5216.75	193.05	189.2	189.2	191.2	208.15	214.9	224.2	232.25	231.55	239.15	238.6	228.25	229.95	229.95	228.55	220.55	228.1	234.8	232.75	229.3	211	203.3	198.7	190.1	
11/25/08	Gen	4972.2	183.35	186.9	189.5	189.65	195.4	195.8	202.5	199.35	206.35	216.25	226.05	229.8	224.2	223.65	220.85	209.75	214.3	224.1	220.5	218.45	227	206	184.5	178	
11/26/08	Gen	4908.6	182.35	182.9	183.75	178.25	187.85	185.7	209.35	212.1	224.9	231.9	231	235.75	232.75	228.6	219.05	200	198.8	207.2	208.15	210.2	207.1	190.25	179.8	180.9	
11/27/08	Gen	4483.95	187.2	178.05	181.65	181.6	175.1	175.1	172.15	167.6	193.15	204.9	215.2	220.6	206.15	200.65	184.4	180.25	177.5	185.7	182.75	180.35	184.65	189.5	180.8	178.95	
11/28/08	Gen	4937.05	188.65	186.05	184.95	184.95	183.9	180.7	174.45	177	199.25	206.95	211.5	218.4	217.8	224.5	220.7	216.65	211.5	231.45	223.3	220.15	222.05	219.6	225.4	207.2	
11/29/08	Gen	4768.1	193.75	188.15	183.65	181.2	172.45	175.7	168.65	169.45	197	206.35	209.4	210.7	206.7	201.2	198.5	193.35	201.75	216.1	216.8	214.55	220.55	216.15	219	207	
11/30/08	Gen	4919.05	192.7	181.5	178.8	175.6	164.9	176.75	179.3	193.4	203.25	215.55	226.55	226.6	224.6	221.95	219.8	215.05	199.7	215.95	217.2	217.15	226.2	230.35	221.1	195.1	
12/01/08	Gen	4897.8	173.6	173.5	170.6	173.95	178	176.25	189.5	202.55	197.75	224.95	227	232.2	234.95	231.45	227.5	222.2	201.2	213.5	221.1	220.1	215.2	212.75	195	183	
12/02/08	Gen	5039.45	189.15	181.8	181.45	178.6	175.45	186.95	197.1	209.05	214.5	223.1	227.25	221.25	216.65	216.7	217.05	223.05	230.9	233.95	233.65	230.6	224.25	211.3	212.5	203.2	
12/03/08	Gen	5095.75	189.95	187.15	181.9	180.5	183.6	195.1	201.15	209.1	207.7	226.95	225.3	221.4	220.85	222.45	219.3	212.35	210.5	244.4	239.1	236.3	227.2	221.8	219.25	212.45	
12/04/08	Gen	5135.9	195.85	187.95	183.55	178	185.65	203.95	212.95	221.95	222.9	229.75	224.3	222.7	217.9	218.15	209.5	206.65	207.45	237.8	242.5	239.8	232.95	223.65	224.15	205.9	
12/05/08	Gen	4420.9	199.4	192.95	184.9	185.45	187.55	187.1	197.35	208.15	210.45	213.6	226.9	218.45	212.25	197.7	179.75	175.7	188.6	209.65	198.05	194.75	167.7	146.35	93.9	44.25	
12/06/08	Gen	10.9	8.35	2.55																							
12/07/08	Gen																										
12/08/08	Gen																										
12/09/08	Gen																										
12/10/08	Gen																										
12/11/08	Gen																										
12/12/08	Gen																										
12/13/08	Gen																										
12/14/08	Gen																										
12/15/08	Gen	1908.4									0.9	11.3	11.1	10.7	52.2	89.15	107.65	133.25	159.05	174.75	182.95	187.3	191.55	205.9	197.15	193.5	
12/16/08	Gen	4924.705	195.95	191.2	187.35	181.1	181.6	196.3	201.35	217.9	219.25	223.2	221.8	204.3	201.9	199.55	204.6	197.9	217.205	222.15	228.95	237.05	224.5	204.95	191.5	173.15	
12/17/08	Gen	4995.9	176.6	179.05	184.5	184.3	189.2	201.35	210.1	210.05	213.45	216.35	220.35	213.95	210.4	210.65	205.4	188.95	193.7	224	227.05	232.5	234	228.75	231.25	210	
12/18/08	Gen	4971.2	200	193.45	190.4	186.7	190.25	197.8	202.6	213.2	217.5	217.95	218.65	209.25	205.05	202.15	199.85	198.4	201.2	226.65	228.45	228.6	221.5	209.9	207.9	203.8	
12/19/08	Gen	5021.25	195.85	185.65	182.4	182.95	174.8	195.6	205.3	222.2	222.3	225.15	232	226.6	221.85	221.1	206.1	193.2	196.9	220.7	215.05	217.85	226.95	224.1	222.95	203.7	
12/20/08	Gen	4888.115	191.05	184.05	180	181	187.9	185.15	191	192.4	202.65	212.15	219.9	211.65	206.65	204.65	200.25	200.2	210.15	228.1	229.8	221.3	230.15	220.6	206.45	190.915	
12/21/08	Gen	4819.75	191.35	188.4	180.1	181.35	176.65	176.55	179.7	182.2	182.85	209.5	217.9	214.9	215.3	215.05	208.05	190.15	218.7	220.1	209.4	205.2	207.1	234.15	215.05	200.05	
12/22/08	Gen	4888.25	195.65	193.05	193.1	189.8	185.9	195.65	183.7	198.2	202.5	203.25	208.85	208.05	202.5	202.8	202.45	188.35	206.2	216.85	219.85	220.8	216.8	214.3	217.2	222.45	
12/23/08	Gen	5279.25	217.7	201.1	201.85	197.25	192.25	206.4	222.2	223.4	226.25	225.75	229	226.05	231.5	225.55	220.95	211.75	203.1	222.9	228.25	238.05	232.75	236.15	230.3	228.8	
12/24/08	Gen	5322.65	230.35	218.5	205.35	204.05	200.5	211	201.85	201.3	222	224.85	227.85	231.1	240.6	236.35	237.1	237.45	233.9	235.8	227.35	223.85	217.85	219.35	225.35	209	
12/25/08	Gen	4885.515	192.95	185.4	180.9	183.35	180.95	182.75	187.2	188.5	206	217	221.7	220.35	217.3	207.9	201.85	197.6	195.2	215.8	215.35	216.65	219.25	227.55	218.915	205.1	
12/26/08	Gen	4903.6	193.8	191.55	190.05	185.95	180.7	181.15	174.5	189.55	200.5	205.9	209.2	218.1	210.75	200.85	205	194.55	195.65	224.9	225.8	223.9	223.35	221.1	229.75	227.05	
12/27/08	Gen	4832.05	215.95	208.4	203.95	201.9	196.55	194.4	168.9	190.15	200.35	205.65	210.2	208.9	197.85	183.35	182.05	183.45	196.1	215.75	215.15	211.1	203.5	205.55	219.55	213.35	
12/28/08	Gen	4884.7	201.2	183.05	182.65	187.7	190.4	177.1	176.55	185.7	196.9	203.4	203.2	204.4	209.45	207.2	208.25	214.35	212	225.65	228.3	217.65	220.75	230.85	212.45	205.55	
12/29/08	Gen	5028.7	199.15	195.8	194.4	193.45	188.55	192.15	200.9	212.55	216.75	218.05	212.4	212.6	216.75	216.05	208.5	197.4	203.45	214.7	219.5	227.5	230.05	225.75	223.7	208.6	
12/30/08	Gen	5128.5	193.95	188.15	186.95	184.1	185.9	193.75	199.55	208.15	220.55	229.1	238	238.15	235.2	228.15	224.05	213.85	211.25	227.95	223.1	216.65	222.1	227.95	220.85	211.1	
12/31/08	Gen	4912	195.15	187.6	184.65	181	181.9	198	205.2	199.35	211.35	219.35	218.5	217.7	215.8	215.75	213.3	207.95	214.4	225.35	213.25	203.75	204.15	197.9	203.9	196.75	

Attachment CURE-83
Existing Peak Hour Report

TID Almond AFC
Existing AM Peak Hour
CH2M HILL

Scenario Report

Scenario:	Existing - AM
Command:	Existing - AM
Volume:	Existing
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TID Almond AFC
Existing AM Peak Hour
CH2M HILL

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

Intersection #1 Crows Landing Rd/ Service Rd

Cycle (sec):	100	Critical Vol./Cap. (X):	0.290
Loss Time (sec):	12 (Y+R = 4 sec)	Average Delay (sec/veh):	27.6
Optimal Cycle:	36	Level Of Service:	C

Street Name:	Crows Landing Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	2	325	31	72	234	12	22	22	6	45	44	142
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	325	31	72	234	12	22	22	6	45	44	142
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	2	346	33	77	249	13	23	23	6	48	47	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	346	33	77	249	13	23	23	6	48	47	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	346	33	77	249	13	23	23	6	48	47	151
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.83	0.17	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3253	310	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.11	0.11	0.04	0.07	0.01	0.01	0.01	0.00	0.03	0.02	0.09
Crit Moves:		****		****			****					****
Green/Cycle:	0.23	0.36	0.36	0.14	0.27	0.27	0.06	0.19	0.19	0.19	0.32	0.32
Volume/Cap:	0.01	0.30	0.30	0.30	0.26	0.03	0.22	0.07	0.02	0.14	0.08	0.30
Delay/Veh:	29.4	23.1	23.1	38.9	28.8	26.9	45.8	33.4	33.1	34.0	24.0	26.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.4	23.1	23.1	38.9	28.8	26.9	45.8	33.4	33.1	34.0	24.0	26.1
HCM2kAvg:	0	4	4	2	3	0	1	1	0	1	1	4

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

Intersection #2 Crows Landing Rd/ Hackett Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.554
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 24.5
Optimal Cycle: 38 Level Of Service: C

Street Name:	Crows Landing Rd						Hackett Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 0	1 0	0	1 0	0 1
Volume Module:												
Base Vol:	3	382	142	489	283	7	10	0	2	15	0	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	382	142	489	283	7	10	0	2	15	0	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	3	398	148	509	295	7	10	0	2	16	0	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	398	148	509	295	7	10	0	2	16	0	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	398	148	509	295	7	10	0	2	16	0	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.95	0.85	0.76	1.00	0.85	0.80	1.00	0.85
Lanes:	1.00	1.46	0.54	1.00	2.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1805	2524	938	1805	3610	1615	1435	0	1615	1520	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.28	0.08	0.00	0.01	0.00	0.00	0.01	0.00	0.06
Crit Moves:		****		****								****
Green/Cycle:	0.34	0.28	0.28	0.51	0.46	0.46	0.12	0.00	0.12	0.12	0.00	0.12
Volume/Cap:	0.01	0.55	0.55	0.55	0.18	0.01	0.06	0.00	0.01	0.09	0.00	0.55
Delay/Veh:	22.1	31.1	31.1	17.5	16.1	14.8	39.5	0.0	39.1	39.7	0.0	45.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.1	31.1	31.1	17.5	16.1	14.8	39.5	0.0	39.1	39.7	0.0	45.3
HCM2kAvg:	0	8	8	11	3	0	0	0	0	1	0	4

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

Intersection #3 Crows Landing Rd/ Whitmore Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.498
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.8
Optimal Cycle: 41 Level Of Service: C

Street Name:	Crows Landing Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	24	405	38	134	579	88	101	93	41	126	100	165
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	405	38	134	579	88	101	93	41	126	100	165
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	26	431	40	143	616	94	107	99	44	134	106	176
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	431	40	143	616	94	107	99	44	134	106	176
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	26	431	40	143	616	94	107	99	44	134	106	176
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	1.00	0.85	0.95	0.91	0.91
Lanes:	1.00	1.83	0.17	1.00	1.74	0.26	1.00	1.00	1.00	1.00	0.38	0.62
Final Sat.:	1805	3257	306	1805	3071	467	1805	1900	1615	1805	650	1073
Capacity Analysis Module:												
Vol/Sat:	0.01	0.13	0.13	0.08	0.20	0.20	0.06	0.05	0.03	0.07	0.16	0.16
Crit Moves:	****				****		****				****	
Green/Cycle:	0.06	0.28	0.28	0.17	0.39	0.39	0.12	0.12	0.12	0.32	0.32	0.32
Volume/Cap:	0.24	0.47	0.47	0.47	0.52	0.52	0.52	0.45	0.23	0.23	0.52	0.52
Delay/Veh:	45.9	30.2	30.2	38.8	23.8	23.8	43.9	42.8	40.9	25.4	28.8	28.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.9	30.2	30.2	38.8	23.8	23.8	43.9	42.8	40.9	25.4	28.8	28.8
HCM2kAvg:	1	6	6	5	9	9	4	3	1	3	7	7

