CENTRAL MESA
LRT EXTENSION

DRAFT ENVIRONMENTAL ASSESSMENT

AIR QUALITY TECHNICAL REPORT

August 2010

METRO

Central Mesa LRT Extension

Air Quality Technical Report

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TABLE OF CONTENTS

SECTION **PAGE**

LIST OF TABLES

LIST OF FIGURES

APPENDICES

Appendix A. Intersection Geometry

Appendix B. MOBILE 6.2 Output Files

Appendix C. SYNCHRO Files

Appendix D. CAL3QHC Output Files

Appendix E. Comment and Response Form

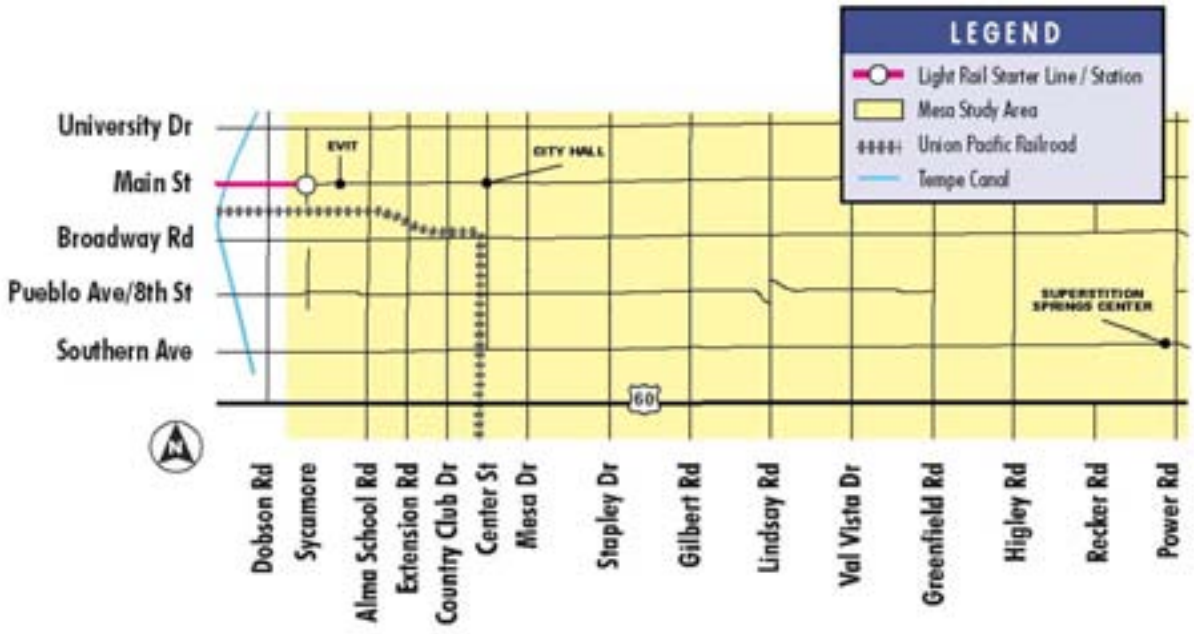
1.0 INTRODUCTION

This Air Quality technical report is being prepared to support the Environmental Assessment (EA) for high capacity transit improvements being considered in the study area for the Central Mesa Light Rail Transit (LRT) Extension. This chapter begins with a short background of the study and a description of the alternatives being considered in the EA.

1.1 STUDY BACKGROUND

The Central Mesa LRT Extension study area is bounded on the west by the Light Rail Starter Line's eastern terminus at Sycamore/Main Street; University Drive to the north; Power Road to the east; and the Superstition Freeway (U.S. 60) on the south (Figure 1).

FIGURE 1: CENTRAL MESA STUDY AREA



Source: METRO (2009)

A two-tiered alternatives development process was implemented to evaluate the Central Mesa Study Area conceptual alternatives. The first phase (Tier 1) included a conceptual level evaluation that analyzed the advantages and disadvantages of the initial list of potential alternatives to address the transportation needs of the study area (see separate *Tier 1 Evaluation of Alternatives Report,* October 2007, for more information). The initial alternatives considered both LRT and bus rapid transit (BRT) modes.

All alternatives began at the eastern terminus of the recently opened LRT Starter Line Station at Sycamore/Main Street and extended east to the Superstition Springs Center area via Main Street (with 1st Street and 1st Avenue suboptions downtown) and Power Road. Fixed guideway (via LRT or BRT) generally extended east to about Horne (between Mesa and Stapley Drives) with BRT offering limited stop express service further east in existing travel lanes (similar to Valley Metro Link) to Superstition Springs Center. LRT consisted of a dedicated fixed guideway with two tracks (one track in each direction) that ran mostly in the middle of the existing street system. BRT also had a dedicated fixed guideway for a portion of the project as previously mentioned. The initial alternatives were subject to a "fatal flaw' screening at the Tier 1 phase; the most feasible alternatives were identified and retained for further analysis, and the alternatives deemed unresponsive to Tier 1 evaluation criteria were eliminated from continued study.

The alternatives that remained after the Tier 1 analysis and public, agency, and other stakeholder input were then subjected to a more detailed evaluation (Tier 2). The Tier 2 evaluation continued to consider both LRT and BRT build alternatives. The criteria developed to analyze all of the build alternatives in Tier 2 began to quantify ridership potential, capital and operating and maintenance costs, land use and economic development impacts, traffic issues, environmental factors, conceptual engineering, and public preferences. See the complete *Tier 2 Evaluation of Alternatives Report,* December 2008, which defines the Tier 2 alternatives considered and details the results of the evaluation.

Based on the results of the Tier 2 evaluation, public meetings, and agency and other stakeholder input, the recommended build alternative is to advance light rail transit as the preferred technology and Main Street as the preferred alignment. The locally preferred alternative (LPA) includes a light rail extension on Main Street east to an interim end-of-the-line east of Mesa Drive as Phase 1. See the complete *Recommended Alternative Report*, Draft June 2009 for discussion of the rationale for selection of the LPA. The Phase 1 project is scheduled to begin operations in 2016 and is the major focus of the Environmental Assessment being prepared pursuant to the National Environmental Policy Act (NEPA). The No-Build Alternative will also continue to be considered as specified by NEPA. The Phase 1 project connects logical termini and has independent utility meaning that the project is a reasonable expenditure even if no additional transportation improvements are made in the area.

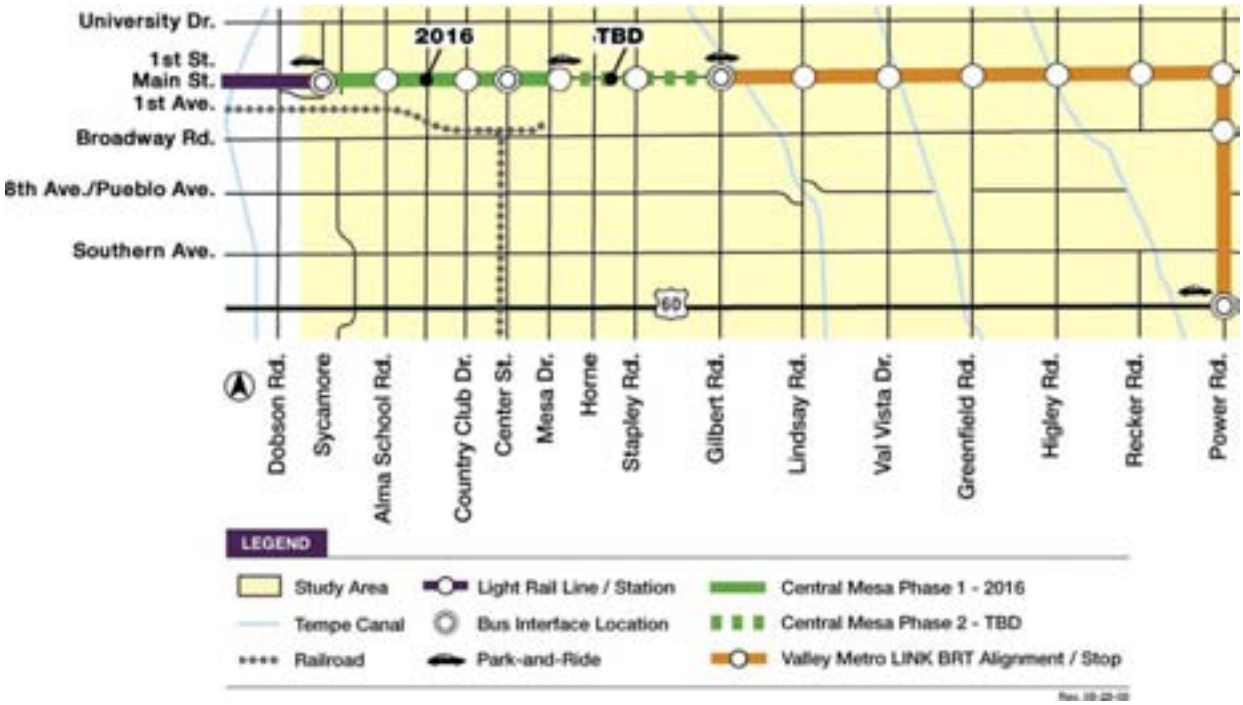
1.2 BUILD ALTERNATIVE

The LRT Main Street Alternative was selected as the recommended LPA for more detailed analysis in the EA. This LPA recommendation was approved by the City of Mesa City Council (May 2009) and the METRO Board of Directors (June 2009). The LPA has two design options for Main Street in the area east of Country Club Drive: 1) 2 Lanes; and 2) 4 Lanes. The design options are described at the end of this discussion.

Whether to implement the Build Alternative, 2-Lane Option or the Build Alternative, 4-Lane Option will be decided after completion of a series of public workshops, the Draft EA, and receipt of input during the Draft EA public comment period.

The Build Alternative, or LPA, is shown in Figure 2. The Build Alternative includes a double-track LRT guideway that would operate in the center of Main Street from just east of Sycamore to just east of Hobson, a distance of 3.1 miles. LRT is electrically powered and receives its power from overhead power lines within the street right-of-way.

FIGURE 2: LOCALLY PREFERRED ALTERNATIVE



LRT operations would include a traffic signal priority system (predictive priority), to allow for faster travel times. The light rail vehicles will be the same as the ones currently being used for the LRT Starter Line. Major operating plan features are listed in Table 1.

TABLE 1: LRT OPERATING PLANS

Headways	All day except late evening: Late evening:	10 minutes 20 minutes
Number of Vehicles	42 – LRT Starter Line + Central Mesa LRT Extension 8 – Spare vehicles 50 – Total current fleet	
Line-haul Capacity	2,700 passengers per peak hour per direction (Based on 3 vehicles per train and 150 passengers/vehicle)[1]	
Hours of Operation	Daily = ~20 hours	

[1]Ultimate capacity. LRT operating plans call for 2-car consists during normal operations with 3-car consists operating only during special events or other high periods of demand.

This alternative is an extension of the LRT Starter Line that opened in December 2008 and would provide a seamless connection (no transfer required) from the current eastern terminus of the LRT Starter Line at Sycamore along Main Street to Mesa Drive. Tail tracks would continue east of the station platform a distance of approximately 425 feet east of Hobson.

East of Centennial Way to Superstition Springs Transit Center, the existing Valley Metro LINK BRT would connect to LRT and operate in mixed traffic as it does today as a skip-stop express service. As a result of the Build Alternative, Valley Metro LINK BRT service would be discontinued along Main Street between Sycamore and Centennial Way to eliminate service duplication, and its operational frequency in the off-peak will increase from 30 to 15 minutes. However, service during peak periods will remain the same as today (15 minutes). Other than that, no other changes to the LINK operations or facilities will be necessary for the Phase 1 LRT extension being evaluated in the EA. LRT stations/LINK BRT stops and park-and-ride locations are identified in Table 2. A new park-and-ride facility would be built near the end-of-line LRT station on the northeast corner of Main Street/Mesa Drive. Each LRT station would serve one or more existing or planned bus routes in the area.

TABLE 2: STATION AND PARK-AND-RIDE LOCATIONS

Station/Stop	Park-and-Ride	Location[1]
LRT Facilities (Stations)		
Sycamore/Main St. (LRT Starter Line End-of-Line Station)	Yes	East of intersection Existing facility and not attributable to LRT extension
Alma School/Main St.	No	East of intersection
Country Club/Main St.	No	East of intersection
Center/Main St.	No	East of intersection
Mesa Dr./Main St.	Yes	Station—East of intersection Park-and-Ride—Northeast of intersection. A 6.4-acre area of interest identified. Park-and-ride would accommodate approximately 500 vehicles and will not likely require the entire 6.4-acre site. Layout to be determined during final design. The park-and-ride site may have potential market value for transit-oriented development sometime in the future.
Valley Metro Link BRT Facilities (Existing Stops—Facilities not attributable to LRT extension)		
Stapley/Main St.[2]	No	East of intersection
Gilbert/Main St.[2]	No	West/east of intersection
Lindsay/Main St.[2]	No	East of intersection
Val Vista/Main St.[2]	No	West/east of intersection
Greenfield/Main St.[2]	No	West/east of intersection
Higley/Main St.[2]	No	East of intersection
Recker/Main St.[2]	No	West/east of intersection
Power/Main St.[2]	No	West of intersection
Broadway/Power[2]	No	North of intersection
U.S. 60/Power (Superstition Springs Center)[2]	Yes	North of intersection

[1]All LRT stations have a center platform configuration.
[2]Station locations as part of existing Valley Metro LINK BRT project. Station locations and amenities would remain.
Source: METRO, 2010.

Also recommended, as part of the LPA, is a future (Phase 2) extension of LRT to Gilbert Road. This extension would provide enhanced regional transit connections and opportunity for a larger regional park-and-ride facility. At this time, Phase 2 is not identified in the MAG RTP, is unfunded, and is not evaluated in the EA. However, the Phase 2 recommendation has been forwarded to MAG and has been identified as an "illustrative project" for inclusion in the RTP. Should the Phase 2 project move forward as a federal project, it will be subject to NEPA compliance.

Construction of the Build Alternative would include installation of trackwork, an overhead contact system (OCS) for the distribution of electricity to LRT vehicles, traction power substations, and signaling and communication systems.

The LRT transitway would consist of tracks formed of continuously welded rails. The rails would be embedded track supported on a concrete slab.

The OCS would consist of poles, approximately 25 feet tall, installed along the operating right-of-way at intervals from 90 to 170 feet to support the electrical power line. The OCS would be designed to be compatible with visual and aesthetic characteristics of the corridor. The poles would generally be located in the center of the two tracks, wherever possible. In some locations, catenary poles may be located on the side of the LRT trackway with the overhead electrical line suspended over the LRT tracks with head spans.

Electricity for LRT operations would be supplied to the OCS from traction power substations (TPSS) located along the proposed LRT alignment. These electrical substations would be enclosed structures approximately 20-by-40 feet (30-by-60 feet including the grounding mat around the substation) located proximally to the LRT alignment. One TPSS would be required for roughly each one to one and a half mile of track. Specific locations will be determined as design is further refined.

LRT vehicles for the Central Mesa LRT Extension would be maintained and serviced at the existing LRT Starter Line Operations and Maintenance Center (OMC), located south of Washington Street between State Route (SR) 143 and Loop 202. The OMC will have sufficient capacity to service LRT vehicles allocated to the Central Mesa LRT Extension, and expansion of the existing facility, or construction of a new facility will not be required.

The existing traffic lane capacity along Main Street would be maintained between Sycamore and Country Club Drive. Typical cross sections are presented in Figure 3. For the segment east of Country Club Drive to the LRT eastern terminus near Hobson (just east of Mesa Drive), two design options are being considered:

- Build Alternative, 2-Lane Option
- Build Alternative, 4-Lane Option

These design options are further described below.

1.2.1 Build Alternative, 2-Lane Option

Main Street's traffic lane capacity would generally be reduced from two lanes in each direction to one lane in each direction from Country Club Drive to Horne. The exception is in the westbound direction only between Mesa Drive and Horne where two through lanes would be available. At the westbound approach to Mesa Drive intersection, one through lane would be trapped into a right turn lane. Single left turn lanes would be maintained at Country Club Drive (double left is removed), Robson, MacDonald, Center Street, Centennial Way/Sirrine Street, Hibbert, Mesa Drive, Lesueur, and Hobson. Acquisition of additional right-of-way along the alignment would be minimal to accommodate the fixed guideway as a result of the reduction of travel lanes. Typical cross sections at various locations along the Build Alternative, 2-Lane Option are shown in Figure 4. The station and park-and-ride locations presented in Table 2 apply to the 2-Lane Option. This option could allow for future conversion, if desired, to 2 lanes in each direction through downtown by eliminating the dedicated left turn lanes and using split-phase traffic signals that would allow through and left-turning traffic to share the same left lane. The conversion would require minor curb revisions and/or parking removal beyond that shown in the current design between Country Club Drive and Robson. Between Mesa Drive and Udall, some additional curb and right-of-way revisions would be needed on the south side of Main Street.

1.2.2 Build Alternative, 4-Lane Option

With the 4-lane option, the current four through travel lanes (two in each direction) would be maintained from Country Club to Hobson. This scenario assumes split-phase traffic signals, and single left turn lanes would only be provided at Country Club Drive and Mesa Drive. All other existing turning lanes would be removed. The bike lane would be eliminated west of Lesueur, and parking would continue to be provided at most locations along this segment where it presently exists. To keep the existing numbers of through lanes will require acquisition of additional right-of-way at the northeast and southeast corners of Main Street and Mesa Drive. Typical cross sections at various locations along the Build Alternative, 4-Lane Option are shown in Figure 5. All of the stations and park-and-ride facility locations are as illustrated in Table 2.