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

Intersection #4 Crows Landing Rd/ Hatch Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.632
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 27.7
Optimal Cycle: 51 Level Of Service: C

Street Name:	Crows Landing Rd						Hatch Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 2	0 1	1	0 2	0 1	1	1 0	1 0	1	1 0	1 0
Volume Module:												
Base Vol:	40	885	180	75	758	91	123	171	44	370	176	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	40	885	180	75	758	91	123	171	44	370	176	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
PHF Volume:	48	1054	214	89	902	108	146	204	52	440	210	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	48	1054	214	89	902	108	146	204	52	440	210	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	48	1054	214	89	902	108	146	204	52	440	210	64
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.92	0.92	0.92	0.91	0.91	0.91
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.09	1.52	0.39	1.85	0.88	0.27
Final Sat.:	1805	3610	1615	1805	3610	1615	1898	2639	679	3197	1521	467
Capacity Analysis Module:												
Vol/Sat:	0.03	0.29	0.13	0.05	0.25	0.07	0.08	0.08	0.08	0.14	0.14	0.14
Crit Moves:		****		****				****		****		
Green/Cycle:	0.10	0.46	0.46	0.08	0.44	0.44	0.12	0.12	0.12	0.22	0.22	0.22
Volume/Cap:	0.26	0.63	0.29	0.62	0.57	0.15	0.64	0.64	0.64	0.63	0.63	0.63
Delay/Veh:	42.4	21.4	17.0	52.4	21.4	16.9	44.2	44.2	44.2	36.4	36.4	36.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.4	21.4	17.0	52.4	21.4	16.9	44.2	44.2	44.2	36.4	36.4	36.4
HCM2kAvg:	2	13	4	4	11	2	5	5	5	8	8	8

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

Intersection #5 Crows Landing Rd/ SR 99 NB Ramps

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: D[28.3]

Street Name:	Crows Landing Rd						SR 99 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	1	0 1	0 0	1	1 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	556	582	9	308	0	3	0	0	30	0	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	556	582	9	308	0	3	0	0	30	0	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	556	582	9	308	0	3	0	0	30	0	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	556	582	9	308	0	3	0	0	30	0	26
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	xxxx	xxxxx	7.1	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1138	xxxx	xxxxx	1186	xxxx	xxxxx	882	xxxx	556
Potent Cap.:	xxxx	xxxx	xxxxx	621	xxxx	xxxxx	167	xxxx	xxxxx	269	xxxx	534
Move Cap.:	xxxx	xxxx	xxxxx	621	xxxx	xxxxx	157	xxxx	xxxxx	266	xxxx	534
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	0.02	xxxx	xxxx	0.11	xxxx	0.05
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	10.9	xxxx	xxxxx	28.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	D	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	347	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx
Shrd StpDel:	9.0	xxxx	xxxxx	10.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	17.4	xxxxx
Shared LOS:	A	*	*	B	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			28.3			17.4		
ApproachLOS:	*			*			D			C		

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

Intersection #6 Carpenter Rd/ Service Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.319
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.6
Optimal Cycle: 0 Level Of Service: A

Street Name:	Carpenter Rd									Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0 0	0 1	0	0 0	1! 0	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	252	26	19	127	1	0	0	0	14	0	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	252	26	19	127	1	0	0	0	14	0	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	252	26	19	127	1	0	0	0	14	0	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	252	26	19	127	1	0	0	0	14	0	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	252	26	19	127	1	0	0	0	14	0	31
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.91	0.09	0.13	0.86	0.01	0.00	1.00	0.00	0.31	0.00	0.69
Final Sat.:	0	790	81	107	714	6	0	687	0	234	0	518
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.32	0.32	0.18	0.18	0.18	xxxx	0.00	xxxx	0.06	xxxx	0.06
Crit Moves:		****			****			****				****
Delay/Veh:	0.0	9.0	9.0	8.2	8.2	8.2	0.0	0.0	0.0	7.7	0.0	7.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.0	9.0	8.2	8.2	8.2	0.0	0.0	0.0	7.7	0.0	7.7
LOS by Move:	*	A	A	A	A	A	*	*	*	A	*	A
ApproachDel:		9.0			8.2			xxxxxx			7.7	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		9.0			8.2			xxxxxx			7.7	
LOS by Appr:		A			A			*			A	

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

Intersection #7 Service Rd/ Morgan Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.315
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.6
Optimal Cycle: 0 Level Of Service: A

Street Name:	Morgan Rd									Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	35	44	16	50	44	65	27	105	7	26	182	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	44	16	50	44	65	27	105	7	26	182	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	37	47	17	53	47	69	29	112	7	28	194	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	47	17	53	47	69	29	112	7	28	194	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	37	47	17	53	47	69	29	112	7	28	194	39
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.73	0.27	1.00	1.00	1.00	1.00	0.94	0.06	1.00	1.00	1.00
Final Sat.:	540	441	160	531	574	647	569	585	39	564	615	694
Capacity Analysis Module:												
Vol/Sat:	0.07	0.11	0.11	0.10	0.08	0.11	0.05	0.19	0.19	0.05	0.31	0.06
Crit Moves:			****			****			****		****	
Delay/Veh:	9.4	8.9	8.9	9.8	9.1	8.5	9.0	9.4	9.4	9.2	10.8	7.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.4	8.9	8.9	9.8	9.1	8.5	9.0	9.4	9.4	9.2	10.8	7.9
LOS by Move:	A	A	A	A	A	A	A	A	A	A	B	A
ApproachDel:		9.1			9.1			9.3			10.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.1			9.1			9.3			10.2	
LOS by Appr:		A			A			A			B	

TID Almond AFC
Existing AM Peak Hour
CH2M HILL

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

Intersection #8 Service Rd/ Blaker Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.374
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.1
Optimal Cycle: 0 Level Of Service: B

Street Name:	Blaker Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0 0	1! 0	0	0	1 0	0 1	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	2	5	5	62	7	25	14	211	0	8	249	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	5	5	62	7	25	14	211	0	8	249	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	5	5	62	7	25	14	211	0	8	249	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	5	5	62	7	25	14	211	0	8	249	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	5	5	62	7	25	14	211	0	8	249	22
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.16	0.42	0.42	0.90	0.10	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Sat.:	97	243	243	492	56	662	632	695	0	605	666	758
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.13	0.13	0.04	0.02	0.30	xxxx	0.01	0.37	0.03
Crit Moves:		****		****				****			****	
Delay/Veh:	8.8	8.8	8.8	9.7	9.7	7.9	8.4	9.9	0.0	8.6	11.0	7.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.8	8.8	8.8	9.7	9.7	7.9	8.4	9.9	0.0	8.6	11.0	7.4
LOS by Move:	A	A	A	A	A	A	A	A	*	A	B	A
ApproachDel:	8.8			9.2			9.8			10.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	8.8			9.2			9.8			10.7		
LOS by Appr:	A			A			A			B		

TID Almond AFC
Existing AM Peak Hour
CH2M HILL

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

Intersection #9 Service Rd/ Central Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.236
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.8
Optimal Cycle: 36 Level Of Service: C

Street Name:	Central Ave						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 0	1	1	0 1	0 1	1	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	36	35	25	16	75	43	38	209	9	16	183	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	35	25	16	75	43	38	209	9	16	183	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
PHF Volume:	42	41	29	19	87	50	44	243	10	19	213	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	41	29	19	87	50	44	243	10	19	213	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	42	41	29	19	87	50	44	243	10	19	213	13
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.99	0.99
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.06
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	1900	1615	1805	1776	107
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.05	0.03	0.02	0.13	0.01	0.01	0.12	0.12
Crit Moves:	****				****			****		****		
Green/Cycle:	0.10	0.14	0.14	0.14	0.19	0.19	0.20	0.53	0.53	0.06	0.39	0.39
Volume/Cap:	0.24	0.15	0.13	0.07	0.24	0.16	0.12	0.24	0.01	0.17	0.30	0.30
Delay/Veh:	42.5	37.7	37.6	37.2	34.6	34.0	33.2	12.7	11.0	45.4	21.0	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.5	37.7	37.6	37.2	34.6	34.0	33.2	12.7	11.0	45.4	21.0	21.0
HCM2kAvg:	1	1	1	1	2	1	1	4	0	1	5	5

TID Almond AFC
Existing AM Peak Hour
CH2M HILL

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

Intersection #10 Mitchell Rd/ Service Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.524
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.1
Optimal Cycle: 42 Level Of Service: C

Street Name:	Mitchell Rd									Service Rd								
Approach:	North Bound				South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected					Protected					Split Phase					Split Phase				
Rights:	Include					Include					Include					Include				
Min. Green:	6		6		6	6		6		6	6		6		6	6		6		6
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	1	0	1	1	0	1	0	1
Volume Module:																				
Base Vol:	109		562		49	13		630		92	88		53		112	166		66		35
Growth Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	109		562		49	13		630		92	88		53		112	166		66		35
User Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	0.86		0.86		0.86	0.86		0.86		0.86	0.86		0.86		0.86	0.86		0.86		0.86
PHF Volume:	127		653		57	15		733		107	102		62		130	193		77		41
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
Reduced Vol:	127		653		57	15		733		107	102		62		130	193		77		41
PCE Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
MLF Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Final Vol.:	127		653		57	15		733		107	102		62		130	193		77		41
Saturation Flow Module:																				
Sat/Lane:	1900		1900		1900	1900		1900		1900	1900		1900		1900	1900		1900		1900
Adjustment:	0.95		0.94		0.94	0.95		0.95		0.85	0.95		1.00		0.85	0.95		1.00		0.85
Lanes:	1.00		1.84		0.16	1.00		2.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Final Sat.:	1805		3281		286	1805		3610		1615	1805		1900		1615	1805		1900		1615
Capacity Analysis Module:																				
Vol/Sat:	0.07		0.20		0.20	0.01		0.20		0.07	0.06		0.03		0.08	0.11		0.04		0.03
Crit Moves:	****					****									****	****				
Green/Cycle:	0.13		0.50		0.50	0.02		0.39		0.39	0.15		0.15		0.15	0.20		0.20		0.20
Volume/Cap:	0.54		0.40		0.40	0.42		0.52		0.17	0.38		0.22		0.54	0.53		0.20		0.13
Delay/Veh:	43.2		15.8		15.8	56.1		23.7		20.1	39.2		37.7		41.7	37.4		33.6		33.0
User DelAdj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
AdjDel/Veh:	43.2		15.8		15.8	56.1		23.7		20.1	39.2		37.7		41.7	37.4		33.6		33.0
HCM2kAvg:	5		7		7	1		9		2	3		2		4	6		2		1

TID Almond AFC
Existing AM Peak Hour
CH2M HILL

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

Intersection #11 Carpenter Rd/ Whitmore Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.394
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.0
Optimal Cycle: 0 Level Of Service: B