1.2.3 Unresolved Issues

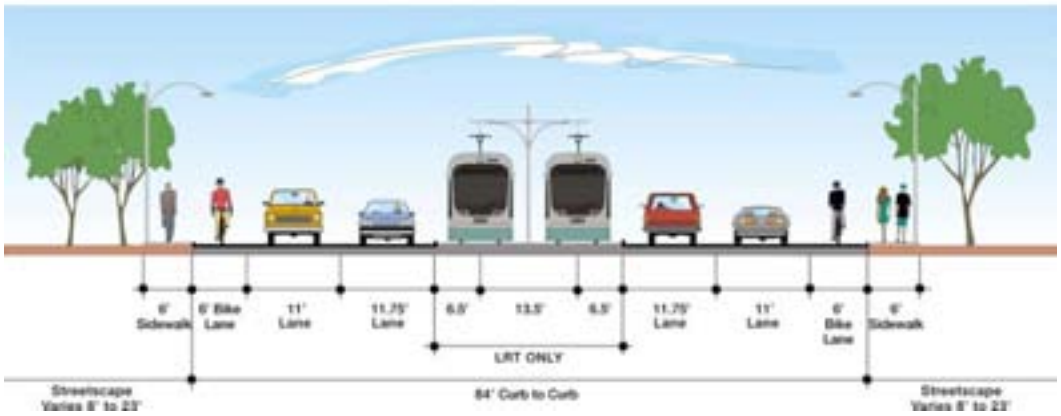
Several issues will be further refined as the EA proceeds and community outreach continues. In addition to the previously discussed optional traffic design configurations downtown, decisions will need to be made about the following:

- TPSS locations
- OCS

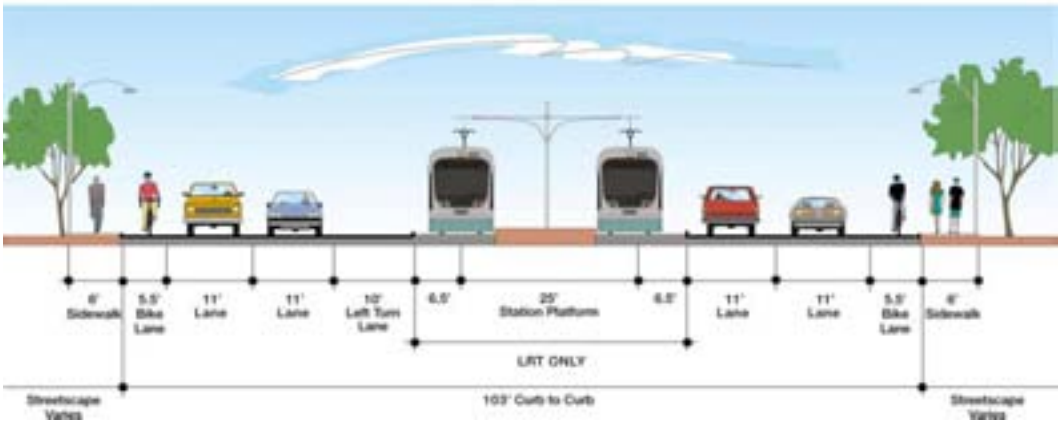
- Pedestrian access points
- Park-and-ride sizing, layout and capacity
- Station design
- Urban design/public art
- Refinement of utilities and location
- Construction staging

FIGURE 3: BUILD ALTERNATIVE, SYCAMORE TO COUNTRY CLUB DRIVE

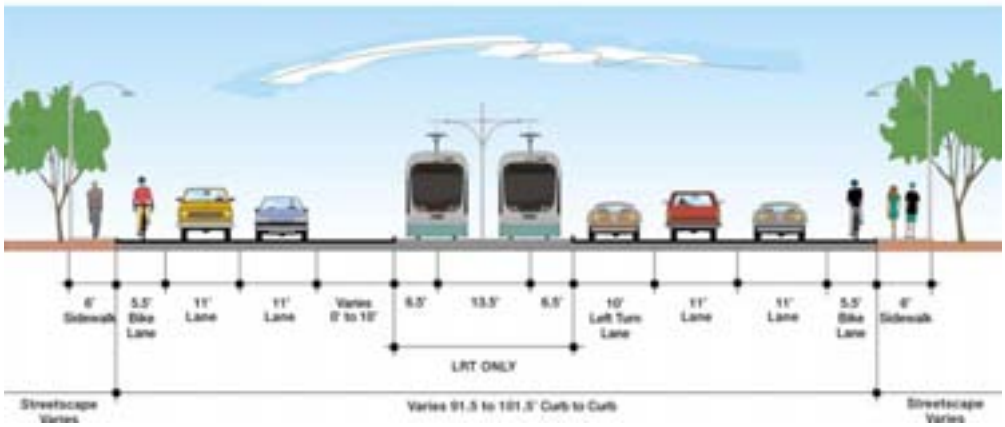
Main Street Typical Section



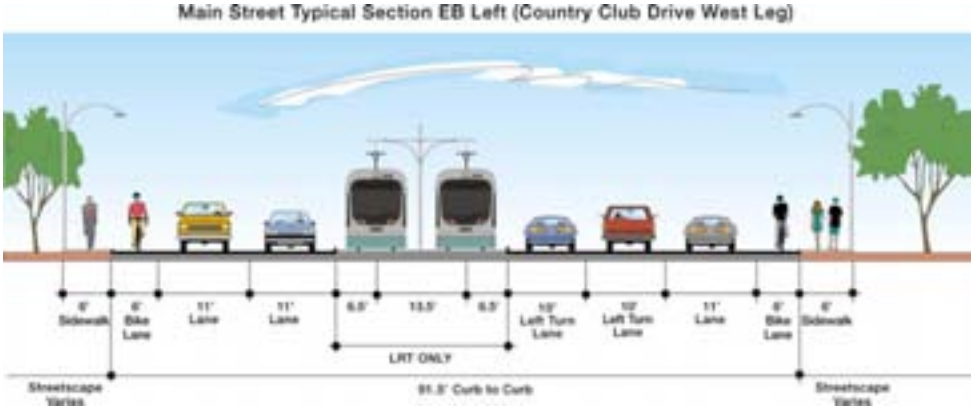
Main Street Typical Section at Station



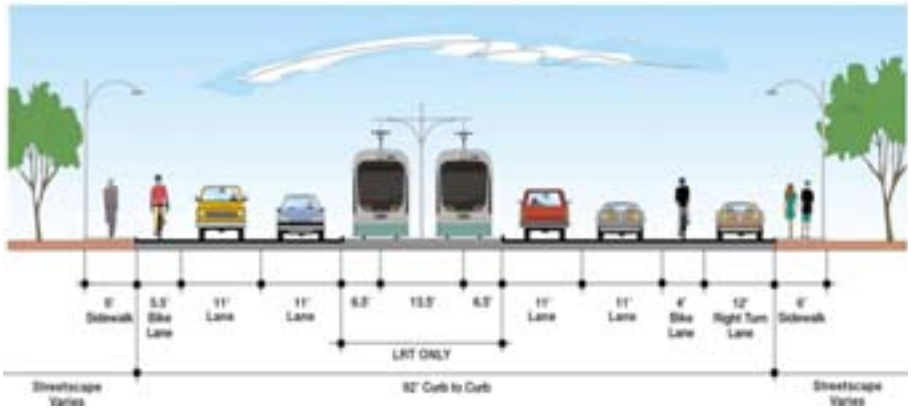
Main Street Typical Section EB Left Turn



Main Street Typical Section EB Left (Country Club Drive West Leg)



Main Street Typical Section EB Right Turn



Main Street Typical Section WB Left Turn

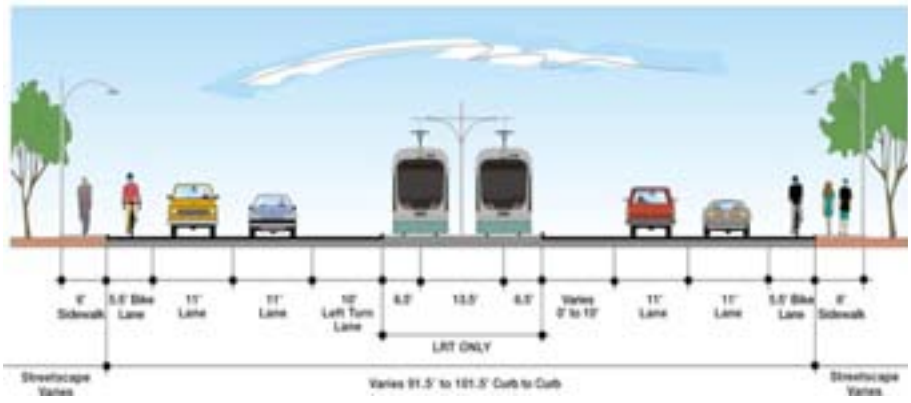
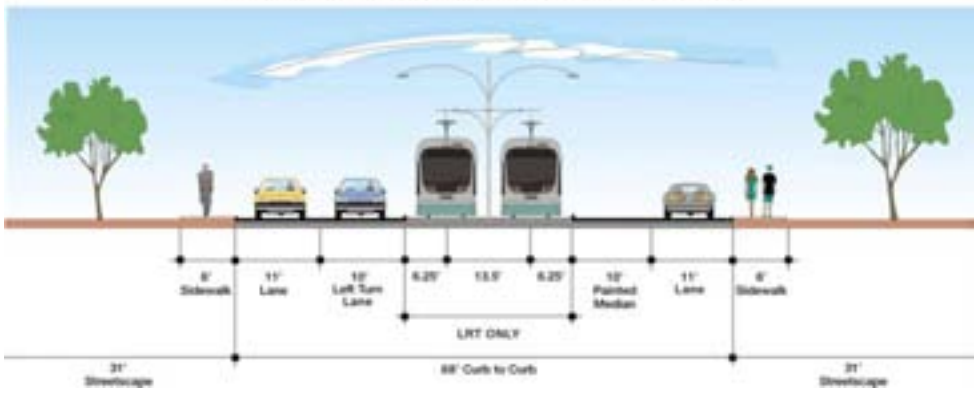
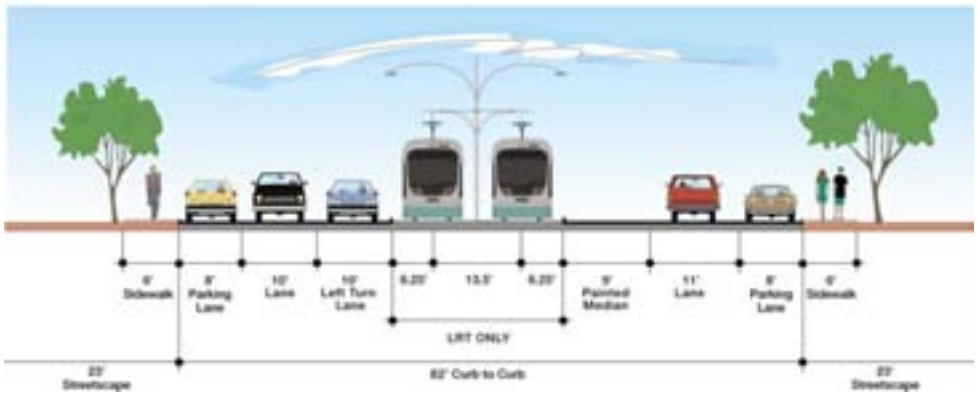


FIGURE 4: BUILD ALTERNATIVE, 2-LANE OPTION
COUNTRY CLUB DRIVE TO HOBSON

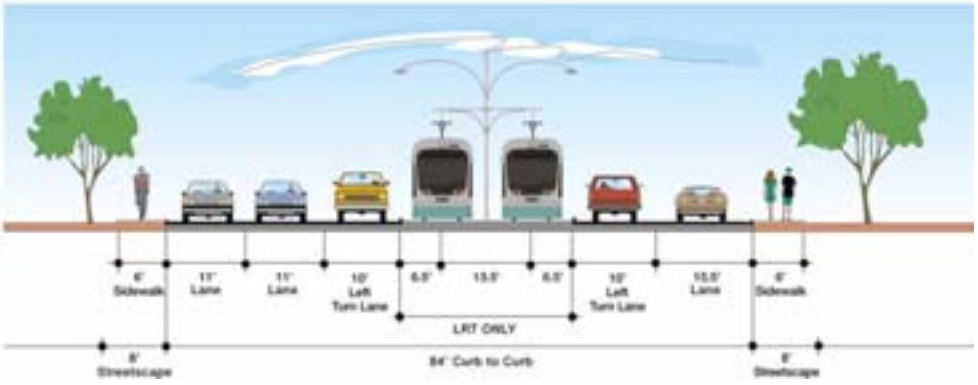
Main Street 2-lane Typical Section Without Parking Lane



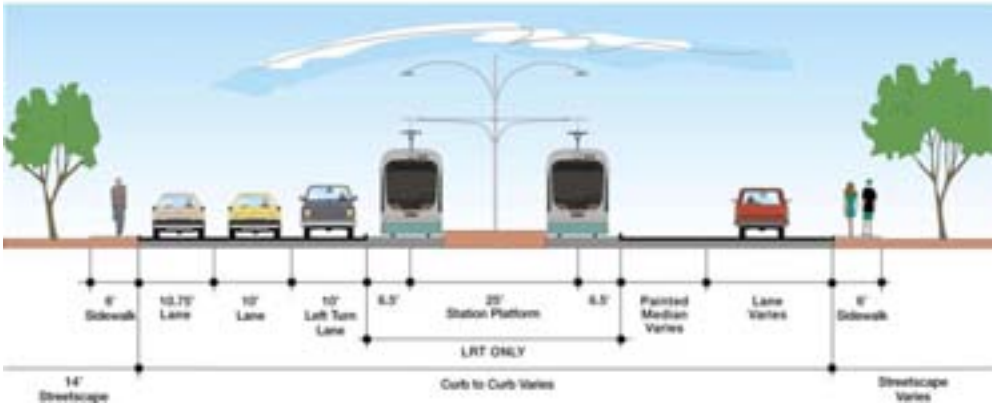
Main Street 2-lane Typical Section with Parking Lane



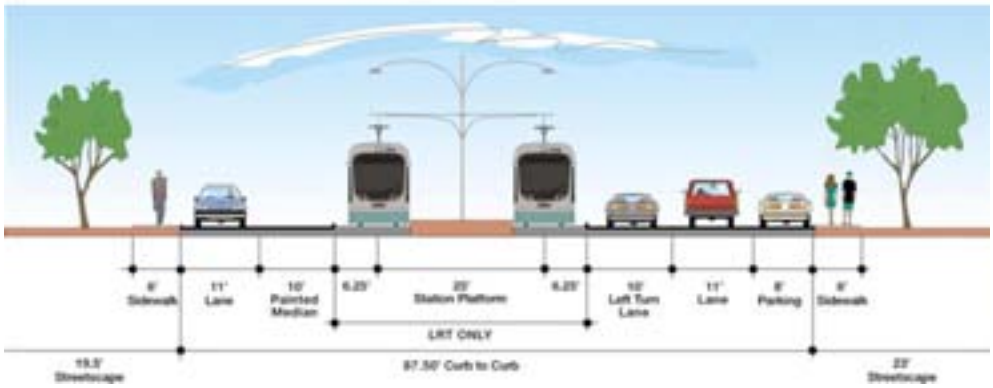
Main Street 2-lane Typical Section (Between Lesueur and Hobson)



Main Street 2-lane Typical Section at Country Club Drive Station



Main Street 2-lane Typical Section at Center Street Station



Main Street 2-lane Typical Section at Mesa Drive Station

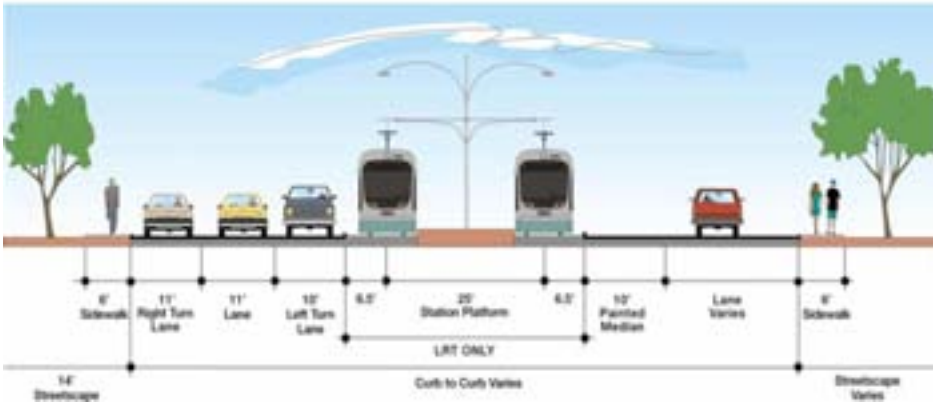
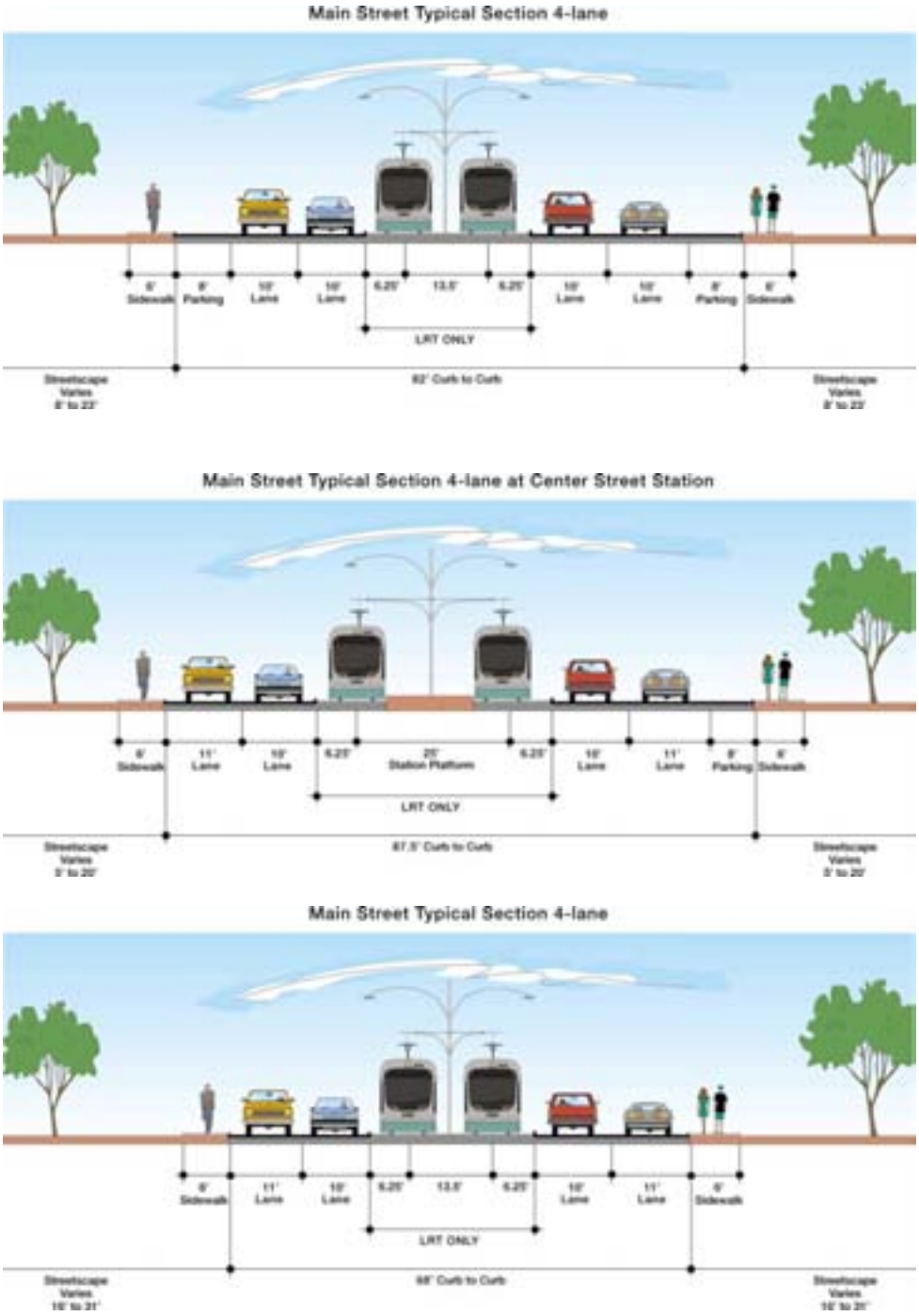


FIGURE 5: BUILD ALTERNATIVE, 4-LANE OPTION
COUNTRY CLUB DRIVE TO HOBSON



2.0 AFFECTED ENVIRONMENT

2.1 APPLICABLE AIR QUALITY STANDARDS

The federal and state ambient air quality standards are applicable to the Maricopa County region. The National Ambient Air Quality Standards (NAAQS) were established by the federal Clean Air Act (CAA) of 1970, as amended in 1977 and 1990. The NAAQS represent the maximum levels of pollution considered safe, with an adequate margin of safety, to protect public health and welfare. The six primary air pollutants of concern for which NAAQS have been established are carbon monoxide (CO), ozone (O_3), particulate matter (PM) equal to or smaller than 10 microns (PM-10) or 2.5 microns (PM-2.5) in diameter, sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead (Pb). In Arizona, the state ambient air quality standards are identical to the federal NAAQS.