Street Name:	Carpenter Rd									Whitmore Ave								
Approach:	North Bound				South Bound					East Bound					West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Min. Green:	6		6		6	6		6		6	6		6		6	6		6		6
Lanes:	0	0	0	1	0	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0		264		18	128		144		25	0		0		0	7		23		133
Growth Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0		264		18	128		144		25	0		0		0	7		23		133
User Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Volume:	0		264		18	128		144		25	0		0		0	7		23		133
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
Reduced Vol:	0		264		18	128		144		25	0		0		0	7		23		133
PCE Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
MLF Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Final Vol.:	0		264		18	128		144		25	0		0		0	7		23		133
Saturation Flow Module:																				
Adjustment:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
Lanes:	0.00		0.94		0.06	0.43		0.49		0.08	0.00		1.00		0.00	0.04		0.14		0.82
Final Sat.:	0		713		49	325		366		63	0		587		0	30		100		576
Capacity Analysis Module:																				
Vol/Sat:	xxxx		0.37		0.37	0.39		0.39		0.39	xxxx		0.00		xxxx	0.23		0.23		0.23
Crit Moves:					****			****					****							****
Delay/Veh:	0.0		10.1		10.1	10.5		10.5		10.5	0.0		0.0		0.0	8.9		8.9		8.9
Delay Adj:	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00
AdjDel/Veh:	0.0		10.1		10.1	10.5		10.5		10.5	0.0		0.0		0.0	8.9		8.9		8.9
LOS by Move:	*		B		B	B		B		B	*		*		*	A		A		A
ApproachDel:	10.1					10.5					xxxxxx					8.9				
Delay Adj:	1.00					1.00					xxxxx					1.00				
ApprAdjDel:	10.1					10.5					xxxxxx					8.9				
LOS by Appr:	B					B					*					A				

TID Almond AFC
Existing AM Peak Hour
CH2M HILL

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

Intersection #12 Whitmore Ave/ Morgan Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.408
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 23.6
Optimal Cycle: 30 Level Of Service: C

Street Name:	Morgan Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	0 1	0	0 1!	0 0	1	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	55	201	138	26	121	79	62	248	25	89	359	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	55	201	138	26	121	79	62	248	25	89	359	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	201	138	26	121	79	62	248	25	89	359	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	201	138	26	121	79	62	248	25	89	359	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	55	201	138	26	121	79	62	248	25	89	359	28
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	1.00	0.85	0.91	0.91	0.91	0.95	1.00	0.85	0.95	0.99	0.99
Lanes:	1.00	1.00	1.00	0.11	0.54	0.35	1.00	1.00	1.00	1.00	0.93	0.07
Final Sat.:	1397	1900	1615	198	923	603	1805	1900	1615	1805	1743	136
Capacity Analysis Module:												
Vol/Sat:	0.04	0.11	0.09	0.13	0.13	0.13	0.03	0.13	0.02	0.05	0.21	0.21
Crit Moves:					****		****				****	
Green/Cycle:	0.32	0.32	0.32	0.32	0.32	0.32	0.08	0.40	0.40	0.19	0.50	0.50
Volume/Cap:	0.12	0.33	0.27	0.41	0.41	0.41	0.41	0.32	0.04	0.27	0.41	0.41
Delay/Veh:	24.1	26.1	25.5	27.0	27.0	27.0	45.2	20.7	18.1	35.3	15.7	15.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.1	26.1	25.5	27.0	27.0	27.0	45.2	20.7	18.1	35.3	15.7	15.7
HCM2kAvg:	2	5	3	6	6	6	2	5	0	3	7	7

TID Almond AFC
Existing AM Peak Hour
CH2M HILL

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

Intersection #13 Whitmore Ave/ Blaker Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.438
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 18.6
Optimal Cycle: 31 Level Of Service: B

Street Name:	Blaker Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	3	6	6	3	6	6	6	6	6	6	6	6
Lanes:	0	1 0	0 1	0	0 1!	0 0	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	27	0	241	0	0	0	0	409	9	61	493	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	0	241	0	0	0	0	409	9	61	493	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	0	241	0	0	0	0	409	9	61	493	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	0	241	0	0	0	0	409	9	61	493	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	27	0	241	0	0	0	0	409	9	61	493	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.82	1.00	0.85	1.00	1.00	1.00	1.00	1.00	0.85	0.95	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1566	0	1615	0	1900	0	1900	1900	1615	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.15	0.00	0.00	0.00	0.00	0.22	0.01	0.03	0.26	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.34	0.00	0.34	0.00	0.00	0.00	0.00	0.49	0.49	0.08	0.57	0.00
Volume/Cap:	0.05	0.00	0.44	0.00	0.00	0.00	0.00	0.44	0.01	0.44	0.46	0.00
Delay/Veh:	22.1	0.0	26.1	0.0	0.0	0.0	0.0	16.8	13.0	46.3	12.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.1	0.0	26.1	0.0	0.0	0.0	0.0	16.8	13.0	46.3	12.8	0.0
HCM2kAvg:	1	0	6	0	0	0	0	8	0	2	9	0

TID Almond AFC
Existing AM Peak Hour
CH2M HILL

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

Intersection #14 Whitmore Ave/ Ustick Rd

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[10.6]

Street Name:	Ustick Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0			0 1 0 0 1		
Volume Module:												
Base Vol:	4	6	4	22	6	12	19	133	3	1	142	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	6	4	22	6	12	19	133	3	1	142	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	6	4	22	6	12	19	133	3	1	142	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	4	6	4	22	6	12	19	133	3	1	142	23
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	337	340	135	322	318	142	165	xxxx	xxxxx	136	xxxx	xxxxx
Potent Cap.:	621	585	920	635	602	911	1426	xxxx	xxxxx	1461	xxxx	xxxxx
Move Cap.:	601	577	920	621	593	911	1426	xxxx	xxxxx	1461	xxxx	xxxxx
Volume/Cap:	0.01	0.01	0.00	0.04	0.01	0.01	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.0	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.0	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	654	xxxxx	615	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd StpDel:	xxxxx	10.6	xxxxx	11.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
Shared LOS:	*	B	*	B	*	*	*	*	*	A	*	*
ApproachDel:	10.6			10.5			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

Scenario Report

Scenario:	Existing - PM
Command:	Existing - PM
Volume:	Existing
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #1 Crows Landing Rd/ Service Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.331
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.7
Optimal Cycle: 36 Level Of Service: C

Street Name:	Crows Landing Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	2	330	63	153	318	25	14	49	9	50	48	94
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	330	63	153	318	25	14	49	9	50	48	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	2	367	70	170	353	28	16	54	10	56	53	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	367	70	170	353	28	16	54	10	56	53	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	367	70	170	353	28	16	54	10	56	53	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.68	0.32	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2959	565	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.12	0.12	0.09	0.10	0.02	0.01	0.03	0.01	0.03	0.03	0.06
Crit Moves:		****		****			****					****
Green/Cycle:	0.24	0.36	0.36	0.27	0.39	0.39	0.06	0.12	0.12	0.12	0.19	0.19
Volume/Cap:	0.01	0.34	0.34	0.34	0.25	0.04	0.14	0.23	0.05	0.25	0.15	0.34
Delay/Veh:	28.9	23.6	23.6	29.6	20.6	18.8	45.2	40.0	38.7	40.2	34.2	36.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.9	23.6	23.6	29.6	20.6	18.8	45.2	40.0	38.7	40.2	34.2	36.0
HCM2kAvg:	0	5	5	5	4	1	1	2	0	2	1	3

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #2 Crows Landing Rd/ Hackett Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.617
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 25.9
Optimal Cycle: 42 Level Of Service: C

Street Name:	Crows Landing Rd						Hackett Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 0	1 0	0	1 0	0 1
Volume Module:												
Base Vol:	0	402	29	150	366	3	3	0	0	136	1	478
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	402	29	150	366	3	3	0	0	136	1	478
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	0	452	33	169	411	3	3	0	0	153	1	537
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	452	33	169	411	3	3	0	0	153	1	537
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	452	33	169	411	3	3	0	0	153	1	537
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.95	0.95	0.85	0.64	1.00	1.00	0.72	0.72	0.85
Lanes:	1.00	1.87	0.13	1.00	2.00	1.00	1.00	1.00	0.00	0.99	0.01	1.00
Final Sat.:	1900	3333	240	1805	3610	1615	1210	1900	0	1366	10	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.14	0.14	0.09	0.11	0.00	0.00	0.00	0.00	0.11	0.11	0.33
Crit Moves:		****		****								****
Green/Cycle:	0.00	0.22	0.22	0.15	0.37	0.37	0.54	0.00	0.00	0.54	0.54	0.54
Volume/Cap:	0.00	0.62	0.62	0.62	0.31	0.01	0.01	0.00	0.00	0.21	0.21	0.62
Delay/Veh:	0.0	36.7	36.7	43.9	22.5	19.8	10.7	0.0	0.0	12.1	12.1	17.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	36.7	36.7	43.9	22.5	19.8	10.7	0.0	0.0	12.1	12.1	17.3
HCM2kAvg:	0	8	8	6	4	0	0	0	0	3	3	12

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #3 Crows Landing Rd/ Whitmore Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.859
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 42.5
Optimal Cycle: 93 Level Of Service: D

Street Name:	Crows Landing Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	53	685	140	236	406	158	82	192	50	52	160	261
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	685	140	236	406	158	82	192	50	52	160	261
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	56	729	149	251	432	168	87	204	53	55	170	278
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	729	149	251	432	168	87	204	53	55	170	278
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	56	729	149	251	432	168	87	204	53	55	170	278
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.91	0.91	0.95	1.00	0.85	0.95	0.91	0.91
Lanes:	1.00	1.66	0.34	1.00	1.44	0.56	1.00	1.00	1.00	1.00	0.38	0.62
Final Sat.:	1805	2922	597	1805	2490	969	1805	1900	1615	1805	655	1068
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.25	0.14	0.17	0.17	0.05	0.11	0.03	0.03	0.26	0.26
Crit Moves:		****		****				****			****	
Green/Cycle:	0.12	0.29	0.29	0.16	0.34	0.34	0.13	0.13	0.13	0.30	0.30	0.30
Volume/Cap:	0.27	0.86	0.86	0.86	0.52	0.52	0.39	0.86	0.26	0.10	0.86	0.86
Delay/Veh:	41.0	41.0	41.0	62.4	27.1	27.1	41.3	68.3	40.3	25.2	46.3	46.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.0	41.0	41.0	62.4	27.1	27.1	41.3	68.3	40.3	25.2	46.3	46.3
HCM2kAvg:	2	16	16	11	8	8	3	9	2	1	16	16

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #4 Crows Landing Rd/ Hatch Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.777
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.3
Optimal Cycle: 72 Level Of Service: C

Street Name:	Crows Landing Rd						Hatch Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 2	0 1	1	0 2	0 1	1	1 0	1 0	1	1 0	1 0
Volume Module:												
Base Vol:	83	931	310	144	1116	229	246	299	57	284	304	129
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	83	931	310	144	1116	229	246	299	57	284	304	129
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	93	1046	348	162	1254	257	276	336	64	319	342	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	1046	348	162	1254	257	276	336	64	319	342	145
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	93	1046	348	162	1254	257	276	336	64	319	342	145
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.92	0.92	0.92	0.91	0.91	0.91
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.23	1.49	0.28	1.19	1.27	0.54
Final Sat.:	1805	3610	1615	1805	3610	1615	2138	2599	495	2047	2191	930
Capacity Analysis Module:												
Vol/Sat:	0.05	0.29	0.22	0.09	0.35	0.16	0.13	0.13	0.13	0.16	0.16	0.16
Crit Moves:	****				****		****					****
Green/Cycle:	0.07	0.39	0.39	0.12	0.45	0.45	0.17	0.17	0.17	0.20	0.20	0.20
Volume/Cap:	0.78	0.74	0.55	0.74	0.78	0.36	0.78	0.78	0.78	0.78	0.78	0.78
Delay/Veh:	72.8	28.1	24.6	54.9	25.9	18.5	44.4	44.4	44.4	41.7	41.7	41.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	72.8	28.1	24.6	54.9	25.9	18.5	44.4	44.4	44.4	41.7	41.7	41.7
HCM2kAvg:	5	15	9	7	18	5	9	9	9	10	10	10

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #5 Crows Landing Rd/ SR 99 NB Ramps

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: E[43.4]

Street Name:	Crows Landing Rd						SR 99 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	1	0 1	0 0	1	1 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	544	788	14	513	0	1	0	0	54	0	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	544	788	14	513	0	1	0	0	54	0	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	544	788	14	513	0	1	0	0	54	0	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	544	788	14	513	0	1	0	0	54	0	30
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	xxxx	xxxxx	7.1	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1332	xxxx	xxxxx	1494	xxxx	xxxxx	1085	xxxx	544
Potent Cap.:	xxxx	xxxx	xxxxx	525	xxxx	xxxxx	102	xxxx	xxxxx	196	xxxx	543
Move Cap.:	xxxx	xxxx	xxxxx	525	xxxx	xxxxx	95	xxxx	xxxxx	192	xxxx	543
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	0.01	xxxx	xxxx	0.28	xxxx	0.06
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	12.0	xxxx	xxxxx	43.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	E	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	249	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.4	xxxxx
Shrd StpDel:	9.0	xxxx	xxxxx	12.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	26.6	xxxxx
Shared LOS:	A	*	*	B	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			43.4			26.6		
ApproachLOS:	*			*			E			D		

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #6 Carpenter Rd/ Service Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.349
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.3
Optimal Cycle: 0 Level Of Service: A

Street Name:	Carpenter Rd									Service Rd								
Approach:	North Bound			South Bound			East Bound			West Bound								
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign								
Rights:	Include			Include			Include			Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	245		14	32	253	0		0	0	0		36	0		28				
Growth Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
Initial Bse:	0	245		14	32	253	0		0	0	0		36	0		28				
User Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
PHF Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
PHF Volume:	0	245		14	32	253	0		0	0	0		36	0		28				
Reduct Vol:	0	0		0	0	0	0		0	0	0		0	0		0				
Reduced Vol:	0	245		14	32	253	0		0	0	0		36	0		28				
PCE Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
MLF Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
Final Vol.:	0	245		14	32	253	0		0	0	0		36	0		28				
Saturation Flow Module:																				
Adjustment:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
Lanes:	0.00	0.95		0.05	0.11	0.89	0.00		0.00	1.00	0.00		0.56	0.00		0.44				
Final Sat.:	0	775		44	92	725	0		0	633	0		380	0		295				
Capacity Analysis Module:																				
Vol/Sat:	xxxx	0.32		0.32	0.35	0.35	xxxx		xxxx	0.00	xxxx		0.09	xxxx		0.09				
Crit Moves:		****				****				****			****							
Delay/Veh:	0.0	9.2		9.2	9.6	9.6	0.0		0.0	0.0	0.0		8.3	0.0		8.3				
Delay Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
AdjDel/Veh:	0.0	9.2		9.2	9.6	9.6	0.0		0.0	0.0	0.0		8.3	0.0		8.3				
LOS by Move:	*	A		A	A	A	*		*	*	*		A	*		A				
ApproachDel:		9.2				9.6				xxxxxx				8.3						
Delay Adj:		1.00				1.00				xxxxx				1.00						
ApprAdjDel:		9.2				9.6				xxxxxx				8.3						
LOS by Appr:		A				A				*				A						

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #7 Service Rd/ Morgan Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.451
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.1
Optimal Cycle: 0 Level Of Service: B

Street Name:	Morgan Rd									Service Rd								
Approach:	North Bound			South Bound			East Bound			West Bound								
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign								
Rights:	Include			Include			Include			Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	1	0	1	0	1	1	0	0	1	0	1	0	1	0	1
Volume Module:																				
Base Vol:	5	58		30	79	66	39		60	232	11		23	138		74				
Growth Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
Initial Bse:	5	58		30	79	66	39		60	232	11		23	138		74				
User Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
PHF Adj:	0.89	0.89		0.89	0.89	0.89	0.89		0.89	0.89	0.89		0.89	0.89		0.89				
PHF Volume:	6	65		34	89	74	44		67	261	12		26	155		83				
Reduct Vol:	0	0		0	0	0	0		0	0	0		0	0		0				
Reduced Vol:	6	65		34	89	74	44		67	261	12		26	155		83				
PCE Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
MLF Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
Final Vol.:	6	65		34	89	74	44		67	261	12		26	155		83				
Saturation Flow Module:																				
Adjustment:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
Lanes:	1.00	0.66		0.34	1.00	1.00	1.00		1.00	0.95	0.05		1.00	1.00		1.00				
Final Sat.:	483	356		184	482	516	573		551	578	27		506	548		610				
Capacity Analysis Module:																				
Vol/Sat:	0.01	0.18		0.18	0.18	0.14	0.08		0.12	0.45	0.45		0.05	0.28		0.14				
Crit Moves:		****				****							****							
Delay/Veh:	9.7	10.1		10.1	11.2	10.2	9.0		9.8	12.8	12.8		9.8	11.3		9.1				
Delay Adj:	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00				
AdjDel/Veh:	9.7	10.1		10.1	11.2	10.2	9.0		9.8	12.8	12.8		9.8	11.3		9.1				
LOS by Move:	A	B		B	B	B	A		A	B	B		A	B		A				
ApproachDel:		10.1				10.4				12.2				10.5						
Delay Adj:		1.00				1.00				1.00				1.00						
ApprAdjDel:		10.1				10.4				12.2				10.5						
LOS by Appr:		B				B				B				B						

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #8 Service Rd/ Blaker Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.687
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.8
Optimal Cycle: 0 Level Of Service: C

Street Name:	Blaker Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	1 0	0	1 0	0 1	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	0	9	5	60	5	17	27	380	4	9	426	75
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	9	5	60	5	17	27	380	4	9	426	75
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	9	5	60	5	17	27	380	4	9	426	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	9	5	60	5	17	27	380	4	9	426	75
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	9	5	60	5	17	27	380	4	9	426	75
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.64	0.36	0.92	0.08	1.00	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	0	312	173	431	36	548	600	656	7	560	620	690
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.03	0.03	0.14	0.14	0.03	0.04	0.58	0.58	0.02	0.69	0.11
Crit Moves:		****			****			****			****	
Delay/Veh:	0.0	9.8	9.8	10.9	10.9	8.8	8.8	14.8	14.8	9.0	19.8	8.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.8	9.8	10.9	10.9	8.8	8.8	14.8	14.8	9.0	19.8	8.3
LOS by Move:	*	A	A	B	B	A	A	B	B	A	C	A
ApproachDel:		9.8			10.4			14.4			17.9	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.8			10.4			14.4			17.9	
LOS by Appr:		A			B			B			C	

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #9 Service Rd/ Central Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.401
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.1
Optimal Cycle: 36 Level Of Service: C

Street Name:	Central Ave						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1	0 1	1	0 1	0 1	1	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	48	77	38	34	80	86	66	248	59	57	367	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	48	77	38	34	80	86	66	248	59	57	367	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	52	83	41	37	86	92	71	267	63	61	395	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	83	41	37	86	92	71	267	63	61	395	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	52	83	41	37	86	92	71	267	63	61	395	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.99	0.99
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.08
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	1900	1615	1805	1731	146
Capacity Analysis Module:												
Vol/Sat:	0.03	0.04	0.03	0.02	0.05	0.06	0.04	0.14	0.04	0.03	0.23	0.23
Crit Moves:	****					****	****				****	
Green/Cycle:	0.07	0.11	0.11	0.11	0.14	0.14	0.10	0.47	0.47	0.20	0.57	0.57
Volume/Cap:	0.40	0.41	0.24	0.19	0.32	0.40	0.40	0.30	0.08	0.17	0.40	0.40
Delay/Veh:	46.4	43.0	41.6	41.2	39.2	40.1	43.8	16.7	14.9	33.4	12.3	12.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.4	43.0	41.6	41.2	39.2	40.1	43.8	16.7	14.9	33.4	12.3	12.3
HCM2kAvg:	2	3	1	1	3	3	3	5	1	2	7	7

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #10 Mitchell Rd/ Service Rd

Cycle (sec): 120 Critical Vol./Cap. (X): 0.558
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.4
Optimal Cycle: 46 Level Of Service: C

Street Name:	Mitchell Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	143	784	125	68	817	215	195	85	188	127	79	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	784	125	68	817	215	195	85	188	127	79	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	146	800	128	69	834	219	199	87	192	130	81	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	800	128	69	834	219	199	87	192	130	81	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	146	800	128	69	834	219	199	87	192	130	81	64
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.72	0.28	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3048	486	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.26	0.26	0.04	0.23	0.14	0.11	0.05	0.12	0.07	0.04	0.04
Crit Moves:	****				****				****	****		
Green/Cycle:	0.14	0.47	0.47	0.09	0.41	0.41	0.21	0.21	0.21	0.13	0.13	0.13
Volume/Cap:	0.58	0.56	0.56	0.43	0.56	0.33	0.52	0.22	0.57	0.55	0.33	0.31
Delay/Veh:	51.6	23.3	23.3	53.5	27.7	24.5	43.4	39.5	44.7	51.8	48.2	48.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.6	23.3	23.3	53.5	27.7	24.5	43.4	39.5	44.7	51.8	48.2	48.1
HCM2kAvg:	6	12	12	3	12	5	7	3	7	5	3	2

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #11 Carpenter Rd/ Whitmore Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.710
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 14.6
Optimal Cycle: 0 Level Of Service: B

Street Name:	Carpenter Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	4	234	23	184	263	60	56	30	4	11	26	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	234	23	184	263	60	56	30	4	11	26	118
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	234	23	184	263	60	56	30	4	11	26	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	234	23	184	263	60	56	30	4	11	26	118
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	4	234	23	184	263	60	56	30	4	11	26	118
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.01	0.90	0.09	0.36	0.52	0.12	0.63	0.33	0.04	0.07	0.17	0.76
Final Sat.:	10	591	58	259	370	85	322	172	23	42	99	448
Capacity Analysis Module:												
Vol/Sat:	0.40	0.40	0.40	0.71	0.71	0.71	0.17	0.17	0.17	0.26	0.26	0.26
Crit Moves:	****						****	****				****
Delay/Veh:	11.3	11.3	11.3	18.5	18.5	18.5	10.2	10.2	10.2	10.1	10.1	10.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.3	11.3	11.3	18.5	18.5	18.5	10.2	10.2	10.2	10.1	10.1	10.1
LOS by Move:	B	B	B	C	C	C	B	B	B	B	B	B
ApproachDel:	11.3			18.5			10.2			10.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.3			18.5			10.2			10.1		
LOS by Appr:	B			C			B			B		

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #12 Whitmore Ave/ Morgan Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.738
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 29.0
Optimal Cycle: 57 Level Of Service: C

Street Name:	Morgan Rd								Whitmore Ave							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	6		6	6	6		6	6	6		6	6	6		6	6
Lanes:	1	0	1	0 1	0	0	1!	0 0	1	0	1	0 1	1	0	0	1 0
Volume Module:																
Base Vol:	56	143		202	56	365		70	64	557		104	183	346		51
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	56	143		202	56	365		70	64	557		104	183	346		51
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	56	143		202	56	365		70	64	557		104	183	346		51
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	56	143		202	56	365		70	64	557		104	183	346		51
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	56	143		202	56	365		70	64	557		104	183	346		51
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.74	1.00		0.85	0.93	0.93		0.93	0.95	1.00		0.85	0.95	0.98		0.98
Lanes:	1.00	1.00		1.00	0.11	0.75		0.14	1.00	1.00		1.00	1.00	0.87		0.13
Final Sat.:	1412	1900		1615	202	1318		253	1805	1900		1615	1805	1624		239
Capacity Analysis Module:																
Vol/Sat:	0.04	0.08		0.13	0.28	0.28		0.28	0.04	0.29		0.06	0.10	0.21		0.21
Crit Moves:					****					****			****			
Green/Cycle:	0.38	0.38		0.38	0.38	0.38		0.38	0.12	0.40		0.40	0.14	0.42		0.42
Volume/Cap:	0.11	0.20		0.33	0.74	0.74		0.74	0.30	0.74		0.16	0.74	0.51		0.51
Delay/Veh:	20.4	21.2		22.6	31.3	31.3		31.3	41.2	29.6		19.5	52.5	22.2		22.2
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	20.4	21.2		22.6	31.3	31.3		31.3	41.2	29.6		19.5	52.5	22.2		22.2
HCM2kAvg:	1	3		5	15	15		15	2	16		2	7	9		9

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #13 Whitmore Ave/ Blaker Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.813
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 27.3
Optimal Cycle: 72 Level Of Service: C