Table 3 presents the current NAAQS for each of the six pollutants for different averaging periods. The "primary" standards have been established to protect public health. The "secondary" standards are intended to protect the nation's welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings. When an area violates a health-based standard, the CAA requires that the area be designated as nonattainment for that pollutant.

TABLE 3. NATIONAL AMBIENT AIR QUALITY STANDARDS

	Primary Standards		Secondary Standards	
Pollutant	**Level**	**Averaging Time**	**Level**	**Averaging Time**
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour (1)	None	
	35 ppm (40 mg/m^3)	1-hour (1)		
Lead	0.15 µg/m^3 (2)	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m^3	Quarterly Average	Same as Primary	
Nitrogen Dioxide	53 ppb (3)	Annual (Arithmetic Average)	Same as Primary	
	100 ppb	1-hour (4)	None	
Particulate Matter (PM_{10})	150 µg/m^3	24-hour (5)	Same as Primary	
Particulate Matter ($PM_{2.5}$)	15.0 µg/m^3	Annual (6) (Arithmetic Average)	Same as Primary	
	35 µg/m^3	24-hour (7)	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour (8)	Same as Primary	
	0.08 ppm (1997 std)	8-hour (9)	Same as Primary	
	0.12 ppm	1-hour (10)	Same as Primary	
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Average)	0.5 ppm	3-hour (1)
	0.14 ppm	24-hour (1)		
	75 ppb (11)	1-hour	None	

(1) Not to be exceeded more than once per year.

(2) Final rule signed October 15, 2008.

(3) The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard

(4) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb (effective January 22, 2010).

(5) Not to be exceeded more than once per year on average over 3 years.

(6) To attain this standard, the 3-year average of the weighted annual mean PM-2.5 concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3.

(7) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m3 (effective December 17, 2006).

(8) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008)

(9) (a) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

(b) The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.

(c) EPA is in the process of reconsidering these standards (set in March 2008).

(10) (a) EPA revoked the 1-hour ozone standard in all areas, although some areas have continuing obligations under that standard ("anti-backsliding").

(b) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is $\leq$ 1.

(11) (a) Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.

Last updated on Thursday, June 03, 2010

2.2 ATTAINMENT STATUS

The Maricopa County area is currently designated as a federal nonattainment area for 8-hour O_3 and PM-10, maintenance area for CO, and unclassifiable/attainment for SO_2, Pb, NO_2, and PM-2.5.

The nonattainment area is located in the Salt River Valley at 1,100 feet above mean sea level and is almost completely surrounded by mountains. The climate in the nonattainment area is arid continental, with temperatures ranging from a mean of 52 degrees Fahrenheit in January to 91 degrees, in July. The sun shines 86 percent of the time and the annual rainfall is about 7.44 inches. In general, the prevailing wind direction is from E/SE to W/SW.

2.2.1 Carbon Monoxide

Carbon monoxide is a colorless, odorless, and (at much higher levels) poisonous gas, formed when carbon in fuels is not burned completely. It is a product of motor vehicle exhaust, which contributes about 60 percent of all CO emissions nationwide. High concentrations of CO generally occur in areas with heavy traffic congestion. Other sources of CO emissions include industrial processes such as carbon black manufacturing, non-transportation fuel combustion, and natural sources such as wildfires.

Peak concentrations typically occur along roadways and near intersections with high levels of traffic congestion. Calm winds during the late fall and winter, coupled with night and early morning ground-based temperature inversions, can cause a build-up of CO concentrations in urban areas.

On March 9, 2005, EPA published the final rule in the Federal Register redesignating the Phoenix metropolitan area to attainment for CO, as well as approving the attainment demonstration and maintenance plan showing maintenance of the CO standard through 2015. The Phoenix metropolitan area has not had a violation of the CO standard since 1996 and has been reporting clean monitoring data for more than ten years.

2.2.2 Ozone

Ozone is the prime ingredient of smog in our cities and other areas of the country. Though it occurs naturally in the stratosphere to provide a protective layer high above the earth, at ground-level it is the prime ingredient of smog. Ozone is not emitted directly into the air, but is formed by gases called nitrogen oxides (NOx) and volatile organic compounds (VOCs) that in the presence of heat and sunlight react to form ozone. Ground-level ozone forms readily in the atmosphere, usually during hot weather, and affects the respiratory system in people and animals, as well as affects the growth of plants. NOx is emitted from motor vehicles, power plants and other sources of combustion. VOCs are emitted from a variety of sources, including motor vehicles, chemical plants, refineries, factories, consumer and commercial products, and other industrial sources.

On June 14, 2005, EPA published the final rule in the Federal Register redesignating the Phoenix metropolitan area to attainment of the 1-hour ozone standard, the primary component of smog, and approving the plan showing maintenance of the standard through 2015. The 1-hour ozone standard was revoked on June 15, 2005 for most areas and replaced with the 8-hour ozone standard.

The Phoenix metropolitan area has been designated an 8-hour ozone nonattainment area and classified as Subpart 1 (Basic). The 2007 MAG Eight-Hour Ozone Plan was submitted to EPA on June 15, 2007. In addition, the MAG Eight-Hour Ozone

Redesignation Request and Maintenance Plan for the Maricopa County Nonattainment Area was submitted in February 2009.

In 2008, there were 18 unique days when at least one monitor exceeded the standard. There were 72 individual exceedances of the 8-hour standard which occurred at 15 different sites. Also in 2008, there were nine violations of the eight-hour primary standard (the 8-hour average NAAQS for ozone is violated when the three-year average of the fourth high is greater than 0.075 ppm).

2.2.3 PM-10

The term "particulate matter" (PM) includes both solid particles and liquid droplets found in the air. Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. These solid and liquid particles come in a wide range of sizes. Particles less than 10 micrometers in diameter (PM-10) pose a health concern because they can be inhaled into and accumulate in the respiratory system. Sources of PM-10 include crushing or grinding operations and dust from paved or unpaved roads.

EPA published a final rule approving the *Revised MAG 1999 Serious Area Particulate Plan* on July 25, 2002. The Plan for the region projected attainment of both standards by 2006; however, the region is still experiencing violations of both the 24-hour and annual standards. It is important to note that EPA revoked the annual PM-10 standard on October 17, 2006 effective December 18, 2006.

On June 6, 2007, EPA published a final rule in the Federal Register finding that the Maricopa County PM-10 Nonattainment Area did not attain the 24-hour standard for PM-10 by December 31, 2006. MAG submitted the 2007 Five Percent Plan for PM-10 to EPA in December 2007.

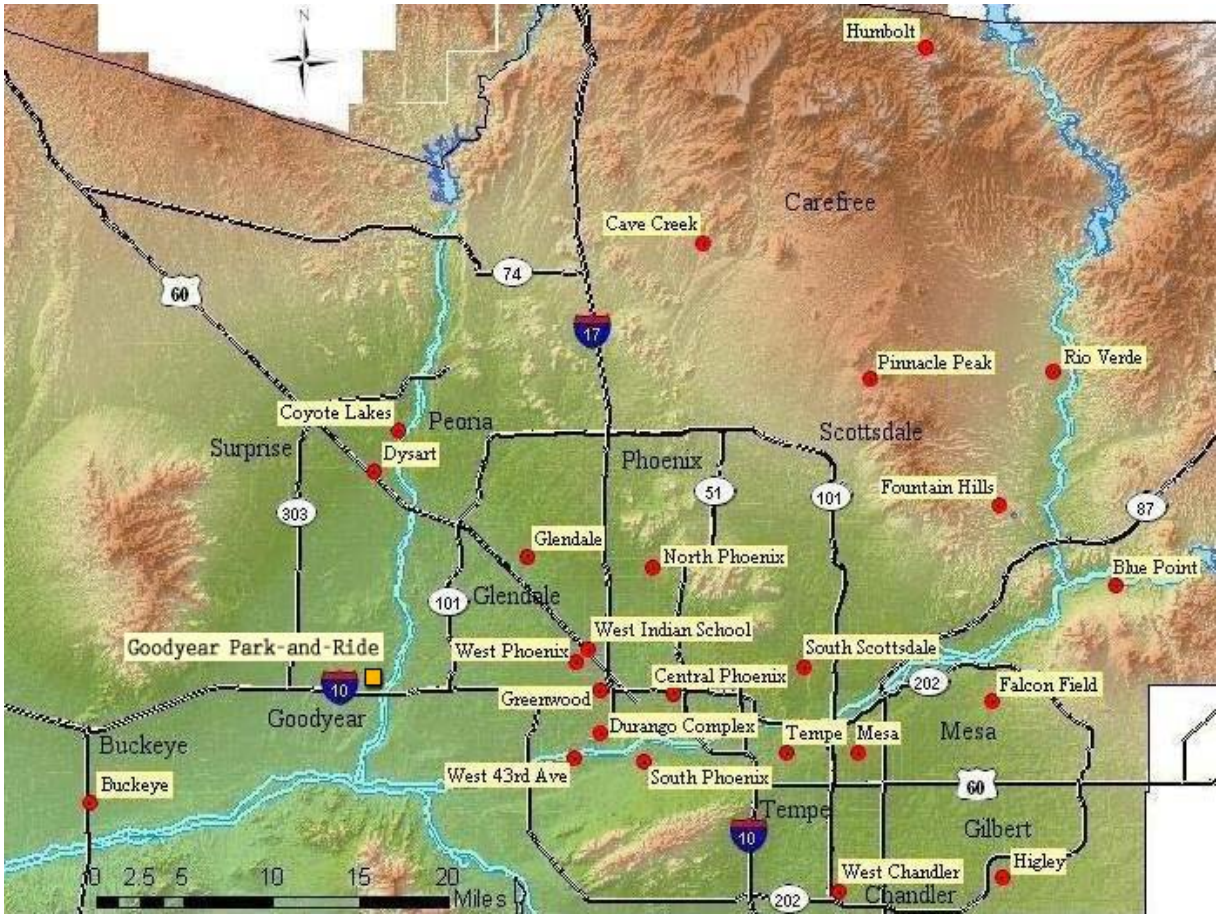
For calendar year 2008, there were 12 unique days when at least one monitor exceeded the standard. There were 16 individual exceedances of the 24-hour standard which occurred at 5 different sites and there were 5 violations of the 24-hour standard.

2.3 AIR QUALITY MONITORING IN THE PROJECT AREA

The Maricopa County Air Quality Department *2008 Air Monitoring Network Review* includes monitoring stations at 24 different sites in Maricopa County. There are two monitoring stations located near the study area (see Figure 6): (1) Mesa, located at Broadway Road and Brooks Avenue; and (2) Tempe, located at Apache Boulevard and College Avenue. Both monitors are of neighborhood scale and focus on population exposure.

It is important to note that ambient air monitoring networks are designed to sample air pollution in a variety of settings, assess the health welfare effects, and assist in determining sources of air pollution. Since it is physically and fiscally impossible to monitor the air quality everywhere within the county, a representative sample of the air quality must be obtained. Maricopa County conducts annual monitoring reviews to meet statutory obligations and to refine the monitoring network to ensure that the citizens of Maricopa County are provided with quality and relevant data.

FIGURE 6. AIR QUALITY MONITORING STATIONS



Source: SR|Beard, MCAQD 2006 Air Monitoring Network Review, June 2007

The Mesa site is located at Brooks Reservoir at the western edge of the city near the Tempe border. It is centered in an area that contains residential, industrial, and a small amount of agricultural activity. An open field borders the site on the west with commercial development to the north, and light industry east and south of the site. Carbon monoxide, PM2.5, and PM-10 are the criteria pollutants monitored at this State and Local Air Monitoring Station (SLAMS) site. A summary of air quality data collected

at this monitoring site, excerpted from the *2008 Air Monitoring Network Review*, is provided in Table 4.

TABLE 4. MESA AIR MONITORING SITE DATA

	2006	2007	2008
CO			
Max. 8-hr CO Avg. (ppm)	2.8	2.0	1.4
Number of 8-hr CO exceedances	0	0	0
PM-10			
Max. 24-hr PM-10 Avg. (ug/m3)	75	110	71
Number of 24-hr PM-10 exceedances	0	0	0

Source: Maricopa County Air Quality Department, 2008 Air Monitoring Network Review.

The Tempe monitoring site was established in 2000. The site was established to fill in a spatial gap between the metropolitan Phoenix area and the City of Mesa. Ozone and carbon monoxide (both SLAMS) are monitored at the site. A summary of air quality data collected at this monitoring site excerpted from the *2008 Air Monitoring Network Review* is provided in Table 5.

TABLE 5. TEMPE AIR MONITORING SITE DATA

	2006	2007	2008
CO			
Max. 8-hr CO Avg. (ppm)	2.5	2.0	1.8
Number of 8-hr CO exceedances	0	0	0
O_3			
Max. 8-hr O_3 Avg. (ppm)	0.087*	0.084	0.082*
Number of Daily Exceedances ≥ 0.075 ppm (as of 2008)	1	0	6
Three-year Avg. of 4 th High	0.075	0.077	0.077

* Indicates an exceedance of standard.
Source: Maricopa County Air Quality Department, 2008 Air Monitoring Network Review.

It should be noted that the Arizona Department of Environmental Quality also operates a few air monitors in Maricopa County. However, the only one located near the study area is the Salt River Pima DOAS which is used to assess transport (ADEQ Air Quality Annual Report 2008).

2.4 AIR QUALITY EMISSIONS

As previously indicated, the Maricopa County area is currently designated as a federal nonattainment area for 8-hour O_3 and PM-10, and maintenance for CO. The applicable air quality standards are expressed in terms of concentrations. Concentrations can be measured through ambient air quality monitoring or estimated by combining pollutant emissions and meteorology in a photochemical model.

Regional emission source categories generally are classified as follows:

- point & area sources: examples include electric utilities and industrial processes, such as manufacturing;
- onroad mobile sources: examples include automobiles, heavy-duty trucks, and buses;
- nonroad mobile sources: examples include lawn and garden equipment, construction equipment, aircraft engines; and
- miscellaneous sources: examples include fires and windblown dust.

Air quality impact analysis is generally focused on motor vehicles. The power to move a motor vehicle comes from burning fuel in an engine. Pollution from vehicles comes from the by-products of this combustion process. In addition, emissions escape through fuel evaporation.

The combustion process results in emissions that are released from the tailpipe while a vehicle is operating. Exhaust emissions occur during two modes: cold start (starting and driving a vehicle the first few minutes results in higher emissions because the emissions control equipment has not yet reached its optimal operating temperature) and running exhaust emissions (pollutants are emitted from the vehicle's tailpipe during driving and idling after the vehicle is warmed up).

Evaporative emissions occur in several ways such as: running losses (the hot engine and exhaust system vaporize gasoline while the vehicle is running), hot soak (the engine remains hot for a period of time after the vehicle is turned off, and gasoline evaporation continues when the car is parked while cooling down), and diurnal emissions (even when the vehicle is parked for long periods of time, gasoline evaporation occurs as the temperature rises during the day). In addition, particulate emissions (PM-10 and PM-2.5) are directly emitted via tailpipe (vehicle exhaust), brake wear, and tire wear. Reentrained road dust from paved and unpaved roads also produces particulate emissions.

2.5 AIR QUALITY MODELING REQUIREMENTS

2.5.1 Clean Air Act Amendments

Section 176(c) of the Clean Air Act (CAA, 1990) requires that Federal agencies and Metropolitan Planning Organizations (MPOs) not approve any transportation project, program, or plan which does not conform to the approved State Implementation Plan (SIP). The 1990 amendments to the Clean Air Act expanded Section 176(c) to more explicitly define conformity to an implementation plan to mean:

Conformity to the plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and that such activities will not (i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of

any existing violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The expanded Section 176(c) also provided conditions for approval of transportation plans, programs, and projects and required that the Environmental Protection Agency (EPA) promulgate conformity determination criteria and procedures.

2.5.2 Federal Transportation Conformity Rule

The federal transportation conformity rule (40 Code of Federal Regulations Parts 51 and 93) specifies criteria and procedures for conformity determinations for transportation plans, programs, and projects and their respective amendments. The federal transportation conformity rule was first promulgated in 1993 by EPA, following the passage of amendments to the federal Clean Air Act in 1990. The federal transportation conformity rule has been revised several times since its initial release to reflect both EPA rule changes and court opinions.

The conformity rule applies nationwide to "all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan" (40 CFR 93.102). As previously indicated, portions of Maricopa County are designated as a nonattainment or maintenance area with respect to federal air quality standards for three criteria pollutants, carbon monoxide (CO), eight-hour ozone, and particulate matter less than or equal to ten microns in diameter (PM-10). Transportation plans, programs, and projects for the nonattainment or maintenance areas in the Maricopa County area must satisfy the requirements of the federal transportation conformity rule.

Section 93.104 of the Federal Transportation Conformity Rule requires that FHWA/FTA projects must be found to conform before they are adopted, accepted, approved, or funded. Section 93.116 of the Federal Transportation Conformity Rule addresses criteria and procedures for localized CO, PM-10, and PM-2.5 violations (hot-spots). As previously indicated, the Maricopa County area is in attainment for PM-2.5.

The criteria states that the FHWA/FTA project must not cause or contribute to any new localized CO and/or PM-10 violations or increase the frequency or severity of any existing CO and/or PM-10 violations in nonattainment and maintenance areas. This criterion is satisfied if it is demonstrated that during the time frame of the transportation plan (or regional emissions analysis) no new local violations will be created and the severity or number of existing violations will not be increased as a result of the project. The demonstration must be performed according to the consultation requirements of §93.105(c)(1)(i) and the methodology requirements of §93.123.

It is important to note that Section 93.116(b) which requires that each project eliminate or reduce the severity and number of localized CO violations in the area, does NOT apply since a CO maintenance plan has been approved by EPA.

In addition, all projects involving federal funding and/or approval are subject to NEPA. According to NEPA, the project must not violate any NAAQS or the project must incorporate all practicable means to avoid or minimize expected exceedances of NAAQS.

2.5.2.1 Carbon Monoxide Hot-spot Requirements

Section 93.123 of the Federal Transportation Conformity Rule provides procedures for determining localized CO concentrations (hot-spot analysis). The demonstrations must be based on quantitative analysis using the applicable air quality models, data bases, and other requirements specified in 40 CFR part 51, Appendix W (Guideline on Air Quality Models). These procedures shall be used in the following cases:

(i) For projects in or affecting locations, areas, or categories of sites which are identified in the applicable implementation plan as sites of violation or possible violation;

(ii) For projects affecting intersections that are at Level-of-Service D, E, or F, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes related to the project;

(iii) For any project affecting one or more of the top three intersections in the nonattainment or maintenance area with highest traffic volumes, as identified in the applicable implementation plan; and

(iv) For any project affecting one or more of the top three intersections in the nonattainment or maintenance area with the worst level of service, as identified in the applicable implementation plan.