Street Name:	Blaker Rd								Whitmore Ave							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	3		6	6	3		6	6	6		6	6	6		6	6
Lanes:	0	1	0	0 1	0	0	0	0 1	1	0	1	0 1	1	0	1	0 1
Volume Module:																
Base Vol:	22	1		276	0	0		1	0	811		28	257	551		1
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	22	1		276	0	0		1	0	811		28	257	551		1
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	22	1		276	0	0		1	0	811		28	257	551		1
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	22	1		276	0	0		1	0	811		28	257	551		1
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	22	1		276	0	0		1	0	811		28	257	551		1
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.95	0.95		0.85	1.00	1.00		0.87	1.00	1.00		0.85	0.95	1.00		0.85
Lanes:	0.96	0.04		1.00	0.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Sat.:	1734	79		1615	0	0		1644	1900	1900		1615	1805	1900		1615
Capacity Analysis Module:																
Vol/Sat:	0.01	0.01		0.17	0.00	0.00		0.00	0.00	0.43		0.02	0.14	0.29		0.00
Crit Moves:				****	****					****			****			
Green/Cycle:	0.21	0.21		0.21	0.00	0.00		0.00	0.00	0.52		0.52	0.18	0.70		0.70
Volume/Cap:	0.06	0.06		0.81	0.00	0.00		0.15	0.00	0.81		0.03	0.81	0.41		0.00
Delay/Veh:	32.0	31.7		51.5	0.0	0.0		59.2	0.0	24.9		11.5	54.5	6.6		4.5
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	32.0	31.7		51.5	0.0	0.0		59.2	0.0	24.9		11.5	54.5	6.6		4.5
HCM2kAvg:	1	1		10	0	0		0	0	22		0	10	7		0

TID Almond AFC
Existing PM Peak Hour
CH2M HILL

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

Intersection #14 Whitmore Ave/ Ustick Rd

Average Delay (sec/veh): 2.3 Worst Case Level Of Service: B[12.8]

Street Name:	Ustick Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 1	0 0	1	0 0	1! 0	0	0 1	0 0	1
Volume Module:												
Base Vol:	2	7	0	22	2	28	49	181	2	8	126	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	7	0	22	2	28	49	181	2	8	126	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	7	0	22	2	28	49	181	2	8	126	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	2	7	0	22	2	28	49	181	2	8	126	60
Critical Gap Module:												
Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	467	482	xxxxx	426	423	126	186	xxxx	xxxxx	183	xxxx	xxxxx
Potent Cap.:	509	487	xxxxx	543	526	930	1401	xxxx	xxxxx	1404	xxxx	xxxxx
Move Cap.:	477	467	xxxxx	519	504	930	1401	xxxx	xxxxx	1404	xxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxx	0.04	0.00	0.03	0.03	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.1	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.0	7.7	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	469	xxxx	xxxxx	518	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd StpDel:	12.8	xxxx	xxxxx	12.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
Shared LOS:	B	*	*	B	*	*	*	*	*	A	*	*
ApproachDel:	12.8			10.5			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Attachment CURE-87
Existing plus Project Peak Hour Report

TID Almond AFC
Existing plus Project - AM Peak Hour
CH2M HILL

Scenario Report

Scenario:	Existing + Project - AM
Command:	Existing + Project - AM
Volume:	Existing
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TID Almond AFC
Existing plus Project - AM Peak Hour
CH2M HILL

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

Intersection #1 Crows Landing Rd/ Service Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.294
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 26.7
Optimal Cycle: 36 Level Of Service: C

Street Name:	Crows Landing Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1	1 0	1 0	2	0 1	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Base Vol:	2	325	31	72	234	12	22	22	6	45	44	142
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	325	31	72	234	12	22	22	6	45	44	142
Added Vol:	0	10	1	0	118	0	0	0	3	14	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	335	32	72	352	12	22	22	9	59	44	142
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	2	356	34	77	374	13	23	23	10	63	47	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	356	34	77	374	13	23	23	10	63	47	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	356	34	77	374	13	23	23	10	63	47	151
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.83	0.17	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3252	311	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.11	0.11	0.04	0.10	0.01	0.01	0.01	0.01	0.03	0.02	0.09
Crit Moves:		****		****			****					****
Green/Cycle:	0.19	0.37	0.37	0.14	0.32	0.32	0.06	0.19	0.19	0.19	0.31	0.31
Volume/Cap:	0.01	0.30	0.30	0.30	0.32	0.02	0.22	0.07	0.03	0.19	0.08	0.30
Delay/Veh:	33.2	22.7	22.7	39.1	25.8	23.2	45.8	33.6	33.4	34.6	24.3	26.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.2	22.7	22.7	39.1	25.8	23.2	45.8	33.6	33.4	34.6	24.3	26.4
HCM2kAvg:	0	4	4	2	4	0	1	1	0	2	1	4

TID Almond AFC
Existing plus Project - AM Peak Hour
CH2M HILL

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

Intersection #2 Crows Landing Rd/ Hackett Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.557
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 23.2
Optimal Cycle: 38 Level Of Service: C

Street Name:	Crows Landing Rd						Hackett Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1	0	1	0 2	0 1	1	0 0	1	0	0 1
Volume Module:												
Base Vol:	3	382	142	489	283	7	10	0	2	15	0	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	382	142	489	283	7	10	0	2	15	0	100
Added Vol:	0	10	0	0	118	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	392	142	489	401	7	10	0	2	15	0	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	3	408	148	509	418	7	10	0	2	16	0	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	408	148	509	418	7	10	0	2	16	0	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	408	148	509	418	7	10	0	2	16	0	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.95	0.85	0.76	1.00	0.85	0.80	1.00	0.85
Lanes:	1.00	1.47	0.53	1.00	2.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1805	2544	922	1805	3610	1615	1435	0	1615	1520	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.28	0.12	0.00	0.01	0.00	0.00	0.01	0.00	0.06
Crit Moves:		****		****								****
Green/Cycle:	0.27	0.29	0.29	0.51	0.52	0.52	0.12	0.00	0.12	0.12	0.00	0.12
Volume/Cap:	0.01	0.56	0.56	0.56	0.22	0.01	0.06	0.00	0.01	0.09	0.00	0.56
Delay/Veh:	26.6	30.9	30.9	17.7	12.9	11.4	39.5	0.0	39.2	39.7	0.0	45.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.6	30.9	30.9	17.7	12.9	11.4	39.5	0.0	39.2	39.7	0.0	45.5
HCM2kAvg:	0	8	8	11	3	0	0	0	0	1	0	4

TID Almond AFC
Existing plus Project - AM Peak Hour
CH2M HILL

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

Intersection #3 Crows Landing Rd/ Whitmore Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.527
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 29.3
Optimal Cycle: 43 Level Of Service: C

Street Name:	Crows Landing Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1	0	1	0 1	1 0	1	0 1	1	0	0 1 0
Volume Module:												
Base Vol:	24	405	38	134	579	88	101	93	41	126	100	165
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	405	38	134	579	88	101	93	41	126	100	165
Added Vol:	0	7	2	0	88	0	0	0	3	27	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	24	412	40	134	667	88	101	93	44	153	100	165
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	26	438	43	143	710	94	107	99	47	163	106	176
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	438	43	143	710	94	107	99	47	163	106	176
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	26	438	43	143	710	94	107	99	47	163	106	176
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	1.00	0.85	0.95	0.91	0.91
Lanes:	1.00	1.82	0.18	1.00	1.77	0.23	1.00	1.00	1.00	1.00	0.38	0.62
Final Sat.:	1805	3248	315	1805	3132	413	1805	1900	1615	1805	650	1073
Capacity Analysis Module:												
Vol/Sat:	0.01	0.13	0.13	0.08	0.23	0.23	0.06	0.05	0.03	0.09	0.16	0.16
Crit Moves:	****				****		****				****	
Green/Cycle:	0.06	0.30	0.30	0.17	0.41	0.41	0.11	0.11	0.11	0.30	0.30	0.30
Volume/Cap:	0.24	0.45	0.45	0.45	0.55	0.55	0.55	0.48	0.27	0.30	0.55	0.55
Delay/Veh:	45.9	28.8	28.8	38.0	22.7	22.7	45.5	43.7	41.7	27.4	30.7	30.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.9	28.8	28.8	38.0	22.7	22.7	45.5	43.7	41.7	27.4	30.7	30.7
HCM2kAvg:	1	6	6	5	10	10	4	3	2	4	8	8

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Existing plus Project - AM Peak Hour
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Crows Landing Rd/ Hatch Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.641
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.0
Optimal Cycle: 52 Level Of Service: C

Street Name:	Crows Landing Rd						Hatch Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 2	0 1	1	0 2	0 1	1	1 0	1 0	1	1 0	1 0
Volume Module:												
Base Vol:	40	885	180	75	758	91	123	171	44	370	176	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	40	885	180	75	758	91	123	171	44	370	176	54
Added Vol:	0	5	2	0	61	0	0	0	0	27	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	890	182	75	819	91	123	171	44	397	176	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
PHF Volume:	48	1060	217	89	975	108	146	204	52	473	210	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	48	1060	217	89	975	108	146	204	52	473	210	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	48	1060	217	89	975	108	146	204	52	473	210	64
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.92	0.92	0.92	0.91	0.91	0.91
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.09	1.52	0.39	1.90	0.84	0.26
Final Sat.:	1805	3610	1615	1805	3610	1615	1898	2639	679	3279	1454	446
Capacity Analysis Module:												
Vol/Sat:	0.03	0.29	0.13	0.05	0.27	0.07	0.08	0.08	0.08	0.14	0.14	0.14
Crit Moves:		****		****				****		****		
Green/Cycle:	0.10	0.46	0.46	0.08	0.44	0.44	0.12	0.12	0.12	0.22	0.22	0.22
Volume/Cap:	0.27	0.64	0.29	0.64	0.62	0.15	0.64	0.64	0.64	0.64	0.64	0.64
Delay/Veh:	42.7	21.7	17.2	54.5	22.4	17.0	44.2	44.2	44.2	36.3	36.3	36.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	21.7	17.2	54.5	22.4	17.0	44.2	44.2	44.2	36.3	36.3	36.3
HCM2kAvg:	2	13	4	4	12	2	5	5	5	8	8	8

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Existing plus Project - AM Peak Hour
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #5 Crows Landing Rd/ SR 99 NB Ramps

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: D[28.4]

Street Name:	Crows Landing Rd						SR 99 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	1 0	0 1	0	1 0	0 1	1	0 0	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	0	556	582	9	308	0	3	0	0	30	0	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	556	582	9	308	0	3	0	0	30	0	26
Added Vol:	0	0	5	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	556	587	9	308	0	3	0	0	30	0	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	556	587	9	308	0	3	0	0	30	0	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	556	587	9	308	0	3	0	0	30	0	26
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	xxxx	xxxxx	7.1	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1143	xxxx	xxxxx	1188	xxxx	xxxxx	882	xxxx	556
Potent Cap.:	xxxx	xxxx	xxxxx	619	xxxx	xxxxx	166	xxxx	xxxxx	269	xxxx	534
Move Cap.:	xxxx	xxxx	xxxxx	619	xxxx	xxxxx	157	xxxx	xxxxx	266	xxxx	534
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	0.02	xxxx	xxxx	0.11	xxxx	0.05
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	10.9	xxxx	xxxxx	28.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	D	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	347	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx
Shrd StpDel:	9.0	xxxx	xxxxx	10.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	17.4	xxxxx
Shared LOS:	A	*	*	B	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			28.4			17.4		
ApproachLOS:	*			*			D			C		

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

Intersection #6 Carpenter Rd/ Service Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.319
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 8.6
Optimal Cycle: 0 Level Of Service: A

Street Name:	Carpenter Rd									Service Rd		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0 0	1 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	0	252	26	19	127	1	0	0	0	14	0	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	252	26	19	127	1	0	0	0	14	0	31
Added Vol:	0	0	0	3	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	252	26	22	127	1	0	0	0	14	0	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	252	26	22	127	1	0	0	0	14	0	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	252	26	22	127	1	0	0	0	14	0	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	252	26	22	127	1	0	0	0	14	0	31
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.91	0.09	0.14	0.85	0.01	0.00	1.00	0.00	0.31	0.00	0.69
Final Sat.:	0	789	81	121	699	6	0	685	0	234	0	517
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.32	0.32	0.18	0.18	0.18	xxxx	0.00	xxxx	0.06	xxxx	0.06
Crit Moves:		****			****			****		****		
Delay/Veh:	0.0	9.0	9.0	8.2	8.2	8.2	0.0	0.0	0.0	7.7	0.0	7.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.0	9.0	8.2	8.2	8.2	0.0	0.0	0.0	7.7	0.0	7.7
LOS by Move:	*	A	A	A	A	A	*	*	*	A	*	A
ApproachDel:		9.0			8.2			xxxxxx			7.7	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		9.0			8.2			xxxxxx			7.7	
LOS by Appr:		A			A			*			A	

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

Intersection #7 Service Rd/ Morgan Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.339
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.7
Optimal Cycle: 0 Level Of Service: A

Street Name:	Morgan Rd									Service Rd		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 0	1 0	1	0 1	0 1	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	35	44	16	50	44	65	27	105	7	26	182	37
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	44	16	50	44	65	27	105	7	26	182	37
Added Vol:	0	0	0	0	0	0	0	1	0	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	44	16	50	44	65	27	106	7	26	196	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	37	47	17	53	47	69	29	113	7	28	209	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	47	17	53	47	69	29	113	7	28	209	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	37	47	17	53	47	69	29	113	7	28	209	39
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.73	0.27	1.00	1.00	1.00	1.00	0.94	0.06	1.00	1.00	1.00
Final Sat.:	535	438	159	526	568	640	567	583	39	563	615	693
Capacity Analysis Module:												
Vol/Sat:	0.07	0.11	0.11	0.10	0.08	0.11	0.05	0.19	0.19	0.05	0.34	0.06
Crit Moves:			****			****			****		****	
Delay/Veh:	9.5	9.0	9.0	9.8	9.2	8.6	9.1	9.5	9.5	9.2	11.1	7.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.5	9.0	9.0	9.8	9.2	8.6	9.1	9.5	9.5	9.2	11.1	7.9
LOS by Move:	A	A	A	A	A	A	A	A	A	A	B	A
ApproachDel:		9.2			9.1			9.4			10.4	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.2			9.1			9.4			10.4	
LOS by Appr:		A			A			A			B	

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

Intersection #8 Service Rd/ Blaker Rd

Cycle (sec): 100 | Critical Vol./Cap. (X): 0.395
Loss Time (sec): 0 (Y+R = 4 sec) | Average Delay (sec/veh): 10.3
Optimal Cycle: 0 | Level Of Service: B

Street Name:	Blaker Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0 0	1! 0	0	0	1 0	0 1	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	2	5	5	62	7	25	14	211	0	8	249	22
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	5	5	62	7	25	14	211	0	8	249	22
Added Vol:	0	0	0	0	0	0	0	1	0	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	5	5	62	7	25	14	212	0	8	263	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	5	5	62	7	25	14	212	0	8	263	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	5	5	62	7	25	14	212	0	8	263	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	2	5	5	62	7	25	14	212	0	8	263	22
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.16	0.42	0.42	0.90	0.10	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Sat.:	96	241	241	488	55	657	630	693	0	605	666	757
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.13	0.13	0.04	0.02	0.31	xxxx	0.01	0.39	0.03
Crit Moves:		****			****			****			****	
Delay/Veh:	8.8	8.8	8.8	9.8	9.8	8.0	8.4	9.9	0.0	8.6	11.3	7.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.8	8.8	8.8	9.8	9.8	8.0	8.4	9.9	0.0	8.6	11.3	7.4
LOS by Move:	A	A	A	A	A	A	A	A	*	A	B	A
ApproachDel:		8.8			9.3			9.8			11.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		8.8			9.3			9.8			11.0	
LOS by Appr:		A			A			A			B	

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Existing plus Project - AM Peak Hour
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Service Rd/ Central Ave

Cycle (sec): 100 | Critical Vol./Cap. (X): 0.252
Loss Time (sec): 12 (Y+R = 4 sec) | Average Delay (sec/veh): 25.3
Optimal Cycle: 36 | Level Of Service: C

Street Name:	Central Ave						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0
Volume Module:												
Base Vol:	36	35	25	16	75	43	38	209	9	16	183	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	35	25	16	75	43	38	209	9	16	183	11
Added Vol:	0	0	0	0	0	0	0	1	0	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	35	25	16	75	43	38	210	9	16	197	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
PHF Volume:	42	41	29	19	87	50	44	244	10	19	229	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	41	29	19	87	50	44	244	10	19	229	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	42	41	29	19	87	50	44	244	10	19	229	13
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.99	0.99
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.05
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	1900	1615	1805	1785	100
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.02	0.01	0.05	0.03	0.02	0.13	0.01	0.01	0.13	0.13
Crit Moves:	****				****		****				****	
Green/Cycle:	0.09	0.14	0.14	0.14	0.18	0.18	0.10	0.41	0.41	0.19	0.51	0.51
Volume/Cap:	0.25	0.16	0.13	0.08	0.25	0.17	0.25	0.31	0.02	0.05	0.25	0.25
Delay/Veh:	43.0	38.3	38.2	37.8	35.4	34.8	42.5	20.0	17.3	33.0	14.0	14.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.0	38.3	38.2	37.8	35.4	34.8	42.5	20.0	17.3	33.0	14.0	14.0
HCM2kAvg:	1	1	1	1	2	1	2	5	0	1	4	4

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Existing plus Project - AM Peak Hour
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Mitchell Rd/ Service Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.535
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 28.3
Optimal Cycle: 43 Level Of Service: C

Street Name:	Mitchell Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1	0	1 0	2 0 1		1 0	1 0 1		1 0	1 0 1
Volume Module:												
Base Vol:	109	562	49	13	630	92	88	53	112	166	66	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	109	562	49	13	630	92	88	53	112	166	66	35
Added Vol:	14	0	0	0	0	0	0	0	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	123	562	49	13	630	92	88	53	113	166	66	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
PHF Volume:	143	653	57	15	733	107	102	62	131	193	77	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	143	653	57	15	733	107	102	62	131	193	77	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	143	653	57	15	733	107	102	62	131	193	77	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.84	0.16	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3281	286	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.20	0.20	0.01	0.20	0.07	0.06	0.03	0.08	0.11	0.04	0.03
Crit Moves:	****				****				****	****		
Green/Cycle:	0.15	0.41	0.41	0.12	0.38	0.38	0.15	0.15	0.15	0.20	0.20	0.20
Volume/Cap:	0.53	0.49	0.49	0.07	0.53	0.17	0.37	0.21	0.53	0.53	0.20	0.13
Delay/Veh:	41.5	22.3	22.3	39.0	24.6	20.7	39.0	37.5	41.4	37.4	33.6	33.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.5	22.3	22.3	39.0	24.6	20.7	39.0	37.5	41.4	37.4	33.6	33.0
HCM2kAvg:	5	8	8	0	9	2	3	2	4	6	2	1

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

Intersection #11 Carpenter Rd/ Whitmore Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.402
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.1
Optimal Cycle: 0 Level Of Service: B

Street Name:	Carpenter Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	0	0 0	1 0		0 0	1! 0 0		0 0	1! 0 0		0 0	1! 0 0
Volume Module:												
Base Vol:	0	264	18	128	144	25	0	0	0	7	23	133
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	264	18	128	144	25	0	0	0	7	23	133
Added Vol:	0	0	0	3	3	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	264	18	131	147	25	0	0	0	7	23	133
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	264	18	131	147	25	0	0	0	7	23	133
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	264	18	131	147	25	0	0	0	7	23	133
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	264	18	131	147	25	0	0	0	7	23	133
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.94	0.06	0.43	0.49	0.08	0.00	1.00	0.00	0.04	0.14	0.82
Final Sat.:	0	712	49	326	366	62	0	584	0	30	99	574
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.37	0.37	0.40	0.40	0.40	xxxx	0.00	xxxx	0.23	0.23	0.23
Crit Moves:			****		****				****		****	
Delay/Veh:	0.0	10.1	10.1	10.6	10.6	10.6	0.0	0.0	0.0	9.0	9.0	9.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	10.1	10.1	10.6	10.6	10.6	0.0	0.0	0.0	9.0	9.0	9.0
LOS by Move:	*	B	B	B	B	B	*	*	*	A	A	A
ApproachDel:		10.1			10.6			xxxxxx			9.0	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		10.1			10.6			xxxxxx			9.0	
LOS by Appr:		B			B			*			A	

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

Intersection #12 Whitmore Ave/ Morgan Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.424
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 23.6
Optimal Cycle: 30 Level Of Service: C

Street Name:	Morgan Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	0 1	0	0 1!	0 0	1	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	55	201	138	26	121	79	62	248	25	89	359	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	55	201	138	26	121	79	62	248	25	89	359	28
Added Vol:	0	0	0	0	0	0	0	2	0	0	27	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	201	138	26	121	79	62	250	25	89	386	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	201	138	26	121	79	62	250	25	89	386	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	201	138	26	121	79	62	250	25	89	386	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	55	201	138	26	121	79	62	250	25	89	386	28
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	1.00	0.85	0.91	0.91	0.91	0.95	1.00	0.85	0.95	0.99	0.99
Lanes:	1.00	1.00	1.00	0.11	0.54	0.35	1.00	1.00	1.00	1.00	0.93	0.07
Final Sat.:	1412	1900	1615	198	923	603	1805	1900	1615	1805	1754	127
Capacity Analysis Module:												
Vol/Sat:	0.04	0.11	0.09	0.13	0.13	0.13	0.03	0.13	0.02	0.05	0.22	0.22
Crit Moves:					****		****				****	
Green/Cycle:	0.31	0.31	0.31	0.31	0.31	0.31	0.08	0.41	0.41	0.19	0.52	0.52
Volume/Cap:	0.13	0.34	0.28	0.42	0.42	0.42	0.42	0.32	0.04	0.26	0.42	0.42
Delay/Veh:	24.9	27.0	26.4	28.0	28.0	28.0	45.7	20.1	17.6	35.1	15.1	15.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.9	27.0	26.4	28.0	28.0	28.0	45.7	20.1	17.6	35.1	15.1	15.1
HCM2kAvg:	2	5	3	6	6	6	2	5	0	3	8	8

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

Intersection #13 Whitmore Ave/ Blaker Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.439
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 18.5
Optimal Cycle: 31 Level Of Service: B

Street Name:	Blaker Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	3	6	6	3	6	6	6	6	6	6	6	6
Lanes:	0	1 0	0 1	0	0 1!	0 0	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	27	0	241	0	0	0	0	409	9	61	493	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	27	0	241	0	0	0	0	409	9	61	493	0
Added Vol:	0	0	0	0	0	0	0	2	0	0	27	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	0	241	0	0	0	0	411	9	61	520	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	0	241	0	0	0	0	411	9	61	520	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	0	241	0	0	0	0	411	9	61	520	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	27	0	241	0	0	0	0	411	9	61	520	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.82	1.00	0.85	1.00	1.00	1.00	1.00	1.00	0.85	0.95	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1566	0	1615	0	1900	0	1900	1900	1615	1805	1900	1900
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.15	0.00	0.00	0.00	0.00	0.22	0.01	0.03	0.27	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.34	0.00	0.34	0.00	0.00	0.00	0.00	0.49	0.49	0.08	0.57	0.00
Volume/Cap:	0.05	0.00	0.44	0.00	0.00	0.00	0.00	0.44	0.01	0.44	0.48	0.00
Delay/Veh:	22.2	0.0	26.2	0.0	0.0	0.0	0.0	16.7	12.9	46.3	13.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.2	0.0	26.2	0.0	0.0	0.0	0.0	16.7	12.9	46.3	13.1	0.0
HCM2kAvg:	1	0	6	0	0	0	0	8	0	2	9	0

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

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Intersection #14 Whitmore Ave/ Ustick Rd

****

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[10.6]