These requirements are addressed for the Central Mesa LRT Extension, including park-and-ride facilities, in the Carbon Monoxide Screening section.

2.5.2.2 Ozone Requirements

It is important to note that there are no requirements for addressing localized ozone concentrations (hot-spot analysis) in the federal transportation conformity rule.

2.5.2.3 PM-10 Hot-spot Requirements

Section 93.123 of the Federal Transportation Conformity Rule also provides procedures for determining localized PM-10 concentrations (hot-spot analysis). The hot-spot

demonstration must be based on quantitative analysis methods for the following types of projects:

(i) New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;

(ii) Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;

(iii) New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location:

(iv) Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and

(v) Projects in or affecting locations, areas, or categories of sites which are identified in the PM-10 or PM-2.5 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

However, where quantitative analysis methods are not available, the demonstration must be based on a qualitative consideration of local factors. In addition, the requirements for quantitative analysis will not take effect until EPA releases modeling guidance and announces in the *Federal Register* that the requirements are in effect.

In March 2006, EPA and FHWA issued joint guidance on how to perform qualitative hot-spot analyses in PM-10 and PM-2.5 nonattainment and maintenance areas. As indicated previously, the Maricopa County area is designated unclassifiable/attainment for the PM-2.5 standard. However, these PM-10 requirements are addressed for the Central Mesa LRT Extension, including park-and-ride facilities, in the PM-10 Screening section.

3.0 METHODOLOGY FOR IMPACT EVALUATION

3.1 REGIONAL CONFORMITY DEMONSTRATION

The Maricopa Association of Governments (MAG) is the designated MPO in Maricopa County, Arizona, and is responsible for regional transportation and air quality planning. In July 2007, MAG approved the Finding of Conformity for the FY 2008-2012 MAG Transportation Improvement Program (TIP) and the MAG Regional Transportation Plan - 2007 Update.

The analysis demonstrates that the criteria specified in the federal transportation conformity rule for a conformity determination are satisfied by the TIP and RTP. A finding of conformity for the FY 2008-2012 MAG Transportation Improvement Program and MAG Regional Transportation Plan – 2007 Update is therefore supported. It is important to note that the Central Mesa LRT Extension, including park-and-ride facilities, is included in the MAG TIP/RTP and conformity analysis.

The MAG regional emissions analysis was conducted for the horizon year 2028 for carbon monoxide, eight-hour ozone, and PM-10. The conformity demonstration complies with the Federal Transportation Rule and indicates that the TIP/RTP will not (i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The MAG TIP/RTP and conformity analysis was approved by the MAG Regional Council in July 2007. Federal approval by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) was issued August 16, 2007.

3.2 CARBON MONOXIDE SCREENING

Section 2.5.2.1 summarized the carbon monoxide hot-spot requirements per the Transportation Conformity Rule. The following addresses each of the requirements:

(i) the Maricopa County region has not recorded a violation of the CO standard since 1996. In addition, the area has an approved Carbon Monoxide Maintenance Plan which does not identify any sites of violation or possible violation through the 2015 horizon year. As a result, the project does not meet this criteria for carbon monoxide hot-spot analysis.

(ii) EPA issued the Guideline for Modeling Carbon Monoxide from Roadway Intersections in November 1992. The Guideline indicates that all signalized intersections in the study area should be reviewed. As part of the procedure for determining critical intersections, those intersections at LOS D, E, or F or those that will

change to LOS D, E, or F because of increased volumes of traffic related to a new project should be considered for modeling. Those intersections should then be ranked based on traffic volumes. The Guideline concludes that the top three intersections based on the worst LOS and the highest traffic volumes should be selected for modeling. It is assumed that if the selected intersections do not show an exceedance of the CO standards, none of the ranked intersections will.

The signalized intersections in the study area were obtained from the March 2010 Transportation Technical Report prepared for the Central Mesa LRT Extension. The LOS for the intersections was obtained for the PM peak period for the existing conditions and analysis years 2015 and 2028 for both the "with" and "without" project scenarios and is summarized in Table 6; the data reflects the estimated impact of the Central Mesa LRT Extension, including park-and-ride facilities. The PM peak period was selected because it is the PM traffic, rather than AM traffic, that typically has the most effect on peak CO concentrations.

It is important to note that the existing 2009 and 2015 options were obtained from the "METRO" version of the regional transportation model; whereas, the 2028 options were obtained from the MAG regional transportation model used for regional conformity analysis.

TABLE 6. LOS FOR PM PEAK FOR SIGNALIZED INTERSECTION

Intersection		2009	2015	2015	2015	2028	2028	2028
Street	Cross Street	Existing	No-Build Alternative	Build Alternative, 2-Lane Option	Build Alternative, 4-Lane Option	No-Build Alternative	Build Alternative, 2-Lane Option	Build Alternative, 4-Lane Option
University Dr.	Alma School Rd.	C	D	D	D	C	C	C
University Dr.	Extension Rd.	A	A	A	A	A	A	A
University Dr.	Country Club Dr.	D	D	D	D	C	C	C
University Dr.	Center St.	A	A	A	A	A	A	A
University Dr.	Mesa Dr.	D	D	D	D	A	C	C
University Dr.	Horne	A	A	A	A	A	A	A
Main St.	Longmore	A	A	A	A	A	A	A
Main St.	Alma School Rd.	E-F	D	D	D	C	C	C
Main St.	Extension Rd.	A	A	A	A	A	A	A
Main St.	Country Club Dr.	C	D	C	D	C	E-F	C
Main St.	Center St.	A	A	A	A	A	A	A
Main St.	Mesa Dr.	D	E-F	E-F	E-F	C	E-F	C
Main St.	Horne	A	A	A	A	A	A	A
Broadway Rd.	Alma School Rd.	D	E-F	E-F	E-F	C	C	C
Broadway Rd.	Extension Rd.	A	A	A	A	A	A	A
Broadway Rd.	Broadway Access Rd. (w/o Country Club Dr.)	A	A	A	A	A	A	A
Broadway Rd.	Center St.	A	A	A	A	A	A	A
Broadway Rd.	Mesa Dr.	D	E-F	E-F	E-F	C	C	C
Broadway Rd.	Horne	A	A	A	A	A	A	A

Shading: those intersections at LOS D, E, or F or those that will change to LOS D, E, or F because of increased volumes of traffic related to the project and will be considered for modeling

Source: MAG Regional Travel Demand Model and METRO, via e-mail from Holly Hassett dated October 29, 2009.

The seven intersections that meet the LOS criteria for screening have been highlighted above. These intersections have been ranked based on traffic volumes in Table 7 below; the data reflect the estimated impact of the Central Mesa LRT Extension, including park-and-ride facilities.

TABLE 7. PM PEAK VOLUMES FOR SIGNALIZED INTERSECTIONS THAT MEET LOS CRITERIA FOR SCREENING

Intersection		Existing	2028	Ranking
Street	Cross Street	2009	Build Alternative, 2-Lane Option	
University Dr.	Country Club Dr.	15,573	NA	3
University Dr.	Mesa Dr.	12,500	NA	NA
Main St.	Alma School Rd.	15,730	NA	2
Main St.	Country Club Dr.	NA	12,748	A
Main St.	Mesa Dr.	13,520	12,618	B
Broadway Rd.	Alma School Rd.	16,371	NA	1
Broadway Rd.	Mesa Dr.	13,647	NA	NA

Source: MAG Regional Travel Demand Model and METRO, via e-mail from Holly Hassett dated October 29, 2009.

As is the case for the data sources noted in the preceding table, the data for the existing 2009 in Table 7 were obtained from the "METRO" version of the regional transportation model; whereas, the 2028 options were obtained from the MAG regional transportation model used for regional conformity analysis.

The intersections ranked 1, 2, and 3 are based on the "METRO" version of the regional transportation model, which in most cases results in higher PM Peak LOS and PM Peak Volumes. The intersections ranked A and B are based on the MAG regional transportation model and will be modeled due to meeting the LOS screening requirements.

In summary, nineteen signalized intersections in the study area were reviewed. Seven intersections met the LOS criteria and were considered for modeling. Those intersections were then ranked based on traffic volumes and five intersections were selected (to address the different transportation models) for air quality modeling.

(iii) & (iv) of the CO hot spot analysis requirements of the Transportation Conformity Rule apply to any project affecting one or more of the top three intersections in the nonattainment or maintenance plan with the highest traffic volumes and worst level of service, respectively; since the approved Maintenance Plan does not identify these top three intersections, additional hot-spot analysis is not required.

3.3 PM-10 SCREENING

Section 2.5.2.3 summarized the PM-10 hot-spot requirements per the Transportation Conformity Rule. For PM-10 areas without approved conformity SIPs (the Maricopa County region does not have an approved conformity SIP), guidance is used to complete the qualitative PM-10 hot-spot analyses only for "projects of air quality concern" as defined in the Section 93.123 of the Transportation Conformity Rule. Guidance was issued jointly by EPA and FHWA in March 2006 entitled Transportation Conformity Guidance for Qualitative Hot-Spot Analyses in PM-2.5 and PM-10 Nonattainment and Maintenance Areas. The Central Mesa LRT Extension, including park-and-ride facilities, does not meet any of the screening criteria in Section 93.123 used to define a "project of air quality concern" as further discussed below:

(i) the Central Mesa LRT Extension, including park-and-ride facilities, is not a new highway project, nor does it expand a highway.

(ii) the affected intersections do not experience significant numbers of diesel vehicles; nor will the project result in increased traffic volumes from a significant number of diesel vehicles related to the project.

(iii) & (iv) new or expanded bus and rail terminals and transfer points associated with the project will not have a significant number of diesel vehicles congregating at a single location. The associated bus fleet in the future is assumed to be zero percent diesel (1/12/06 e-mail from Dale Hardy, City of Phoenix Transit to Jerri Horst, HDR/SR Beard).

(v) the MAG 2007 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area projects attainment of the PM-10 standards in 2010. The modeling attainment demonstration focused on the Salt River Area (which includes the only three monitors in the nonattainment area that violated the PM-10 standard in 2004-2006) and the Higley area. Neither of these areas is located within or near the Central Mesa LRT Extension study area.

Since none of the screening criteria were met, the project has been determined NOT to be a Project of Air Quality Concern. Therefore, no additional qualitative assessment is required.

4.0 POTENTIAL OPERATION IMPACTS AND MITIGATION

The results of the screening for CO or PM-10 as documented in the previous section, indicated that detailed hot-spot analysis is needed for CO, but not PM-10. The general requirements for CO hot-spot analysis per Section 93.123 of the Federal Transportation Conformity Rule include the following:

(1) Estimated pollutant concentrations must be based on the total emissions burden which may result from the implementation of the project, summed together with future background concentrations. The total concentration must be estimated and analyzed at appropriate receptor locations in the area substantially affected by the project.

(2) Hot-spot analyses must include the entire project, and may be performed only after the major design features which will significantly impact concentrations have been identified. The future background concentration should be estimated by multiplying current background by the ratio of future to current traffic and the ratio of future to current emission factors.

(3) Hot-spot analysis assumptions must be consistent with those in the regional emissions analysis for those inputs which are required for both analyses.

(4) Mitigation or control measures shall be assumed in the hot-spot analysis only where there are written commitments from the project sponsor and/or operator to implement such measures, as required by §93.125(a).

The hot-spot analysis assumptions are consistent with the regional analysis as documented below. Future background concentrations were estimated in accordance with EPA guidance and added to the hot-spot results to estimate total concentrations which may result from the project. Additional control measures (beyond those assumed in the regional analysis) were not included in the hot-spot analysis.

4.1 HOT-SPOT ANALYSIS

The EPA Guideline for Modeling Carbon Monoxide from Roadway Intersections, November 1992 is designed to evaluate air quality impacts at one or more roadway intersections where vehicular traffic may cause or contribute to increased emissions of carbon monoxide. The Guideline is appropriate for project level conformity analysis and may be used for EAs. The overall procedure for consistent selection and analysis of intersections includes the following:

- Gathering of data related to the project of concern, including traffic and operating characteristics, and roadway configurations and geometry.

- Computation of traffic flow conditions and emission for intersections, based on both those vehicles moving through the intersection without stopping (free-flow) and those that are delayed and stopped (queued vehicles).
- Selection of receptor locations.
- Use of dispersion models to calculate estimated concentrations
- Overall tabulation of total concentrations due to the intersection and background.

4.1.1 Roadway Configurations and Geometry

As documented in Section 3.2, the EPA Guideline was followed for the Carbon Monoxide Screening. There are five intersections selected for modeling.

The geometry for the selected intersections have been prepared (see Appendix A) as follows:

- No-Build Alternative: configurations measured from to-scale aerials provided by METRO.
    - 2 intersections (Broadway/Alma School and University/Country Club) were modified to reflect TIP improvement projects per drawings provided by City of Mesa.
- Build Alternative, 2-Lane Option: configurations measured from to-scale aerials with added line drawings provided by METRO;
    - 2 of the intersection configurations remain unchanged from the No-Build Alternative: Broadway/Alma School and University/Country Club
- Build Alternative, 4-Lane Option: configurations measured from to-scale aerials with added line drawings provided by METRO;
    - 3 of the intersection configurations remain unchanged from the 2-Lane Option: Broadway/Alma School, Main/Alma School, and University/Country Club

4.1.2 Emission Estimates

Carbon monoxide emission factors were estimated using the EPA Mobile 6.2 for the winter season for the 2028 horizon year of the RTP analysis. The MOBILE model was developed by EPA for the purpose of estimating motor vehicle emission factors, in units of grams per mile, for specified vehicle fleet, fuel, temperature and speed conditions.

Mobile 6.2 input files used for the 2028 CO estimates in the MAG 2007 Conformity Analysis were obtained from MAG (via 10/26/07 email from Taejoo Shin, MAG to Luke Albert, City of Goodyear). The input files include locally-derived motor vehicle registration distribution by model year. January 2007 vehicle registration data from the Arizona Department of Transportation was used as input to the model. MAG has verified that there are no changes to the input files since that time (as of December 2009).

Inspection and maintenance (I/M) program benefits are also assumed in the modeling. The MOBILE 6.2 runs were weighted to account for vehicles driving in the area that do not participate in the I/M program. Consistent with the MAG 2007 Conformity Analysis, it is assumed that 91.6 percent of eligible onroad vehicles participate in the I/M program.

The inputs also include fuel and temperature assumptions for the winter season. The input files were modified to reflect the 2028 analysis year and average speeds for both free-flow and queue links for the selected intersection. The Guideline recommends that the vehicle speed on the link be obtained from traffic engineering data. Average speeds by segment were provided for the "with and without" project scenarios (via e-mail from Saroja Devarakonda, December 10, 2009). The vehicle speed for a free-flow link represents the speed experienced by drivers traveling along the link in the absence of the delay caused by the intersection traffic signal. MOBILE6.2 does not directly model idle emission rates for carbon monoxide. Idling emission rates (in grams per hour) are assumed to be the same as for driving at 2.5 miles per hour. The resulting emission rate is multiplied by the average speed to yield the emission rate in grams per hour.

The output from the MOBILE 6.2 model includes emission factors representative of the PM peak period for the winter season. Appendix B contains the MOBILE6.2 output files; the output provides a summary of input variables and model results. Composite emission factors obtained for the microscale analysis are presented in Table 8 below rounded to one decimal place.

TABLE 8. 2028 CARBON MONOXIDE COMPOSITE EMISSION FACTORS (WINTER SEASON - ALL VEHICLES)

Speed (mph)	I/M Fleet Average	Non-I/M Fleet Average	Composite Fleet Average	Units[1]
Idle	33.153	45.048	34.2	g/hr
2.5	13.261	18.019	13.7	g/mi
15	6.126	7.642	6.3	g/mi
20	5.724	7.071	5.8	g/mi
25	5.490	6.744	5.6	g/mi
30	5.394	6.594	5.5	g/mi
35	5.393	6.583	5.5	g/mi

[1]g/hr = grams per hour; g/mi = grams per mile.
Source: CAC MOBILE6.2 runs. February 2010.

4.1.3 Dispersion Modeling

The hot-spot analysis was performed using the EPA CAL3QHC Version 2.0 air quality dispersion model. The model was developed to predict pollutant concentrations near roadway intersections and is the recommended model for carbon monoxide hot-spot analyses. CO levels in the project area were estimated for the selected intersection resulting from the screening analysis for the "with and without" project alternatives for the 2028 horizon year.

Different emission rates occur when vehicles are stopped (idling), accelerating, decelerating and moving a different average speeds. CAL3QHC simplifies these different emission rates into the following two components:

(1) Emissions when vehicles are stopped (idling) during the red phase of a signalized intersection.

(2) Emissions when vehicles are in motion during the green phase of a signalized intersection.

A complete description of the model can be found in the User's Guide. There are a number of inputs required to execute the CAL3QHC model which are described briefly below.

4.1.3.1 Site Variables

- Averaging time: the most common value is 60 minutes, since most predictions are performed for a one hour period.
- Surface roughness length: should be selected from the CAL3QHC model's recommended values for various land uses. The land use used in the traffic analysis was City land use, office. The corresponding surface roughness is 175.00 cm.
- Settling velocity: is set to zero
- Deposition velocity: is set to zero
- Scale conversion factor: if units are in feet, enter 0.3048

4.1.3.2 Receptor Locations

The locations at which concentrations are estimated are known as receptors. The CAL3QHC User's Guide calls for receptors to be located along a queue where the general public is likely to have access. Receptors should not be located within 3 meters of the traveled roadways, where vehicle turbulence does not allow current models to make valid concentration estimates. Receptors should be placed at a height of 1.8 meters. Receptors should be placed on both sides of the road near the corner and at mid-block for each approach and departure at the intersection. It is recommended that receptors be located at 25 m and 50 m from the intersection corner. Receptors should not be located within median strips of roadway or within intersections or crosswalks.

For the CAL3QHC modeling, a receptor was placed at each corner of each intersection according to the Guideline. Additional receptors were placed at 25 and 50 m in each direction on each side of the roadway. Four additional receptors were placed within each corner quadrant for screening purposes, regardless of building locations. If an elevated carbon monoxide concentration is modeled, additional receptors will be located within the quadrant.

4.1.3.3 Link Data

Free flow links are defined as straight segments of roadway that have a constant width, height, traffic volume, travel speed and vehicle emission factor. The location of the link is specified by its end point coordinates. A new link must be coded when there is a change.

Free flow links were estimated for each turning, approach, and departure lanes from the center of the intersection (0,0). The guidance indicates that a maximum of 300 m (~985 feet) is sufficient for the length of a free-flow link. The link width is defined as the width of the traveled roadway (lanes of moving traffic) plus 3 m (10 feet) on each side to account for the dispersion of the plume generated by the wake of moving vehicles.