****

Street Name:	Ustick Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 1			0 0 1! 0 0			0 1 0 0 1		
Volume Module:												
Base Vol:	4	6	4	22	6	12	19	133	3	1	142	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	6	4	22	6	12	19	133	3	1	142	23
Added Vol:	0	0	0	0	0	0	0	3	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	6	4	22	6	12	19	136	3	1	142	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	6	4	22	6	12	19	136	3	1	142	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	4	6	4	22	6	12	19	136	3	1	142	23
Critical Gap Module:												
Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	340	343	138	325	321	142	165	xxxx	xxxxx	139	xxxx	xxxxx
Potent Cap.:	618	583	916	632	599	911	1426	xxxx	xxxxx	1457	xxxx	xxxxx
Move Cap.:	598	575	916	618	591	911	1426	xxxx	xxxxx	1457	xxxx	xxxxx
Volume/Cap:	0.01	0.01	0.00	0.04	0.01	0.01	0.01	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.0	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.0	7.6	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	651	xxxxx	612	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd StpDel:	xxxxx	10.6	xxxxx	11.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
Shared LOS:	*	B	*	B	*	*	*	*	*	A	*	*
ApproachDel:	10.6			10.5			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

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Existing plus Project - PM Peak Hour
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Scenario Report

Scenario:	Existing plus Project - PM
Command:	Existing plus Project - PM
Volume:	Existing
Geometry:	Existing
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Paths
Routes:	Default Routes
Configuration:	Default Configuration

TID Almond AFC
Existing plus Project - PM Peak Hour
CH2M HILL

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

Intersection #1 Crows Landing Rd/ Service Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.381
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.5
Optimal Cycle: 36 Level Of Service: C

Street Name:	Crows Landing Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 1	0	1 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Base Vol:	2	330	63	153	318	25	14	49	9	50	48	94
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	330	63	153	318	25	14	49	9	50	48	94
Added Vol:	7	116	22	0	9	0	0	0	1	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	446	85	153	327	25	14	49	10	52	48	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	10	496	94	170	363	28	16	54	11	58	53	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	496	94	170	363	28	16	54	11	58	53	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	10	496	94	170	363	28	16	54	11	58	53	104
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.68	0.32	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	2959	564	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.17	0.17	0.09	0.10	0.02	0.01	0.03	0.01	0.03	0.03	0.06
Crit Moves:		****		****			****					****
Green/Cycle:	0.25	0.42	0.42	0.24	0.41	0.41	0.06	0.11	0.11	0.11	0.16	0.16
Volume/Cap:	0.02	0.40	0.40	0.40	0.24	0.04	0.14	0.26	0.06	0.29	0.17	0.40
Delay/Veh:	28.6	20.3	20.3	32.8	19.3	17.6	45.2	41.3	39.9	41.6	36.3	38.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.6	20.3	20.3	32.8	19.3	17.6	45.2	41.3	39.9	41.6	36.3	38.5
HCM2kAvg:	0	6	6	5	4	1	1	2	0	2	1	3

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

Intersection #2 Crows Landing Rd/ Hackett Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.657
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 26.7
Optimal Cycle: 46 Level Of Service: C

Street Name:	Crows Landing Rd						Hackett Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 0	1 0	0	1 0	0 1
Volume Module:												
Base Vol:	0	402	29	150	366	3	3	0	0	136	1	478
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	402	29	150	366	3	3	0	0	136	1	478
Added Vol:	0	116	0	0	9	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	518	29	150	375	3	3	0	0	136	1	478
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	0	582	33	169	421	3	3	0	0	153	1	537
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	582	33	169	421	3	3	0	0	153	1	537
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	582	33	169	421	3	3	0	0	153	1	537
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.94	0.94	0.95	0.95	0.85	0.63	1.00	1.00	0.72	0.72	0.85
Lanes:	1.00	1.89	0.11	1.00	2.00	1.00	1.00	1.00	0.00	0.99	0.01	1.00
Final Sat.:	1900	3391	190	1805	3610	1615	1201	1900	0	1364	10	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.17	0.09	0.12	0.00	0.00	0.00	0.00	0.11	0.11	0.33
Crit Moves:		****		****								****
Green/Cycle:	0.00	0.26	0.26	0.14	0.40	0.40	0.51	0.00	0.00	0.51	0.51	0.51
Volume/Cap:	0.00	0.66	0.66	0.66	0.29	0.01	0.01	0.00	0.00	0.22	0.22	0.66
Delay/Veh:	0.0	34.6	34.6	46.7	20.2	17.8	12.2	0.0	0.0	13.9	13.9	20.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	34.6	34.6	46.7	20.2	17.8	12.2	0.0	0.0	13.9	13.9	20.2
HCM2kAvg:	0	9	9	6	4	0	0	0	0	4	4	13

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

Intersection #3 Crows Landing Rd/ Whitmore Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.896
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 45.1
Optimal Cycle: 108 Level Of Service: D

Street Name:	Crows Landing Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	53	685	140	236	406	158	82	192	50	52	160	261
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	685	140	236	406	158	82	192	50	52	160	261
Added Vol:	7	94	15	0	7	0	0	0	1	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	60	779	155	236	413	158	82	192	51	53	160	261
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	64	829	165	251	439	168	87	204	54	56	170	278
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	829	165	251	439	168	87	204	54	56	170	278
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	64	829	165	251	439	168	87	204	54	56	170	278
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.91	0.91	0.95	1.00	0.85	0.95	0.91	0.91
Lanes:	1.00	1.67	0.33	1.00	1.45	0.55	1.00	1.00	1.00	1.00	0.38	0.62
Final Sat.:	1805	2936	584	1805	2501	957	1805	1900	1615	1805	655	1068
Capacity Analysis Module:												
Vol/Sat:	0.04	0.28	0.28	0.14	0.18	0.18	0.05	0.11	0.03	0.03	0.26	0.26
Crit Moves:		****		****				****			****	
Green/Cycle:	0.12	0.31	0.31	0.16	0.35	0.35	0.12	0.12	0.12	0.29	0.29	0.29
Volume/Cap:	0.30	0.90	0.90	0.90	0.50	0.50	0.40	0.90	0.28	0.11	0.90	0.90
Delay/Veh:	40.9	42.4	42.4	70.2	25.9	25.9	41.9	76.7	40.9	26.1	52.6	52.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.9	42.4	42.4	70.2	25.9	25.9	41.9	76.7	40.9	26.1	52.6	52.6
HCM2kAvg:	2	18	18	11	8	8	3	9	2	1	17	17

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

Intersection #4 Crows Landing Rd/ Hatch Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.780
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.6
Optimal Cycle: 73 Level Of Service: C

Street Name:	Crows Landing Rd						Hatch Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 2	0 1	1	0 2	0 1	1	1 0	1 0	1	1 0	1 0
Volume Module:												
Base Vol:	83	931	310	144	1116	229	246	299	57	284	304	129
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	83	931	310	144	1116	229	246	299	57	284	304	129
Added Vol:	0	80	15	0	6	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	83	1011	325	144	1122	229	246	299	57	285	304	129
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	93	1136	365	162	1261	257	276	336	64	320	342	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	1136	365	162	1261	257	276	336	64	320	342	145
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	93	1136	365	162	1261	257	276	336	64	320	342	145
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.92	0.92	0.92	0.91	0.91	0.91
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.23	1.49	0.28	1.19	1.27	0.54
Final Sat.:	1805	3610	1615	1805	3610	1615	2138	2599	495	2052	2188	929
Capacity Analysis Module:												
Vol/Sat:	0.05	0.31	0.23	0.09	0.35	0.16	0.13	0.13	0.13	0.16	0.16	0.16
Crit Moves:	****				****		****				****	
Green/Cycle:	0.07	0.40	0.40	0.11	0.45	0.45	0.17	0.17	0.17	0.20	0.20	0.20
Volume/Cap:	0.78	0.79	0.57	0.79	0.78	0.36	0.78	0.78	0.78	0.78	0.78	0.78
Delay/Veh:	73.2	29.2	24.4	61.1	25.9	18.4	44.5	44.5	44.5	41.8	41.8	41.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.2	29.2	24.4	61.1	25.9	18.4	44.5	44.5	44.5	41.8	41.8	41.8
HCM2kAvg:	5	17	9	7	18	5	9	9	9	10	10	10

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

Intersection #5 Crows Landing Rd/ SR 99 NB Ramps

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: E[46.0]

Street Name:	Crows Landing Rd						SR 99 NB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	1 0	0 1	0	1 0	0 1	1	0 0	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	0	544	788	14	513	0	1	0	0	54	0	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	544	788	14	513	0	1	0	0	54	0	30
Added Vol:	0	0	80	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	544	868	14	513	0	1	0	0	54	0	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	544	868	14	513	0	1	0	0	54	0	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	0	544	868	14	513	0	1	0	0	54	0	30
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	xxxx	xxxxx	7.1	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	xxxx	xxxxx	3.5	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1412	xxxx	xxxxx	1534	xxxx	xxxxx	1085	xxxx	544
Potent Cap.:	xxxx	xxxx	xxxxx	489	xxxx	xxxxx	96	xxxx	xxxxx	196	xxxx	543
Move Cap.:	xxxx	xxxx	xxxxx	489	xxxx	xxxxx	89	xxxx	xxxxx	192	xxxx	543
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	0.01	xxxx	xxxx	0.28	xxxx	0.06
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	12.6	xxxx	xxxxx	46.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	E	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	249	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.4	xxxxx
Shrd StpDel:	9.0	xxxx	xxxxx	12.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	26.6	xxxxx
Shared LOS:	A	*	*	B	*	*	*	*	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			46.0			26.6		
ApproachLOS:	*			*			E			D		

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

Intersection #6 Carpenter Rd/ Service Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.352
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.3
Optimal Cycle: 0 Level Of Service: A

Street Name:	Carpenter Rd									Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	1 0	0	1 0	0 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	0	245	14	32	253	0	0	0	0	36	0	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	245	14	32	253	0	0	0	0	36	0	28
Added Vol:	0	0	0	1	0	0	0	0	0	0	0	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	245	14	33	253	0	0	0	0	36	0	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	245	14	33	253	0	0	0	0	36	0	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	245	14	33	253	0	0	0	0	36	0	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	245	14	33	253	0	0	0	0	36	0	35
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.95	0.05	0.12	0.88	0.00	0.00	1.00	0.00	0.51	0.00	0.49
Final Sat.:	0	772	44	94	718	0	0	631	0	345	0	336
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.32	0.32	0.35	0.35	xxxx	xxxx	0.00	xxxx	0.10	xxxx	0.10
Crit Moves:		****			****			****		****		
Delay/Veh:	0.0	9.3	9.3	9.6	9.6	0.0	0.0	0.0	0.0	8.4	0.0	8.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.3	9.3	9.6	9.6	0.0	0.0	0.0	0.0	8.4	0.0	8.4
LOS by Move:	*	A	A	A	A	*	*	*	*	A	*	A
ApproachDel:		9.3			9.6			xxxxxx			8.4	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		9.3			9.6			xxxxxx			8.4	
LOS by Appr:		A			A			*			A	

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

Intersection #7 Service Rd/ Morgan Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.492
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.5
Optimal Cycle: 0 Level Of Service: B

Street Name:	Morgan Rd									Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 0	1 0	1	0 1	0 1	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	5	58	30	79	66	39	60	232	11	23	138	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	58	30	79	66	39	60	232	11	23	138	74
Added Vol:	0	0	0	0	0	0	0	22	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	58	30	79	66	39	60	254	11	23	140	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	6	65	34	89	74	44	67	285	12	26	157	83
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	65	34	89	74	44	67	285	12	26	157	83
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	6	65	34	89	74	44	67	285	12	26	157	83
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.66	0.34	1.00	1.00	1.00	1.00	0.96	0.04	1.00	1.00	1.00
Final Sat.:	477	351	181	476	509	563	551	580	25	501	542	603
Capacity Analysis Module:												
Vol/Sat:	0.01	0.19	0.19	0.19	0.15	0.08	0.12	0.49	0.49	0.05	0.29	0.14
Crit Moves:		****		****				****			****	
Delay/Veh:	9.8	10.3	10.3	11.3	10.4	9.1	9.8	13.6	13.6	9.9	11.5	9.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.8	10.3	10.3	11.3	10.4	9.1	9.8	13.6	13.6	9.9	11.5	9.2
LOS by Move:	A	B	B	B	B	A	A	B	B	A	B	A
ApproachDel:		10.2			10.5			12.9			10.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.2			10.5			12.9			10.6	
LOS by Appr:		B			B			B			B	

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Existing plus Project - PM Peak Hour
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Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #8 Service Rd/ Blaker Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.696
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 16.4
Optimal Cycle: 0 Level Of Service: C

Street Name:	Blaker Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 1	0	0 1	0 0	1	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	0	9	5	60	5	17	27	380	4	9	426	75
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	9	5	60	5	17	27	380	4	9	426	75
Added Vol:	0	0	0	0	0	0	0	22	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	9	5	60	5	17	27	402	4	9	428	75
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	9	5	60	5	17	27	402	4	9	428	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	9	5	60	5	17	27	402	4	9	428	75
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	9	5	60	5	17	27	402	4	9	428	75
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.64	0.36	0.92	0.08	1.00	1.00	0.99	0.01	1.00	1.00	1.00
Final Sat.:	0	308	171	428	36	543	600	656	7	555	615	683
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.03	0.03	0.14	0.14	0.03	0.04	0.61	0.61	0.02	0.70	0.11
Crit Moves:		****			****				****		****	
Delay/Veh:	0.0	9.9	9.9	10.9	10.9	8.9	8.8	15.8	15.8	9.1	20.3	8.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.9	9.9	10.9	10.9	8.9	8.8	15.8	15.8	9.1	20.3	8.4
LOS by Move:	*	A	A	B	B	A	A	C	C	A	C	A
ApproachDel:		9.9			10.5			15.4			18.4	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		9.9			10.5			15.4			18.4	
LOS by Appr:		A			B			C			C	

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Existing plus Project - PM Peak Hour
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Service Rd/ Central Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.403
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 24.8
Optimal Cycle: 36 Level Of Service: C

Street Name:	Central Ave						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	0 1	0
Volume Module:												
Base Vol:	48	77	38	34	80	86	66	248	59	57	367	31
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	48	77	38	34	80	86	66	248	59	57	367	31
Added Vol:	0	0	0	0	0	0	0	22	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	77	38	34	80	86	66	270	59	57	369	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	52	83	41	37	86	92	71	290	63	61	397	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	83	41	37	86	92	71	290	63	61	397	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	52	83	41	37	86	92	71	290	63	61	397	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.99	0.99
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.08
Final Sat.:	1805	1900	1615	1805	1900	1615	1805	1900	1615	1805	1732	145
Capacity Analysis Module:												
Vol/Sat:	0.03	0.04	0.03	0.02	0.05	0.06	0.04	0.15	0.04	0.03	0.23	0.23
Crit Moves:	****					****	****				****	
Green/Cycle:	0.07	0.11	0.11	0.11	0.14	0.14	0.10	0.48	0.48	0.19	0.57	0.57
Volume/Cap:	0.40	0.41	0.24	0.19	0.32	0.40	0.40	0.32	0.08	0.18	0.40	0.40
Delay/Veh:	46.5	43.1	41.7	41.2	39.2	40.2	43.9	16.2	14.2	34.4	12.3	12.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.5	43.1	41.7	41.2	39.2	40.2	43.9	16.2	14.2	34.4	12.3	12.3
HCM2kAvg:	2	3	1	1	3	3	3	5	1	2	7	7

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

Intersection #10 Mitchell Rd/ Service Rd

Cycle (sec): 120 Critical Vol./Cap. (X): 0.575
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 32.9
Optimal Cycle: 47 Level Of Service: C

Street Name:	Mitchell Rd						Service Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	1 0	1	0 2	0 1	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	143	784	125	68	817	215	195	85	188	127	79	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	143	784	125	68	817	215	195	85	188	127	79	63
Added Vol:	2	0	0	0	0	0	0	0	22	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	145	784	125	68	817	215	195	85	210	127	79	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	148	800	128	69	834	219	199	87	214	130	81	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	148	800	128	69	834	219	199	87	214	130	81	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	148	800	128	69	834	219	199	87	214	130	81	64
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.72	0.28	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1805	3048	486	1805	3610	1615	1805	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.08	0.26	0.26	0.04	0.23	0.14	0.11	0.05	0.13	0.07	0.04	0.04
Crit Moves:	****				****				****	****		
Green/Cycle:	0.14	0.46	0.46	0.09	0.40	0.40	0.23	0.23	0.23	0.12	0.12	0.12
Volume/Cap:	0.57	0.57	0.57	0.44	0.57	0.34	0.48	0.20	0.57	0.57	0.34	0.32
Delay/Veh:	51.2	24.5	24.5	54.0	28.5	25.2	40.8	37.4	43.1	53.1	48.8	48.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.2	24.5	24.5	54.0	28.5	25.2	40.8	37.4	43.1	53.1	48.8	48.8
HCM2kAvg:	6	13	13	3	12	6	7	3	8	6	3	2

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

Intersection #11 Carpenter Rd/ Whitmore Ave

Cycle (sec): 100 Critical Vol./Cap. (X): 0.719
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 14.9
Optimal Cycle: 0 Level Of Service: B

Street Name:	Carpenter Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0	0	0 1!	0 0
Volume Module:												
Base Vol:	4	234	23	184	263	60	56	30	4	11	26	118
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	234	23	184	263	60	56	30	4	11	26	118
Added Vol:	0	7	0	1	1	0	0	0	0	0	0	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	241	23	185	264	60	56	30	4	11	26	125
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	241	23	185	264	60	56	30	4	11	26	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	4	241	23	185	264	60	56	30	4	11	26	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	4	241	23	185	264	60	56	30	4	11	26	125
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.01	0.90	0.09	0.36	0.52	0.12	0.63	0.33	0.04	0.07	0.16	0.77
Final Sat.:	10	589	56	257	367	83	318	170	23	40	94	452
Capacity Analysis Module:												
Vol/Sat:	0.41	0.41	0.41	0.72	0.72	0.72	0.18	0.18	0.18	0.28	0.28	0.28
Crit Moves:	****				****				****	****		
Delay/Veh:	11.5	11.5	11.5	19.0	19.0	19.0	10.3	10.3	10.3	10.3	10.3	10.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.5	11.5	11.5	19.0	19.0	19.0	10.3	10.3	10.3	10.3	10.3	10.3
LOS by Move:	B	B	B	C	C	C	B	B	B	B	B	B
ApproachDel:	11.5			19.0			10.3			10.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.5			19.0			10.3			10.3		
LOS by Appr:	B			C			B			B		

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

Intersection #12 Whitmore Ave/ Morgan Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.747
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 29.2
Optimal Cycle: 58 Level Of Service: C

Street Name:	Morgan Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	6	6	6	6	6	6	6	6	6	6	6	6
Lanes:	1	0 1	0 1	0	0 1!	0 0	1	0 1	0 1	1	0 0	1 0
Volume Module:												
Base Vol:	56	143	202	56	365	70	64	557	104	183	346	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	56	143	202	56	365	70	64	557	104	183	346	51
Added Vol:	0	0	0	0	0	0	0	15	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	56	143	202	56	365	70	64	572	104	183	347	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	56	143	202	56	365	70	64	572	104	183	347	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	143	202	56	365	70	64	572	104	183	347	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	56	143	202	56	365	70	64	572	104	183	347	51
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.75	1.00	0.85	0.93	0.93	0.93	0.95	1.00	0.85	0.95	0.98	0.98
Lanes:	1.00	1.00	1.00	0.11	0.75	0.14	1.00	1.00	1.00	1.00	0.87	0.13
Final Sat.:	1421	1900	1615	202	1318	253	1805	1900	1615	1805	1625	239
Capacity Analysis Module:												
Vol/Sat:	0.04	0.08	0.13	0.28	0.28	0.28	0.04	0.30	0.06	0.10	0.21	0.21
Crit Moves:					****			****		****		
Green/Cycle:	0.37	0.37	0.37	0.37	0.37	0.37	0.12	0.40	0.40	0.14	0.42	0.42
Volume/Cap:	0.11	0.20	0.34	0.75	0.75	0.75	0.30	0.75	0.16	0.75	0.51	0.51
Delay/Veh:	20.7	21.5	22.9	32.1	32.1	32.1	41.1	29.5	19.1	53.4	21.9	21.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.7	21.5	22.9	32.1	32.1	32.1	41.1	29.5	19.1	53.4	21.9	21.9
HCM2kAvg:	1	3	5	15	15	15	2	16	2	7	9	9

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

Intersection #13 Whitmore Ave/ Blaker Rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.822
Loss Time (sec): 9 (Y+R = 4 sec) Average Delay (sec/veh): 27.7
Optimal Cycle: 74 Level Of Service: C

Street Name:	Blaker Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	3	6	6	3	6	6	6	6	6	6	6	6
Lanes:	0	1 0	0 1	0	0 0	0 1	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	22	1	276	0	0	1	0	811	28	257	551	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	1	276	0	0	1	0	811	28	257	551	1
Added Vol:	0	0	0	0	0	0	0	15	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	1	276	0	0	1	0	826	28	257	552	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	22	1	276	0	0	1	0	826	28	257	552	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	1	276	0	0	1	0	826	28	257	552	1
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	22	1	276	0	0	1	0	826	28	257	552	1
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	1.00	1.00	0.87	1.00	1.00	0.85	0.95	1.00	0.85
Lanes:	0.96	0.04	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1734	79	1615	0	0	1644	1900	1900	1615	1805	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.17	0.00	0.00	0.00	0.00	0.43	0.02	0.14	0.29	0.00
Crit Moves:			****	****				****		****		
Green/Cycle:	0.20	0.21	0.21	0.00	0.00	0.00	0.00	0.53	0.53	0.17	0.70	0.70
Volume/Cap:	0.06	0.06	0.82	0.00	0.00	0.15	0.00	0.82	0.03	0.82	0.41	0.00
Delay/Veh:	32.2	31.8	52.8	0.0	0.0	59.4	0.0	25.2	11.3	55.7	6.5	4.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.2	31.8	52.8	0.0	0.0	59.4	0.0	25.2	11.3	55.7	6.5	4.4
HCM2kAvg:	1	1	11	0	0	0	0	23	0	10	7	0

TID Almond AFC
Existing plus Project - PM Peak Hour
CH2M HILL

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

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Intersection #14 Whitmore Ave/ Ustick Rd

****

Average Delay (sec/veh): 2.2 Worst Case Level Of Service: B[12.9]

****

Street Name:	Ustick Rd						Whitmore Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0 0		0 1 0	0 1		0 0 1!	0 0		0 1 0	0 1	
Volume Module:												
Base Vol:	2	7	0	22	2	28	49	181	2	8	126	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	7	0	22	2	28	49	181	2	8	126	60
Added Vol:	0	0	0	0	0	0	0	1	0	0	7	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	7	0	22	2	28	49	182	2	8	133	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	7	0	22	2	28	49	182	2	8	133	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	2	7	0	22	2	28	49	182	2	8	133	60
Critical Gap Module:												
Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	475	490	xxxxx	434	431	133	193	xxxx	xxxxx	184	xxxx	xxxxx
Potent Cap.:	503	482	xxxxx	536	520	922	1392	xxxx	xxxxx	1403	xxxx	xxxxx
Move Cap.:	471	462	xxxxx	513	498	922	1392	xxxx	xxxxx	1403	xxxx	xxxxx
Volume/Cap:	0.00	0.02	xxxx	0.04	0.00	0.03	0.04	xxxx	xxxx	0.01	xxxx	xxxx
Level Of Service Module:												
Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.1	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.0	7.7	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	464	xxxx	xxxxx	512	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd StpDel:	12.9	xxxx	xxxxx	12.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
Shared LOS:	B	*	*	B	*	*	*	*	*	A	*	*
ApproachDel:	12.9			10.6			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE TID ALMOND 2 *POWER PLANT PROJECT*

Docket No. 09-AFC-2

PROOF OF SERVICE
(Revised 9/3//09)

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*indicates change

DECLARATION OF SERVICE

I, Mary Finn, declare that on Friday, November 20, 2009, I served and filed copies of the attached, CURE Data Responses Set 1A dated November 20, 2009. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [http://www.energy.ca.gov/sitingcases/almond].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(*Check all that Apply*)

FOR SERVICE TO ALL OTHER PARTIES:

__x__ sent electronically to all email addresses on the Proof of Service list;

__X__ by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses NOT marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

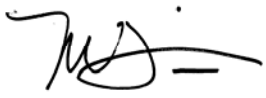
__x__ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method***);

OR

_____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 09-AFC-2
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.



Mary Finn