Queue links are defined as straight segments of roadway with a constant width and emission source, on which vehicles are idling for a specified period of time. The location of a link is determined by its beginning point and an arbitrary end point which is used to specify the direction of the queue. The actual length of the queue is estimated by the CAL3QHC program based on the traffic volume and capacity of the approach.

Queue links were estimated for each turning and approach lanes from the stop line. The link width is determined by the width of the lanes on which vehicles are idling. Three meters are not added on each side since vehicles are not moving and no wake is generated. The number of travel lanes must also be defined for queue links; these were obtained from the intersection geometries.

The origin for each intersection is located in the center of the intersection with positive x-axis aligned due east and y-axis aligned due north. Since the intersection is “at-grade” and remains as such with the proposed build alternatives, the source height is zero feet.

Additional traffic variables are required for the model. This data was obtained from the HDR/Grijalva Engineering SYNCHRO modeling for the PM peak hour (see Appendix C). Note that transportation analysis year 2015 is used as a worst-case surrogate for air quality analysis year 2028 (per “METRO” version of the regional transportation modeling, which in most cases results in higher PM Peak LOS and PM Peak Volumes).

- Traffic volumes for each link in vehicles per hour. Departure volumes are not readily available, but were calculated from the Synchro data. For example, a northbound departure is calculated as follows: northbound through volume plus westbound right turn volume plus eastbound left turn volume.
- Average signal cycle length.
- Average red time length for each approach is calculated using signal timing data from the Synchro reports. Red time for an approach is calculated by subtracting the green time for that approach from the total cycle length. This represents a worst-case assumption because vehicles are not assumed to proceed through the

intersection during the yellow phase, permissive left turns on red from one-way streets and permissive right turns on red at an intersection.
- Clearance lost time (portion of the yellow phase that is not used by motorists) is set to the default of 2 seconds per the CAL3QHC guidance.
- Saturation flow rate (vehicles per hour of effective green time) for the protected scenario.
- Traffic signal type is actuated for the intersection analyzed.
- Arrival type of vehicle platoon is set to an average progression which reflects random arrivals.

4.1.3.4 Meteorological Variables

The transport and concentration of pollutants emitted from motor vehicles are influenced by meteorological factors summarized below. The values for these parameters were chosen to maximize pollutant concentrations at each predictions site (i.e., to establish a conservative, worst-case situation).

- Wind speed: CO concentrations are greatest at low wind speeds. A worst-case wind speed of one meter per second (2.2 miles per hour) was used to predict CO concentrations during peak traffic periods.
- Wind direction: Maximum CO concentrations are normally found when the wind is assumed to blow parallel to a roadway adjacent to the receptor location. At complex intersections, however, it is difficult to predict which wind angle will result in maximum concentrations. At each receptor location therefore, the approximate wind angle that would result in maximum pollutant concentrations was used in the analysis. All wind angles from 0 to 350 degrees (in 10 degree increments) were considered.
- Stability class: the atmospheric stability class that should be used for intersection analyses varies by the urban/rural nature of the area surrounding the intersection. The recommended stability class for urban areas is D (4).
- Mixing height: a mixing height (the height in the atmosphere to which pollutants will rise) of 1000 m should be used for all 1-hour and 8-hour estimates.

Three CAL3QHC runs were executed to estimate the highest 1-hour CO concentration for each intersection for the 2028 analysis year: No-Build Alternative (without project) and Build Alternative, 2-Lane and 4-Lane Options (see Table 9). Again, the CO hot-spot analysis was performed for the PM peak traffic period assuming worst-case parameters. This is the period when the greatest air quality effects of the proposed project are expected. Appendix D contains the CAL3QHC output files; the output provides a summary of all input variables and model results.

TABLE 9. 2028 1-HOUR HIGHEST CO CONCENTRATION (PPM)[1]

Intersection		No-Build Alternative	Build Alternative, 2-Lane Option	Build Alternative, 4-Lane Option
Street	**Cross Street**			
Broadway Rd.	Alma School Rd.	1.80	1.80	1.70
Main St.	Alma School Rd.	1.30	1.30	1.20
University Dr.	Country Club Dr.	1.30	1.20	1.30
Main St.	Country Club Dr.	1.40	1.00	1.00
Main St.	Mesa Dr.	1.00	0.90	1.20

[1]Does not include background CO concentrations.
Source: CAC CAL3QHC runs. March 2010.

4.1.4 Persistence Factor

The persistence factor is the relationship between 1-hour and 8-hour traffic volumes and meteorological conditions. Monitoring data is not readily available to determine the persistence factor; therefore, the default value of 0.7 was used to convert from peak 1-hour concentration to a peak 8-hour concentration. The default factor is a reasonably conservative persistence factor based on studies of monitoring data throughout many regions of the country. Peak 8-hour concentrations of CO were obtained by multiplying the highest peak 1-hour CO estimates by 0.7.

TABLE 10. 2028 8-HOUR HIGHEST CO CONCENTRATION (PPM)[1]

Intersection		No-Build Alternative	Build Alternative, 2-Lane Option	Build Alternative, 4-Lane Option
Street	**Cross Street**			
Broadway Rd.	Alma School Rd.	1.26	1.26	1.19
Main St.	Alma School Rd.	0.91	0.91	0.84
University Dr.	Country Club Dr.	0.91	0.84	0.91
Main St.	Country Club Dr.	0.98	0.70	0.70
Main St.	Mesa Dr.	0.70	0.63	0.84

[1]Does not include background CO concentrations.
Source: CAC Calculations. March 2010.

4.1.5 Background Concentrations

For project analysis, the Guideline indicates that background concentrations should be determined using local monitoring data. The background concentration should be obtained from a representative background monitoring site not affected by the intersection of interest. Background monitored data should be adjusted for the future. This is accomplished by multiplying the present CO background by the ratio of the future MOBILE CO emission factor to the current MOBILE CO emission factor and multiplying by the ratio of future to current traffic.

Air quality monitoring in the project area was provided in Section 2.3. The Mesa Air Monitoring Site is used to calculate the background concentration because it recorded the highest neighborhood CO values. The maximum 8-hour CO concentration is 2.8 ppm. The MOBILE 6.2 input files were adjusted to produce a 2009 composite emission factor using

the methodology described above for the emission estimates (output files included in Appendix B). The ratio of the 2028 emission factor to 2009 emission factor was calculated and averaged for the seven travel speeds resulting in a ratio of 0.67. The ratio of future to current traffic was estimated using the regional average weekday vehicle miles of travel documented in Table 3-1 in the MAG 2007 Conformity Analysis which results in a ratio of 1.71. The resulting 8-hour background concentration is 3.21 ppm.

4.2 IMPACTS

Project-level modeling is used to predict CO concentrations resulting from emissions from motor vehicles using roadways immediately adjacent to the location at which predictions are being made. A CO "background" level must be added to this value to account for CO entering the area from other sources upwind of the receptors.

TABLE 11. 2028 TOTAL 8-HOUR CO CONCENTRATIONS (PPM)[1,2]

Intersection		No-Build Alternative	Build Alternative, 2-Lane Option	Build Alternative, 4-Lane Option
Street	Cross Street			
Broadway Rd.	Alma School Rd.	4.47	4.47	4.40
Main St.	Alma School Rd.	4.12	4.12	4.05
University Dr.	Country Club Dr.	4.12	4.05	4.12
Main St.	Country Club Dr.	4.19	3.91	3.91
Main St.	Mesa Dr.	3.91	3.84	4.05

[1]Total 8-hour concentration = 8-hour highest CO concentration (Table 10) + background concentration (3.21 ppm).
[2]NAAQS for 8-hour CO Concentration = 9 ppm.
Source: CAC calculations. March 2010.

As documented in Chapter 2, the NAAQS for carbon monoxide is 9 parts per million for the 8-hour average. Total concentrations are estimated for the five intersections that meet the screening criteria. The estimated total concentrations in 2028 for both Build Alternative, 2-Lane and 4-Lane Options are approximately 50 percent below the standard. In accordance with EPA guidance, since the selected intersections with the worst LOS and highest traffic volumes do not show exceedances of the CO standard, it is assumed that the Central Mesa LRT Extension, including park-and-ride facilities, will not result in any exceedances.

4.3 MITIGATION

As previously indicated, additional control measures (beyond those assumed in the regional analysis) were not included in the hot-spot analysis. The impacts estimated for the Central Mesa LRT Extension project, including park-and-ride facilities, do not indicate an exceedance of the CO standard; therefore, no mitigation is necessary.

5.0 POTENTIAL CONSTRUCTION IMPACTS AND MITIGATION

Construction activities associated with the project would produce air pollutants from two types of sources: exhaust emissions from construction equipment and fugitive dust emissions associated with clearing and grading of the project site. The emissions associated with construction activities are of short-term duration and will cease when the project is built.

5.1 IMPACTS

5.1.1 Regional Analysis

Section 93.122(e)(2) of the federal conformity rule requires that PM-10 from construction-related fugitive dust be included in the regional PM-10 emissions analysis, if it is identified as a contributor to the nonattainment problem in a PM-10 implementation plan. The motor vehicle emissions budget established in the MAG 2007 Five Percent Plan for PM-10 includes regional reentrained dust from road construction. Therefore, emissions from road construction are included as part of the PM-10 estimates developed for the 2007 conformity analysis.

5.1.2 Hot-Spot Analysis

According to Section 93.123(c)(5) of the Federal Transportation Conformity Rule, CO and PM-10 hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site.

The Central Mesa LRT Extension construction period would be less than five years (via e-mail from Jerri Horst 8/14/09). Consequently, the construction-related activities are considered temporary and do not require further analysis.

5.2 MITIGATION

Maricopa County Air Quality Department (MCAQD) Rule 310 will be applicable to the project. Under the MCAQD Rule 310, a dust control plan is required during the project construction phase. The dust control plan will include control measures to be implemented at the project site and/or in transit to and from the project site for the earth moving and/or dust generating operation. By implementing the requirements under the MCAQD Rule 310, the air quality impacts due to the project should be substantially reduced. As a result, air quality is not anticipated to be adversely affected during the construction phase of the proposed project after implementation of the required control measures.

Potential control measures that may be implemented at the construction site include, but are not limited to, the following:

- Site Preparation
  - Minimize land disturbance;
  - Use watering trucks to minimize dust;
  - Cover trucks when hauling dirt;
  - Stabilize the surface of dirt piles if not removed immediately;
  - Use windbreaks to prevent any accidental dust pollution;
  - Limit vehicular paths and stabilize these temporary roads; and
  - Pave all unpaved construction roads and parking areas to road grade for a length no less than 50 feet where such roads and parking areas exit the construction site to prevent dirt from washing onto paved roadways.
- Construction
  - Cover trucks when transferring materials;
  - Use dust suppressants on traveled paths which are not paved;
  - Minimize unnecessary vehicular and machinery activities; and
  - Minimize dirt track-out by washing or cleaning trucks before leaving the construction site (alternative to this strategy is to pave a few hundred feet of the exit road, just before entering the public road).
- Post Construction
  - Revegetate any disturbed land not used;
  - Remove unused material;
  - Remove dirt piles; and
  - Revegetate all vehicular paths created during construction to avoid future off-road vehicular activities.

6.0 CUMULATIVE IMPACTS

6.1 IMPACTS

The Central Mesa LRT Extension project is located in Maricopa County; portions of which are designated nonattainment for 8-hour ozone and PM-10 and maintenance for carbon monoxide.

The Clean Air Act requires that Federal agencies and Metropolitan Planning Organizations (MPOs) not approve any transportation project, program, or plan which does not conform with the approved State Implementation Plan (SIP). The Federal Transportation Conformity Rule requires that FHWA/FTA projects must be found to conform before they are adopted, accepted, approved, or funded. The rule requires both regional and project-level hot-spot analyses.

Regional Analysis: The Central Mesa LRT Extension project, including park-and-ride facilities, is included in the FY 2008-2012 MAG Transportation Improvement Program (TIP) and Regional Transportation Plan - 2007 Update (RTP) and corresponding 2007 Conformity Analysis. PM-10 from road construction-related fugitive dust was included in the regional PM-10 emissions analysis.

Hot-Spot Analysis: The Central Mesa LRT Extension project, including park-and-ride facilities, was screened for both carbon monoxide and PM-10. The carbon monoxide screening resulted in detailed intersection analysis which demonstrated that the estimated total concentrations for the project are approximately 50 percent below the standard. The PM-10 screening documented that the project was determined NOT to be a Project of Air Quality Concern; therefore, no further PM-10 analysis was necessary. Construction-related activities were not included in the hot-spot analysis because the construction period is less than five years and considered temporary under the Federal Transportation Conformity Rule.

Both the regional and hot-spot analyses comply with the Federal Transportation Rule and indicates that the Central Mesa LRT Extension project, including park-and-ride facilities, will not (i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

This Air Quality Report was provided to the Maricopa Association of Governments (MAG) for review. Minor editorial comments were received from MAG and have been addressed accordingly. A comment and response form is contained in Appendix E.

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Appendix A. Intersection Geometry

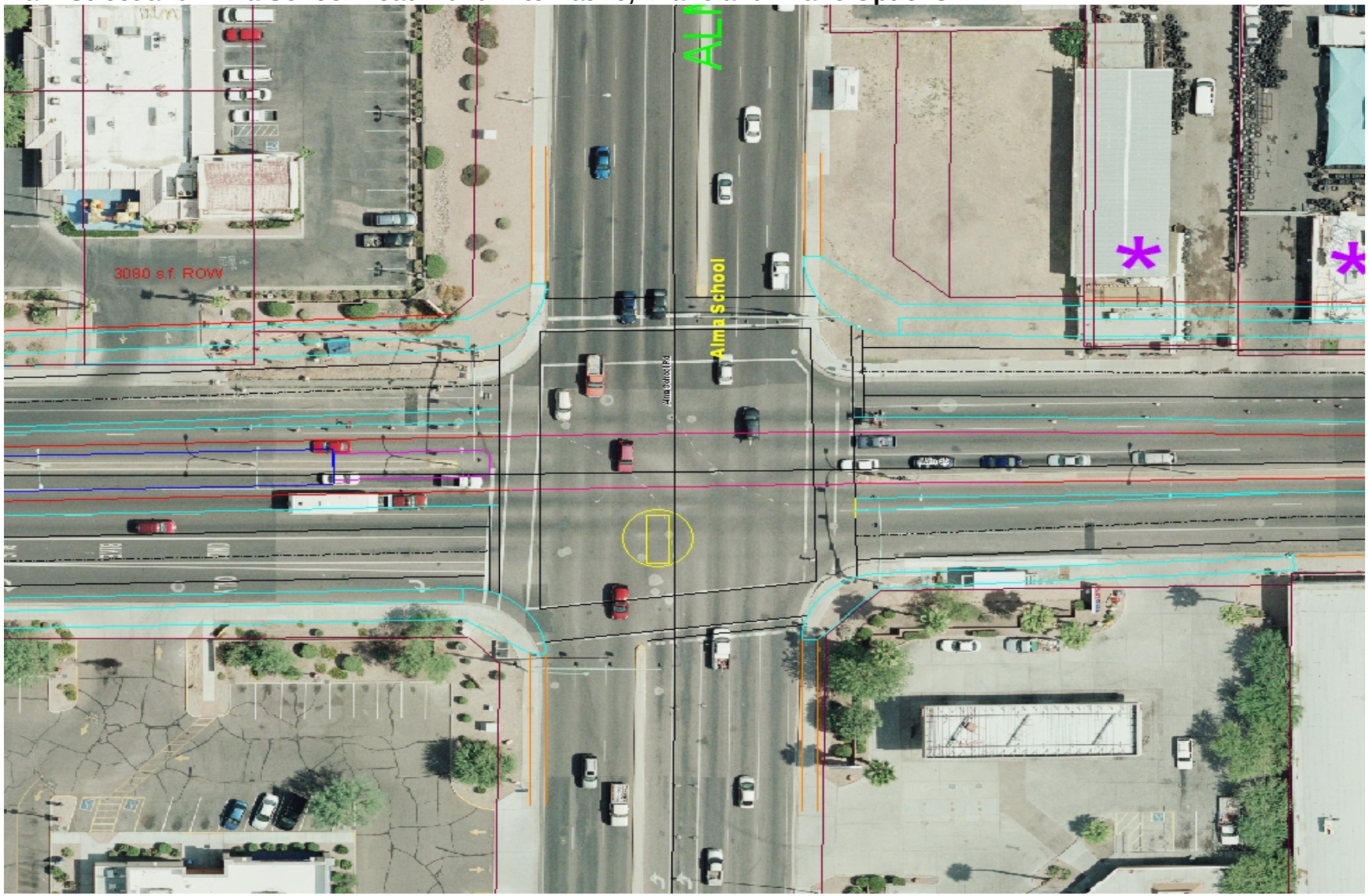
The following figures are included:

- Broadway Rd. & Alma School Rd: No-Build Alternative; Build Alternative, 2-Lane and 4-Lane Options are the same as No-Build; therefore, no additional figures included
- Main St. & Alma School Rd: No-Build Alternative; Build Alternative, 2-Lane and 4-Lane Options are the same as No-Build; therefore, no additional figure included
- University Dr. & Country Club Dr.: No-Build Alternative; Build Alternative, 2-Lane and 4-Lane Options are the same as No-Build; therefore, no additional figures included)
- Main St. & Country Club Dr.: No-Build Alternative; Build Alternative, 2-Lane Option; and Build Alternative, 4-Lane Option
- Main St. & Mesa Dr.: No-Build Alternative; Build Alternative, 2-Lane Option; and Build Alternative, 4-Lane Option

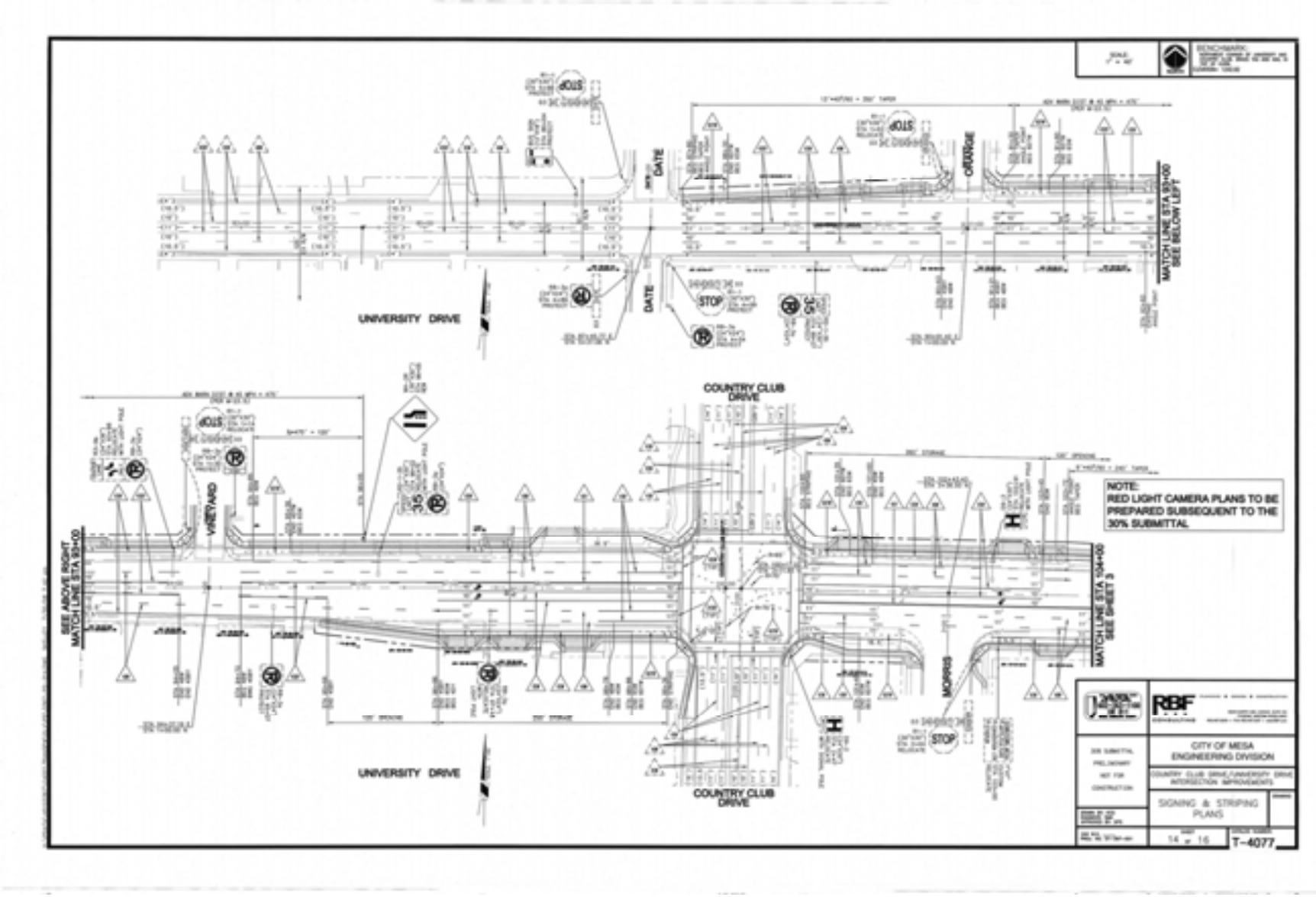
Future Broadway Road and Alma School Road

Main Street and Alma School Road No-Build Alternative

Main Street and Alma School Road Build Alternative, 2-lane and 4-lane Options

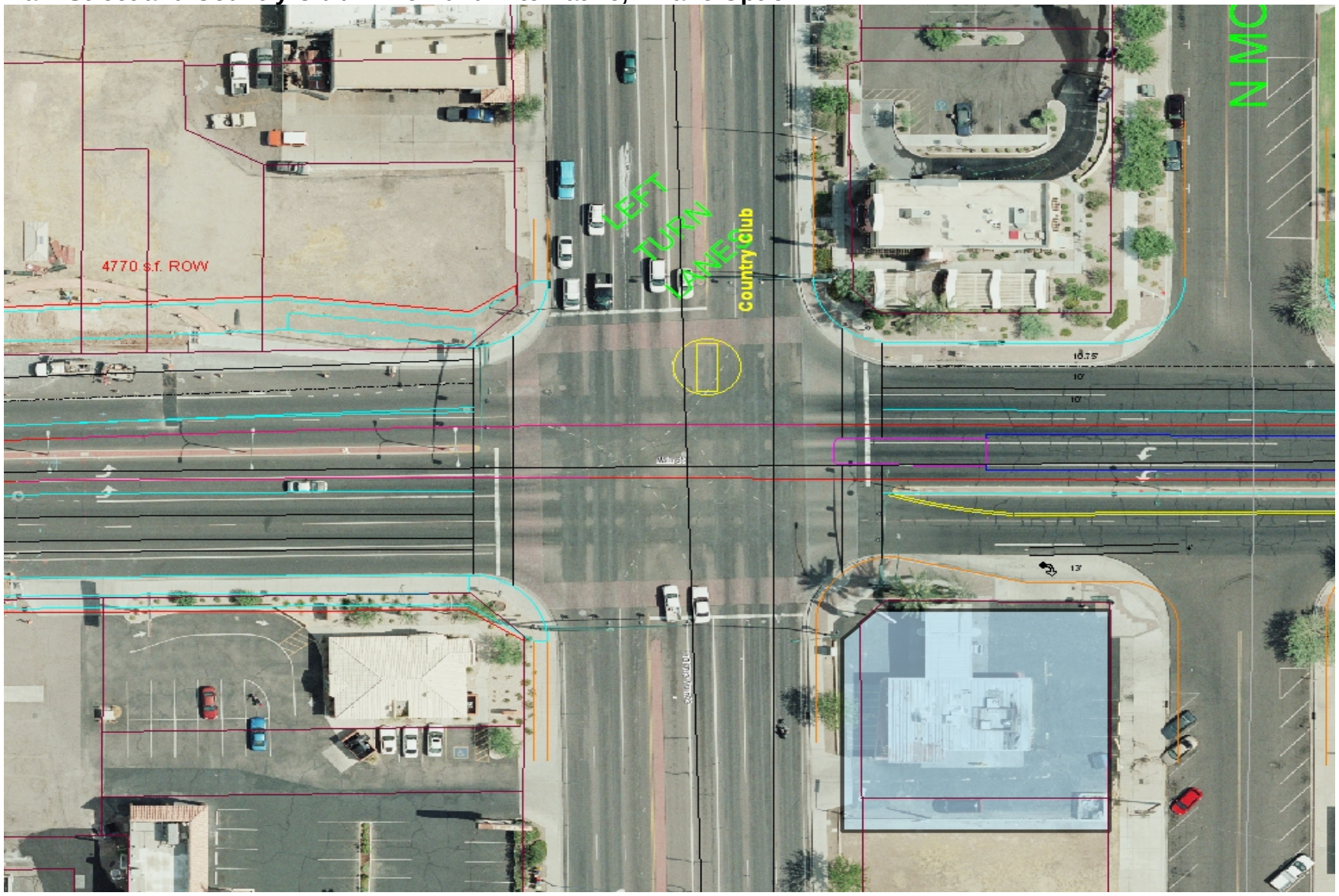


Future University Drive and Country Club Drive

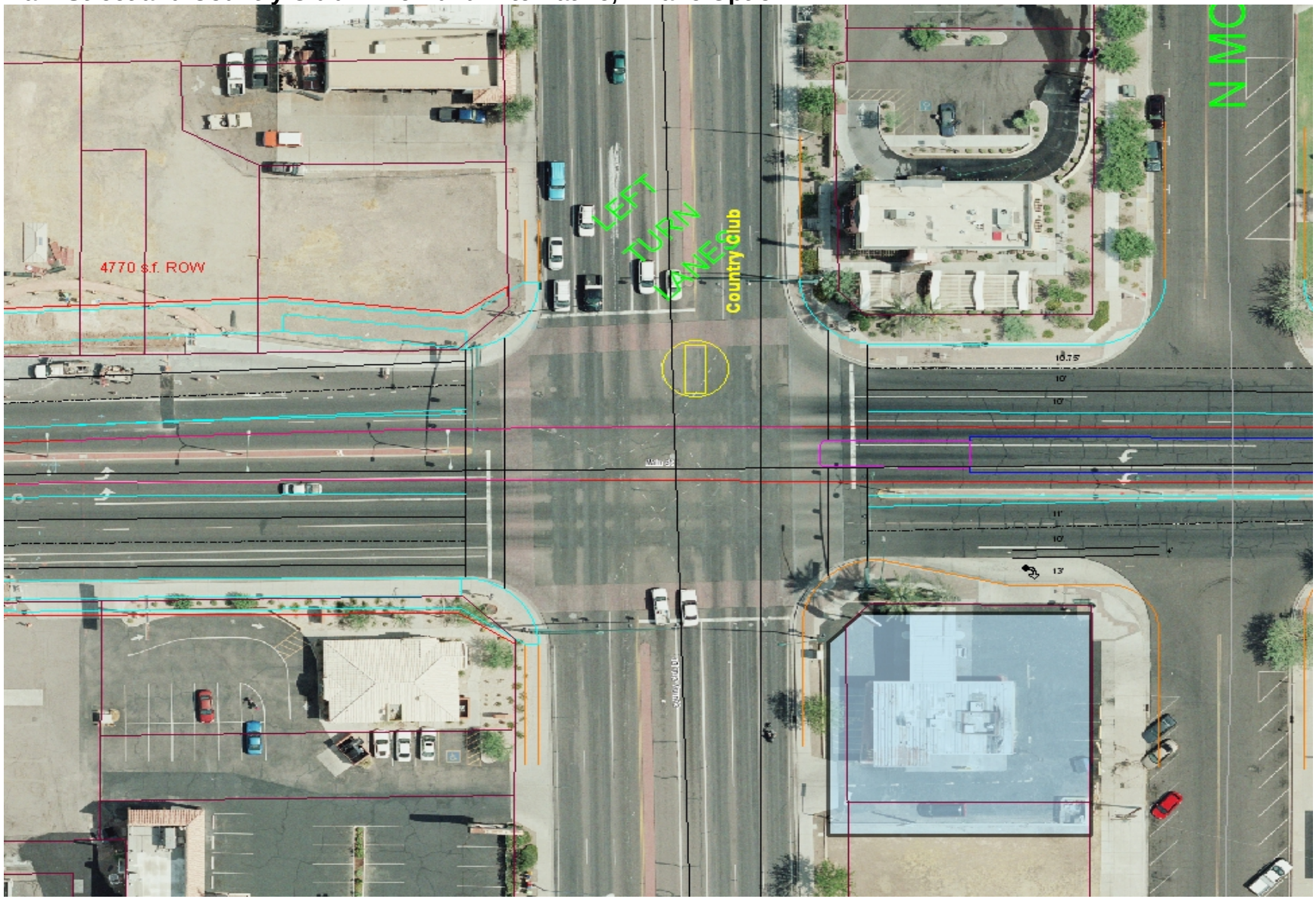


Main Street and Country Club Drive No-Build Alternative

Main Street and Country Club Drive Build Alternative, 2-Lane Option

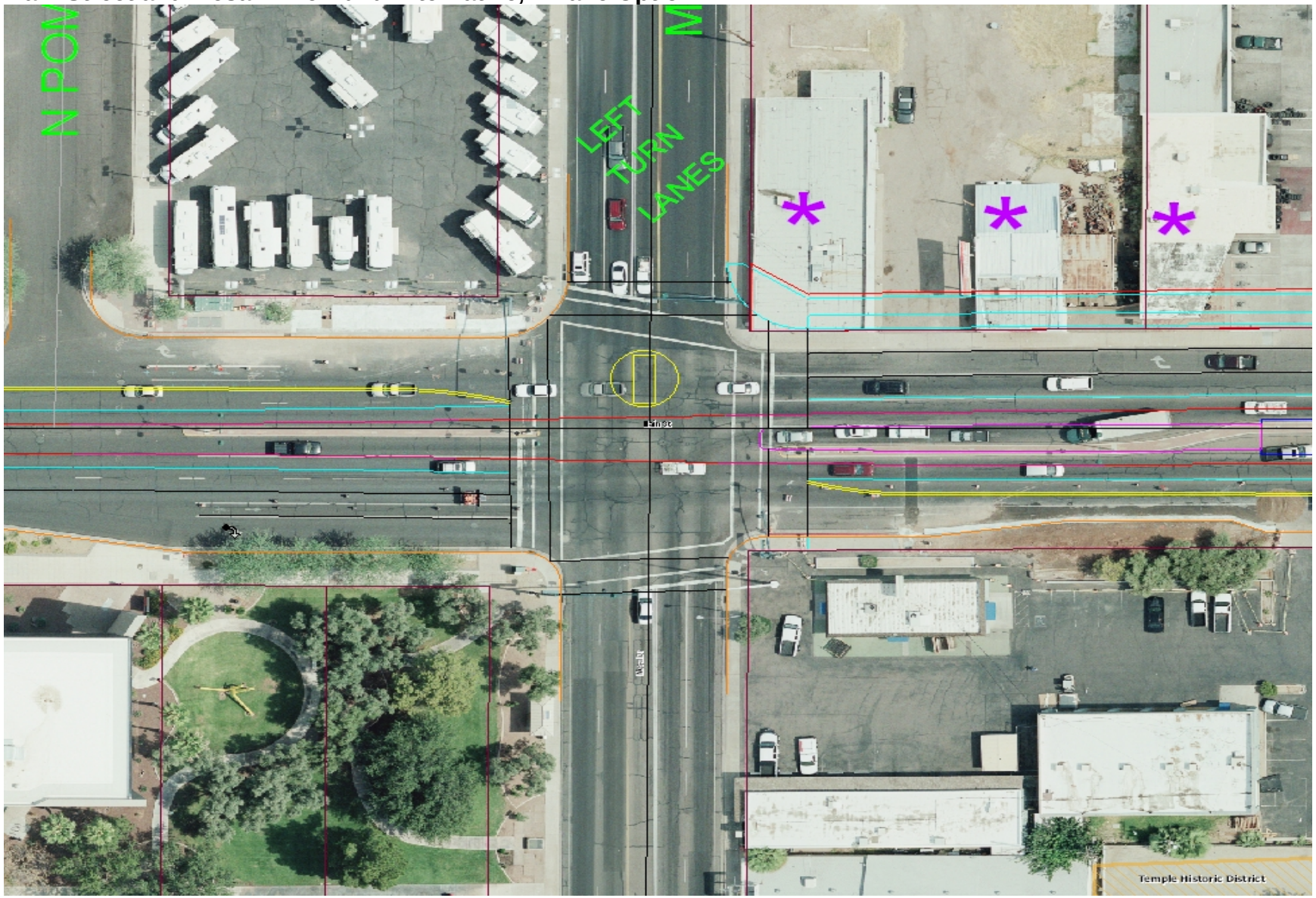


Main Street and Country Club Drive Build Alternative, 4-Lane Option

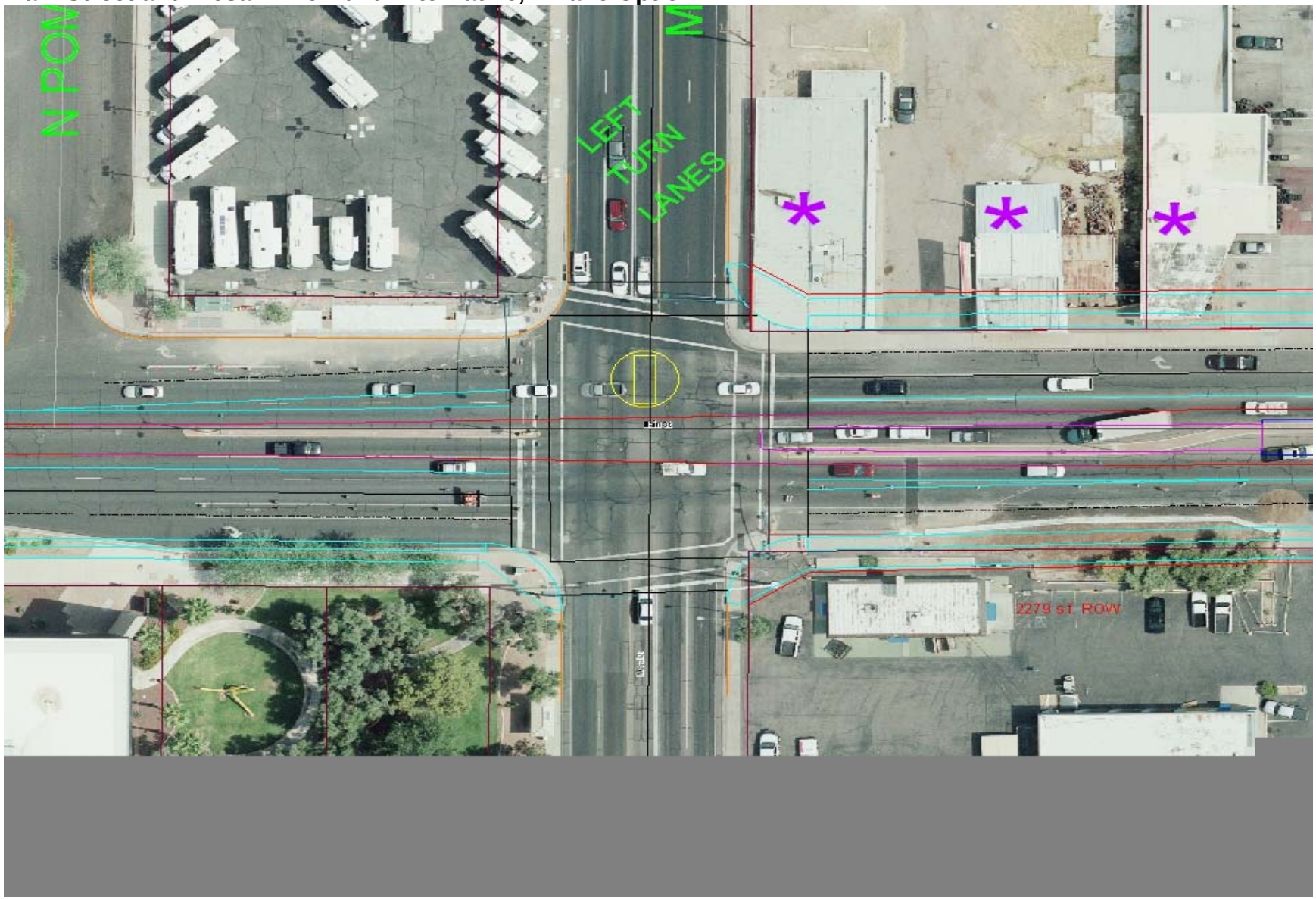


Main Street and Mesa Drive No-Build Alternative

Main Street and Mesa Drive Build Alternative, 2-Lane Option



Main Street and Mesa Drive Build Alternative, 4-Lane Option



Appendix B. MOBILE 6.2 Output Files

```
***************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                              *
* Input file: MESAC28.IN (file 1, run 1).                                 *
***************************************************************************

* Reading non-default I/M CUTPOINTS from the following external
* data file: CUTPNT18.D

* Reading Registration Distributions from the following external
* data file: 06REG29.D
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                1.00     MYR sum not = 1. (will normalize)
  M614 Comment:
              User supplied diesel sale fractions.
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of  2.5
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

*** I/M credits for Tech1&2 vehicles were read from the following external
    data file: TECH12.D
  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :     12.70     13.90     14.41     14.04     29.53     1.840     1.080     0.986     82.22    13.261
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 2.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 15.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      6.23      6.63      6.66      6.64     11.03     0.874     0.497     0.400     17.65     6.126
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 3.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 20.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      5.96      6.30      6.31      6.30      8.19     0.713     0.399     0.302     14.13     5.724
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 4.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 25.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      5.80      6.11      6.11      6.11      6.43     0.608     0.336     0.239     11.98     5.490
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 5.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 30.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      5.75      6.06      6.05      6.06      5.33     0.540     0.295     0.198     10.42     5.394
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 6.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 35.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      5.78      6.10      6.09      6.10      4.67     0.496     0.269     0.171      9.26     5.393
  ---------------------------------------------------------------------------------------------------------------------
```

```
***************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                              *
* Input file: MESA28N.IN (file 1, run 1).                                 *
***************************************************************************

* Reading Registration Distributions from the following external
* data file: 06REG29.D
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M614 Comment:
               User supplied diesel sale fractions.
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of  2.5
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
                User has supplied post-1999 sulfur levels.

           User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :     18.17     19.15     20.05     19.41     32.45     1.840     1.080     0.986     82.22    18.019
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 2.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 15.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      7.83      8.36      8.53      8.41     12.13     0.874     0.497     0.400     17.65     7.642
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 3.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 20.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
                User has supplied post-1999 sulfur levels.

           User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      7.36      7.85      7.99      7.89      9.01     0.713     0.399     0.302     14.13     7.071
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 4.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 25.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      7.10      7.57      7.69      7.60      7.07     0.608     0.336     0.239     11.98     6.744
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 5.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 30.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      6.99      7.46      7.57      7.49      5.86     0.540     0.295     0.198     10.42     6.594
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 6.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 35.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2029
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.2768    0.4190    0.1656              0.0365    0.0002    0.0025    0.0950    0.0044    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      7.01      7.49      7.60      7.52      5.13     0.496     0.269     0.171      9.26     6.583
  ---------------------------------------------------------------------------------------------------------------------
```

```
***************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                              *
* Input file: MESAC09.IN (file 1, run 1).                                 *
***************************************************************************

* Reading non-default I/M CUTPOINTS from the following external
* data file: CUTPNT18.D

* Reading Registration Distributions from the following external
* data file: 06REG29.D
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M614 Comment:
               User supplied diesel sale fractions.
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of  2.5
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

           User supplied gasoline sulfur content =  30.0 ppm.

*** I/M credits for Tech1&2 vehicles were read from the following external
    data file: TECH12.D
  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :     18.25     22.62     24.69     23.21     30.37     2.662     1.958     6.089     82.22    20.345
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 2.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 15.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  -------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      8.23     10.64     10.89     10.71     11.35     1.277     0.928     2.473     17.65     9.101
  -------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 3.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 20.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      7.83     10.14     10.32     10.19      8.43     1.045     0.755     1.868     14.13     8.513
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 4.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 25.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      7.61      9.87     10.02      9.91      6.61     0.895     0.643     1.476     11.98     8.183
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 5.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 30.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      7.54      9.77      9.91      9.81      5.48     0.798     0.571     1.221     10.42     8.034
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 6.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 35.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  Yes
                 Evap I/M Program:  Yes
                      ATP Program:  Yes
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  -------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      7.59      9.84      9.98      9.88      4.80     0.735     0.524     1.057      9.26     8.044
  -------------------------------------------------------------------------------------------------------------------
```

```
***************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                              *
* Input file: MESA09N.IN (file 1, run 1).                                 *
***************************************************************************

* Reading Registration Distributions from the following external
* data file: 06REG29.D
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M 49 Warning:
                 1.00     MYR sum not = 1. (will normalize)
  M614 Comment:
               User supplied diesel sale fractions.
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of  2.5
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  -------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :     25.74     29.79     32.11     30.45     33.54     2.662     1.958     6.089     82.22    26.800
  -------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 2.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 15.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :     10.36     12.87     13.15     12.95     12.53     1.277     0.928     2.473     17.65    11.036
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 3.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 20.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  -------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      9.71     12.12     12.33     12.18      9.31     1.045     0.755     1.868     14.13    10.223
  -------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 4.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 25.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      9.35     11.72     11.89     11.77      7.30     0.895     0.643     1.476     11.98     9.770
  ---------------------------------------------------------------------------------------------------------------------
```

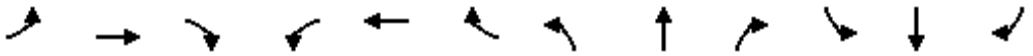
```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 5.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 30.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

      Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                <6000     >6000     (All)
                       ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      9.20     11.54     11.70     11.59      6.06     0.798     0.571     1.221     10.42     9.548
  ---------------------------------------------------------------------------------------------------------------------
```

```
* # # # # # # # # # # # # # # # # # # # # # # # #
* I/M Scenario
* File 1, Run 1, Scenario 6.
* # # # # # # # # # # # # # # # # # # # # # # # #
  M583 Warning:
            The user supplied arterial average speed of 35.0
            will be used for all hours of the day.  100% of VMT
            has been assigned to the arterial/collector roadway
            type for all hours of the day and all vehicle types.
  M616 Comment:
               User has supplied post-1999 sulfur levels.

          User supplied gasoline sulfur content =  30.0 ppm.

  M 48 Warning:
              there are no sales for vehicle class HDGV8b
  M 48 Warning:
              there are no sales for vehicle class LDDT12

                    Calendar Year:  2010
                           Month:  Jan.
                        Altitude:  Low
              Minimum Temperature:  36.6 (F)
              Maximum Temperature:  66.7 (F)
                Absolute Humidity:   75. grains/lb
                 Nominal Fuel RVP:   9.0 psi
                    Weathered RVP:   9.0 psi
              Fuel Sulfur Content:   30. ppm

              Exhaust I/M Program:  No
                 Evap I/M Program:  No
                      ATP Program:  No
                 Reformulated Gas:  No

   Ether Blend Market Share: 0.000       Alcohol Blend Market Share: 1.000
   Ether Blend Oxygen Content: 0.000     Alcohol Blend Oxygen Content: 0.035
                                          Alcohol Blend RVP Waiver: No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT      HDDV        MC   All Veh
              GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------    ------    ------    ------
   VMT Distribution:    0.3512    0.3671    0.1451              0.0359    0.0003    0.0022    0.0935    0.0047    1.0000
  ---------------------------------------------------------------------------------------------------------------------
 Composite Emission Factors (g/mi):
     Composite CO  :      9.23     11.60     11.75     11.64      5.30     0.735     0.524     1.057      9.26     9.540
  ---------------------------------------------------------------------------------------------------------------------
```

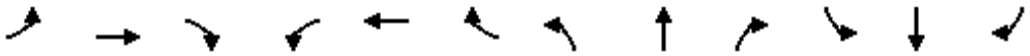
Appendix C. SYNCHRO Files

The following reports are included:

- Broadway Rd. & Alma School Rd: 2015 No-Build Alternative, Build Alternative, 2-Lane Option, and Build Alternative, 4-Lane Option
- Main St. & Alma School Rd: 2015 No-Build Alternative, Build Alternative,2-Lane Option, and Build Alternative,4-Lane Option
- University Dr. & Country Club Dr.: 2015 No-Build Alternative, Build Alternative,2-Lane Option, and Build Alternative,4-Lane Option
- Main St. & Country Club Dr.: 2015 No-Build Alternative, Build Alternative,2-Lane Option, and Build Alternative,4-Lane Option
- Main St. & Mesa Dr.: 2015 No-Build Alternative, Build Alternative,2-Lane Option, and Build Alternative,4-Lane Option



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	349	1503	268	339	714	208	136	896	198	403	1329	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		250	300		0	375		200	400		0
Storage Lanes	2		1	2		0	2		1	2		0
Taper Length (ft)	0		0	0		0	0		0	0		0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	0.91	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor							0.99		0.91	0.98	0.99	
Frt			0.850		0.966				0.850		0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	4912	0	3433	5085	1583	3433	4914	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	3433	4912	0	3405	5085	1434	3358	4914	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104		59				214		28	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		560			1060			768			1734	
Travel Time (s)		12.7			24.1			13.1			29.6	
Confl. Peds. (#/hr)							49		49	49		49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	379	1634	291	368	776	226	148	974	215	438	1445	229
Shared Lane Traffic (%)												
Lane Group Flow (vph)	379	1634	291	368	1002	0	148	974	215	438	1674	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	2	0	0	2		0	0	0	0	0	
Detector Template		Thru			Thru							
Leading Detector (ft)	0	100	0	0	100		0	0	0	0	0	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	0	6	0	0	6		0	0	0	0	0	
Detector 1 Type		Cl+Ex			Cl+Ex							
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94							
Detector 2 Size(ft)		6			6							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	1	6		5	2		3	8		7	4	

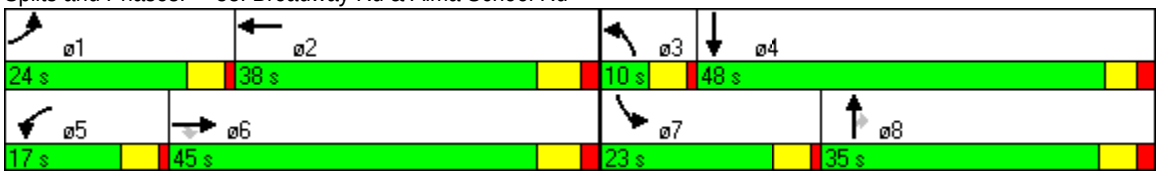


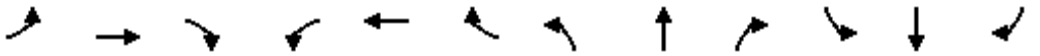
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			6						8			
Detector Phase	1	6	6	5	2		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	4.0	4.0	5.0	4.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	10.0	30.5	30.5	10.0	33.0		10.0	27.0	27.0	10.0	27.5	
Total Split (s)	24.0	45.0	45.0	17.0	38.0	0.0	10.0	35.0	35.0	23.0	48.0	0.0
Total Split (%)	20.0%	37.5%	37.5%	14.2%	31.7%	0.0%	8.3%	29.2%	29.2%	19.2%	40.0%	0.0%
Maximum Green (s)	19.0	38.5	38.5	12.0	31.5		5.0	29.0	29.0	18.0	42.5	
Yellow Time (s)	4.0	4.5	4.5	4.0	4.5		4.0	4.0	4.0	4.0	3.5	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.5	6.5	5.0	6.5	4.0	5.0	6.0	6.0	5.0	5.5	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	Ped	Ped	None	Ped	
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	
Flash Dont Walk (s)		20.0	20.0		20.0			17.0	17.0		17.0	
Pedestrian Calls (#/hr)		0	0		0			0	0		0	
Act Effct Green (s)	17.3	38.5	38.5	12.0	33.2		5.0	29.4	29.4	17.6	42.5	
Actuated g/C Ratio	0.14	0.32	0.32	0.10	0.28		0.04	0.24	0.24	0.15	0.35	
v/c Ratio	0.76	1.00	0.50	1.07	0.72		1.03	0.78	0.42	0.87	0.95	
Control Delay	60.0	63.6	24.1	120.1	40.4		140.6	47.6	7.6	68.5	50.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	60.0	63.6	24.1	120.1	40.4		140.6	47.6	7.6	68.5	50.2	
LOS	E	E	C	F	D		F	D	A	E	D	
Approach Delay		58.0			61.8			51.5			54.0	
Approach LOS		E			E			D			D	
90th %ile Green (s)	19.0	38.5	38.5	12.0	31.5		5.0	29.0	29.0	18.0	42.5	
90th %ile Term Code	Max	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	19.0	38.5	38.5	12.0	31.5		5.0	29.0	29.0	18.0	42.5	
70th %ile Term Code	Max	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
50th %ile Green (s)	18.4	38.5	38.5	12.0	32.1		5.0	29.0	29.0	18.0	42.5	
50th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
30th %ile Green (s)	16.5	38.5	38.5	12.0	34.0		5.0	29.0	29.0	18.0	42.5	
30th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	Hold	Hold	Max	Max	
10th %ile Green (s)	13.7	38.5	38.5	12.0	36.8		5.0	31.0	31.0	16.0	42.5	
10th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	Hold	Hold	Gap	Max	
Stops (vph)	329	1363	140	290	770		113	818	23	374	1381	
Fuel Used(gal)	9	41	5	13	19		6	21	2	14	47	
CO Emissions (g/hr)	655	2874	322	887	1361		399	1495	109	981	3315	
NOx Emissions (g/hr)	127	559	63	173	265		78	291	21	191	645	
VOC Emissions (g/hr)	152	666	75	206	315		93	347	25	227	768	
Dilemma Vehicles (#)	0	0	0	0	0		0	36	0	0	62	
Queue Length 50th (ft)	145	~464	115	~162	245		~63	260	1	172	453	
Queue Length 95th (ft)	198	#579	203	#261	300		#133	314	63	#254	#561	
Internal Link Dist (ft)		480			980			688			1654	
Turn Bay Length (ft)	300		250	300			375		200	400		
Base Capacity (vph)	544	1631	579	343	1401		143	1246	513	515	1758	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.70	1.00	0.50	1.07	0.72		1.03	0.78	0.42	0.85	0.95	

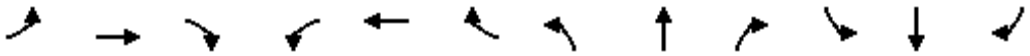
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.07			
Intersection Signal Delay: 56.3		Intersection LOS: E	
Intersection Capacity Utilization 92.1%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 33: Broadway Rd & Alma School Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	339	1444	300	289	725	264	120	889	213	425	1349	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		250	300		0	375		200	400		0
Storage Lanes	2		1	2		0	2		1	2		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	0.91	0.97	0.91	1.00	0.97	0.91	0.91
Frt			0.850		0.960				0.850		0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	4882	0	3433	5085	1583	3433	4979	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	3433	4882	0	3433	5085	1583	3433	4979	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114		78				181		28	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		565			554			707			1323	
Travel Time (s)		9.6			9.4			12.1			22.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	368	1570	326	314	788	287	130	966	232	462	1466	243
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	1570	326	314	1075	0	130	966	232	462	1709	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6						8			
Detector Phase	1	6	6	5	2		3	8	8	7	4	

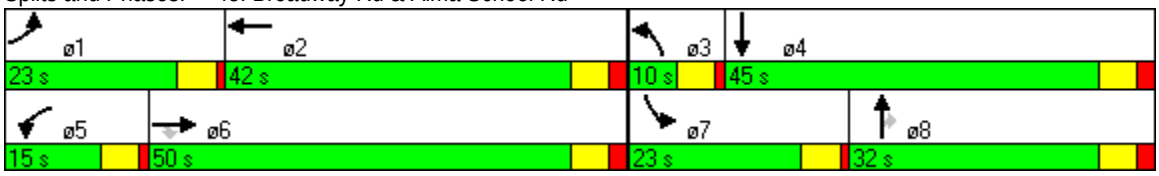


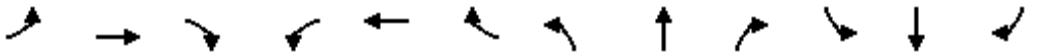
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	4.0	4.0	5.0	4.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	10.0	30.0	30.0	10.0	30.0		10.0	27.0	27.0	10.0	27.0	
Total Split (s)	23.0	50.0	50.0	15.0	42.0	0.0	10.0	32.0	32.0	23.0	45.0	0.0
Total Split (%)	19.2%	41.7%	41.7%	12.5%	35.0%	0.0%	8.3%	26.7%	26.7%	19.2%	37.5%	0.0%
Maximum Green (s)	18.0	44.0	44.0	10.0	36.0		5.0	26.0	26.0	18.0	39.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	6.0	5.0	6.0	4.0	5.0	6.0	6.0	5.0	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	Ped	Ped	None	Ped	
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	
Flash Dont Walk (s)		20.0	20.0		20.0			17.0	17.0		17.0	
Pedestrian Calls (#/hr)		0	0		0			0	0		0	
Act Effct Green (s)	16.7	44.0	44.0	10.0	37.3		5.0	26.1	26.1	17.9	39.0	
Actuated g/C Ratio	0.14	0.37	0.37	0.08	0.31		0.04	0.22	0.22	0.15	0.32	
v/c Ratio	0.77	0.84	0.50	1.10	0.68		0.91	0.87	0.48	0.90	1.04	
Control Delay	61.2	39.9	21.6	132.6	36.3		111.7	55.1	14.1	72.5	73.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	61.2	39.9	21.6	132.6	36.3		111.7	55.1	14.1	72.5	73.7	
LOS	E	D	C	F	D		F	E	B	E	E	
Approach Delay		40.7			58.1			53.5			73.5	
Approach LOS		D			E			D			E	
90th %ile Green (s)	18.0	44.0	44.0	10.0	36.0		5.0	26.0	26.0	18.0	39.0	
90th %ile Term Code	Max	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	18.0	44.0	44.0	10.0	36.0		5.0	26.0	26.0	18.0	39.0	
70th %ile Term Code	Max	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
50th %ile Green (s)	18.0	44.0	44.0	10.0	36.0		5.0	26.0	26.0	18.0	39.0	
50th %ile Term Code	Max	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
30th %ile Green (s)	16.1	44.0	44.0	10.0	37.9		5.0	26.0	26.0	18.0	39.0	
30th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
10th %ile Green (s)	13.4	44.0	44.0	10.0	40.6		5.0	26.7	26.7	17.3	39.0	
10th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	Hold	Hold	Gap	Max	
Stops (vph)	321	1287	151	244	790		103	822	50	390	1388	
Fuel Used(gal)	9	33	5	12	21		4	22	2	14	51	
CO Emissions (g/hr)	655	2315	345	829	1459		302	1560	149	973	3588	
NOx Emissions (g/hr)	128	450	67	161	284		59	304	29	189	698	
VOC Emissions (g/hr)	152	537	80	192	338		70	362	34	226	832	
Dilemma Vehicles (#)	0	60	0	0	41		0	36	0	0	61	
Queue Length 50th (ft)	141	404	124	~142	252		52	267	32	183	~520	
Queue Length 95th (ft)	194	468	213	#236	305		#114	#336	107	#276	#619	
Internal Link Dist (ft)		485			474			627			1243	
Turn Bay Length (ft)	300		250	300			375		200	400		
Base Capacity (vph)	515	1865	653	286	1571		143	1108	487	515	1637	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.71	0.84	0.50	1.10	0.68		0.91	0.87	0.48	0.90	1.04	

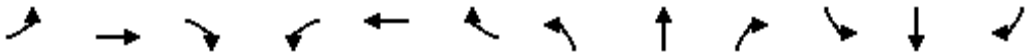
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 56.4		Intersection LOS: E	
Intersection Capacity Utilization 89.7%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 45: Broadway Rd & Alma School Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	351	1499	268	343	708	204	135	894	199	409	1322	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		250	300		0	375		200	400		0
Storage Lanes	2		1	2		0	2		1	2		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	0.91	0.97	0.91	1.00	0.97	0.91	0.91
Frt			0.850		0.966				0.850		0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	4912	0	3433	5085	1583	3433	4979	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5085	1583	3433	4912	0	3433	5085	1583	3433	4979	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			126		60				211		27	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		558			554			797			1372	
Travel Time (s)		9.5			9.4			13.6			23.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	382	1629	291	373	770	222	147	972	216	445	1437	229
Shared Lane Traffic (%)												
Lane Group Flow (vph)	382	1629	291	373	992	0	147	972	216	445	1666	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6						8			
Detector Phase	1	6	6	5	2		3	8	8	7	4	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	4.0	4.0	5.0	4.0		5.0	10.0	10.0	5.0	10.0	
Minimum Split (s)	10.0	30.0	30.0	10.0	30.0		10.0	27.0	27.0	10.0	27.0	
Total Split (s)	25.0	45.0	45.0	19.0	39.0	0.0	11.0	33.0	33.0	23.0	45.0	0.0
Total Split (%)	20.8%	37.5%	37.5%	15.8%	32.5%	0.0%	9.2%	27.5%	27.5%	19.2%	37.5%	0.0%
Maximum Green (s)	20.0	39.0	39.0	14.0	33.0		6.0	27.0	27.0	18.0	39.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	6.0	5.0	6.0	4.0	5.0	6.0	6.0	5.0	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	Ped	Ped	None	Ped	
Walk Time (s)		4.0	4.0		4.0			4.0	4.0		4.0	
Flash Dont Walk (s)		20.0	20.0		20.0			17.0	17.0		17.0	
Pedestrian Calls (#/hr)		0	0		0			0	0		0	
Act Effct Green (s)	17.8	39.0	39.0	14.0	35.2		6.0	27.3	27.3	17.7	39.0	
Actuated g/C Ratio	0.15	0.32	0.32	0.12	0.29		0.05	0.23	0.23	0.15	0.32	
v/c Ratio	0.75	0.99	0.48	0.93	0.67		0.85	0.84	0.41	0.88	1.02	
Control Delay	58.6	59.4	20.9	83.2	37.9		95.5	52.0	8.1	69.6	66.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	58.6	59.4	20.9	83.2	37.9		95.5	52.0	8.1	69.6	66.5	
LOS	E	E	C	F	D		F	D	A	E	E	
Approach Delay		54.4			50.3			49.7			67.2	
Approach LOS		D			D			D			E	
90th %ile Green (s)	20.0	39.0	39.0	14.0	33.0		6.0	27.0	27.0	18.0	39.0	
90th %ile Term Code	Max	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
70th %ile Green (s)	20.0	39.0	39.0	14.0	33.0		6.0	27.0	27.0	18.0	39.0	
70th %ile Term Code	Max	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
50th %ile Green (s)	18.5	39.0	39.0	14.0	34.5		6.0	27.0	27.0	18.0	39.0	
50th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
30th %ile Green (s)	16.6	39.0	39.0	14.0	36.4		6.0	27.0	27.0	18.0	39.0	
30th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	Max	Max	Max	Max	
10th %ile Green (s)	13.8	39.0	39.0	14.0	39.2		6.0	28.6	28.6	16.4	39.0	
10th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	Hold	Hold	Gap	Max	
Stops (vph)	328	1362	122	309	742		120	825	26	378	1365	
Fuel Used(gal)	10	44	5	11	21		5	22	2	13	48	
CO Emissions (g/hr)	725	3084	321	796	1475		317	1566	116	931	3387	
NOx Emissions (g/hr)	141	600	62	155	287		62	305	23	181	659	
VOC Emissions (g/hr)	168	715	74	184	342		73	363	27	216	785	
Dilemma Vehicles (#)	0	60	0	0	38		0	36	0	0	60	
Queue Length 50th (ft)	146	457	99	150	235		59	265	3	175	~495	
Queue Length 95th (ft)	197	#571	185	#242	291		#119	320	66	#261	#594	
Internal Link Dist (ft)		478			474			717			1292	
Turn Bay Length (ft)	300		250	300			375		200	400		
Base Capacity (vph)	572	1653	600	401	1484		172	1158	524	515	1636	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	

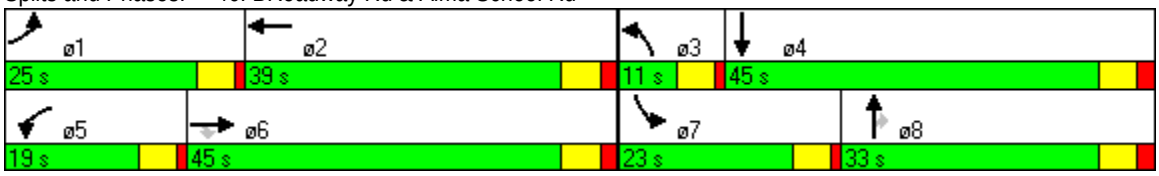
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.67	0.99	0.48	0.93	0.67		0.85	0.84	0.41	0.86	1.02	

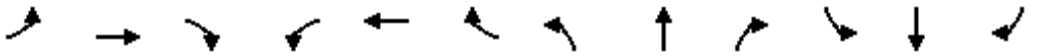
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay: 56.5		Intersection LOS: E	
Intersection Capacity Utilization 91.5%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

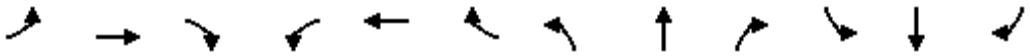
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 46: BRoadway Rd & Alma School Rd





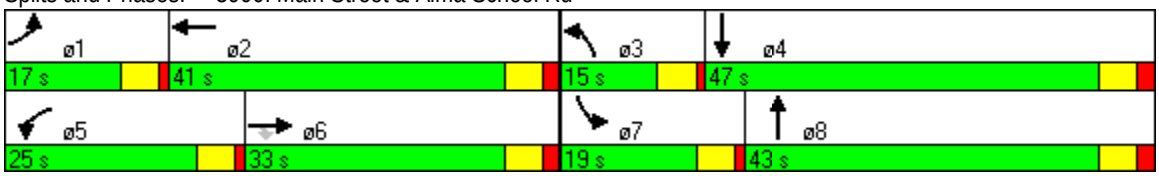
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	613	151	267	455	114	174	896	186	239	1563	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		520	170		0	155		0	170		0
Storage Lanes	1		1	1		0	2		0	2		0
Taper Length (ft)	25		25	25		0	25		0	25		0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor	0.99		0.94	0.98	0.99			0.99			1.00	
Frt			0.850		0.970			0.974			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3497	1583	1770	3352	0	3433	4896	0	3433	5018	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1749	3497	1484	1735	3352	0	3433	4896	0	3433	5018	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			172		27			39			8	
Link Speed (mph)		40			35			40			40	
Link Distance (ft)		1016			319			744			741	
Travel Time (s)		17.3			6.2			12.7			12.6	
Confl. Peds. (#/hr)	12		23	23		12			18			17
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93
Bus Blockages (#/hr)	0	6	0	0	8	0	0	2	0	0	2	0
Adj. Flow (vph)	95	697	172	281	479	120	183	943	196	257	1681	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	95	697	172	281	599	0	183	1139	0	257	1773	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.02	1.00	1.00	1.02	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6									
Detector Phase	1	6	6	5	2		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	23.0	23.0	5.0	23.0		5.0	20.0		5.0	20.0	

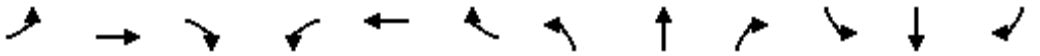


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	17.0	32.0	32.0	18.0	33.0		15.0	29.0		15.0	29.0	
Total Split (s)	17.0	33.0	33.0	25.0	41.0	0.0	15.0	43.0	0.0	19.0	47.0	0.0
Total Split (%)	14.2%	27.5%	27.5%	20.8%	34.2%	0.0%	12.5%	35.8%	0.0%	15.8%	39.2%	0.0%
Maximum Green (s)	12.0	27.0	27.0	20.0	35.0		10.0	37.0		14.0	41.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	0.0	-1.0	-2.0	0.0	-1.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max		None	Max		None	Max	
Walk Time (s)		5.0	5.0		5.0			5.0			5.0	
Flash Dont Walk (s)		11.0	11.0		11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	11.6	29.2	29.2	20.8	38.4		10.7	40.0		14.0	43.3	
Actuated g/C Ratio	0.10	0.24	0.24	0.17	0.32		0.09	0.33		0.12	0.36	
v/c Ratio	0.56	0.82	0.35	0.92	0.55		0.60	0.69		0.64	0.98	
Control Delay	64.2	52.0	7.5	83.1	34.6		61.1	36.1		58.3	54.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	64.2	52.0	7.5	83.1	34.6		61.1	36.1		58.3	54.2	
LOS	E	D	A	F	C		E	D		E	D	
Approach Delay		45.3			50.1			39.6			54.7	
Approach LOS		D			D			D			D	
90th %ile Green (s)	12.0	27.0	27.0	20.0	35.0		10.0	37.0		14.0	41.0	
90th %ile Term Code	Max	Coord	Coord	Max	Coord		Max	MaxR		Max	MaxR	
70th %ile Green (s)	12.0	27.0	27.0	20.0	35.0		10.0	37.0		14.0	41.0	
70th %ile Term Code	Max	Coord	Coord	Max	Coord		Max	MaxR		Max	MaxR	
50th %ile Green (s)	11.7	27.0	27.0	20.0	35.3		10.0	37.0		14.0	41.0	
50th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	MaxR		Max	MaxR	
30th %ile Green (s)	9.9	27.0	27.0	20.0	37.1		10.0	38.4		12.6	41.0	
30th %ile Term Code	Gap	Coord	Coord	Max	Coord		Max	MaxR		Gap	MaxR	
10th %ile Green (s)	7.2	28.1	28.1	18.9	39.8		8.5	40.6		10.4	42.5	
10th %ile Term Code	Gap	Coord	Coord	Gap	Coord		Gap	MaxR		Gap	MaxR	
Stops (vph)	78	561	18	237	439		164	884		224	1483	
Fuel Used(gal)	3	23	3	11	18		5	22		6	41	
CO Emissions (g/hr)	237	1621	221	781	1238		325	1545		436	2870	
NOx Emissions (g/hr)	46	315	43	152	241		63	301		85	558	
VOC Emissions (g/hr)	55	376	51	181	287		75	358		101	665	
Dilemma Vehicles (#)	0	25	0	0	24		0	45		0	66	
Queue Length 50th (ft)	71	270	0	216	194		71	272		98	492	
Queue Length 95th (ft)	124	334	52	#377	255		110	326		142	#610	
Internal Link Dist (ft)		936			239			664			661	
Turn Bay Length (ft)	250		520	170			155			170		
Base Capacity (vph)	192	851	491	310	1092		315	1658		429	1816	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.49	0.82	0.35	0.91	0.55		0.58	0.69		0.60	0.98	

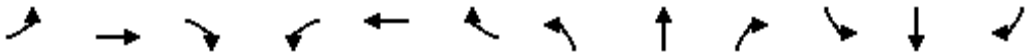
Intersection Summary		
Area Type:	Other	
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green		
Natural Cycle: 105		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.98		
Intersection Signal Delay: 48.3		Intersection LOS: D
Intersection Capacity Utilization 84.5%		ICU Level of Service E
Analysis Period (min) 15		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

Splits and Phases: 3900: Main Street & Alma School Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	496	228	316	441	90	182	848	254	271	1483	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	350		0	350		0	155		0	170		0
Storage Lanes	1		0	1		0	2		0	2		0
Taper Length (ft)	25		0	25		0	25		0	25		0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor	0.99	0.98		0.98	0.99		0.96	0.99		0.99	0.99	
Frt		0.953			0.975			0.965			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	3181	0	1711	3299	0	3433	4821	0	3433	4969	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1688	3181	0	1681	3299	0	3282	4821	0	3384	4969	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60			21			67			6	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		752			319			992			741	
Travel Time (s)		14.6			6.2			16.9			12.6	
Confl. Peds. (#/hr)	13		24	24		13	119		19	19		119
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93
Bus Blockages (#/hr)	0	2	0	0	2	0	0	4	0	0	4	0
Adj. Flow (vph)	110	564	259	333	464	95	192	893	267	291	1595	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	823	0	333	559	0	192	1160	0	291	1666	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.05	1.04	1.04	1.05	1.04	1.00	1.01	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												
Detector Phase	1	6		5	2		3	8		7	4	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	23.0		5.0	23.0		5.0	20.0		5.0	20.0	
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	26.0		10.0	26.0	
Total Split (s)	19.0	34.0	0.0	26.0	41.0	0.0	12.0	43.0	0.0	17.0	48.0	0.0
Total Split (%)	15.8%	28.3%	0.0%	21.7%	34.2%	0.0%	10.0%	35.8%	0.0%	14.2%	40.0%	0.0%
Maximum Green (s)	14.0	28.0		21.0	35.0		7.0	37.0		12.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0	-1.0	-1.0	-2.0	0.0	-1.0	-2.0	0.0	-1.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	13.0	30.0		22.1	39.1		8.0	39.0		12.9	43.9	
Actuated g/C Ratio	0.11	0.25		0.18	0.33		0.07	0.32		0.11	0.37	
v/c Ratio	0.59	0.98		1.06	0.51		0.84	0.72		0.79	0.91	
Control Delay	76.3	49.5		104.2	25.5		84.8	36.5		68.1	45.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	76.3	49.5		104.2	25.5		84.8	36.5		68.1	45.0	
LOS	E	D		F	C		F	D		E	D	
Approach Delay		52.7			54.9			43.4			48.4	
Approach LOS		D			D			D			D	
90th %ile Green (s)	14.0	28.0		21.0	35.0		7.0	37.0		12.0	42.0	
90th %ile Term Code	Max	Coord		Max	Coord		Max	Max		Max	Max	
70th %ile Green (s)	14.0	28.0		21.0	35.0		7.0	37.0		12.0	42.0	
70th %ile Term Code	Max	Coord		Max	Coord		Max	Max		Max	Max	
50th %ile Green (s)	13.0	28.0		21.0	36.0		7.0	37.0		12.0	42.0	
50th %ile Term Code	Gap	Coord		Max	Coord		Max	Hold		Max	Max	
30th %ile Green (s)	10.9	28.0		21.0	38.1		7.0	37.0		12.0	42.0	
30th %ile Term Code	Gap	Coord		Max	Coord		Max	Hold		Max	Max	
10th %ile Green (s)	7.9	28.0		21.4	41.5		7.0	37.0		11.6	41.6	
10th %ile Term Code	Gap	Coord		Max	Coord		Max	Hold		Gap	Gap	
Stops (vph)	75	676		226	454		167	897		251	1397	
Fuel Used(gal)	3	16		14	16		6	24		8	36	
CO Emissions (g/hr)	182	1141		991	1111		420	1707		530	2496	
NOx Emissions (g/hr)	35	222		193	216		82	332		103	486	
VOC Emissions (g/hr)	42	264		230	257		97	396		123	578	
Dilemma Vehicles (#)	0	14		0	4		0	46		0	63	
Queue Length 50th (ft)	65	317		~263	201		77	273		114	444	
Queue Length 95th (ft)	111	#435		#453	252		#141	327		#178	#517	
Internal Link Dist (ft)		672			239			912			661	
Turn Bay Length (ft)	350			350			155			170		
Base Capacity (vph)	214	840		315	1090		229	1612		372	1826	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	

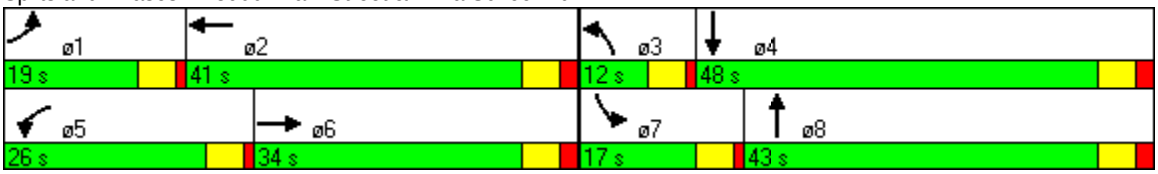
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio	0.51	0.98		1.06	0.51		0.84	0.72		0.78	0.91	

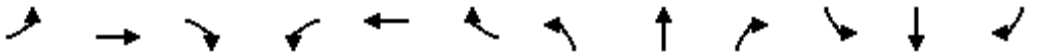
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 69 (58%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 49.0		Intersection LOS: D	
Intersection Capacity Utilization 88.1%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

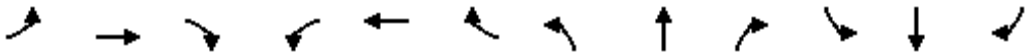
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3900: Main Street & Alma School Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	607	160	268	453	109	172	902	178	249	1553	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	350		0	350		0	155		0	170		0
Storage Lanes	1		0	1		0	2		0	2		0
Taper Length (ft)	25		0	25		0	25		0	25		0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor	0.99	0.99		0.98	0.99		0.96	0.99		0.99	0.99	
Frt		0.969			0.971			0.975			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	3257	0	1711	3283	0	3433	4888	0	3433	4946	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1689	3257	0	1683	3283	0	3300	4888	0	3383	4946	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			27			36			8	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		753			319			842			741	
Travel Time (s)		14.7			6.2			14.4			12.6	
Confl. Peds. (#/hr)	13		24	24		13	119		19	19		119
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.95	0.95	0.95	0.93	0.93	0.93
Bus Blockages (#/hr)	0	2	0	0	2	0	0	4	0	0	4	0
Adj. Flow (vph)	89	690	182	282	477	115	181	949	187	268	1670	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	872	0	282	592	0	181	1136	0	268	1762	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.05	1.04	1.04	1.05	1.04	1.00	1.01	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												
Detector Phase	1	6		5	2		3	8		7	4	
Switch Phase												

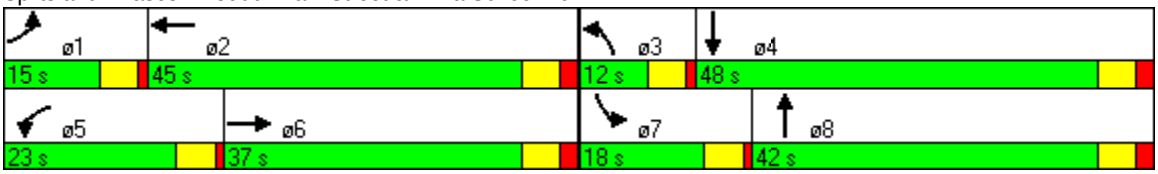


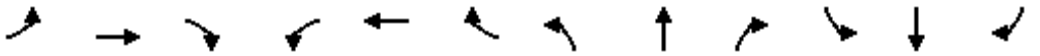
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	23.0		5.0	23.0		5.0	20.0		5.0	20.0	
Minimum Split (s)	10.0	29.0		10.0	29.0		10.0	26.0		10.0	26.0	
Total Split (s)	15.0	37.0	0.0	23.0	45.0	0.0	12.0	42.0	0.0	18.0	48.0	0.0
Total Split (%)	12.5%	30.8%	0.0%	19.2%	37.5%	0.0%	10.0%	35.0%	0.0%	15.0%	40.0%	0.0%
Maximum Green (s)	10.0	31.0		18.0	39.0		7.0	36.0		13.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	0.0	-1.0	-2.0	0.0	-1.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	10.3	33.0		19.0	41.7		8.0	38.5		13.5	44.0	
Actuated g/C Ratio	0.09	0.28		0.16	0.35		0.07	0.32		0.11	0.37	
v/c Ratio	0.60	0.95		1.04	0.51		0.79	0.71		0.69	0.97	
Control Delay	88.9	41.3		126.5	23.9		79.2	37.8		61.1	52.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	88.9	41.3		126.5	23.9		79.2	37.8		61.1	52.3	
LOS	F	D		F	C		E	D		E	D	
Approach Delay		45.7			57.0			43.5			53.5	
Approach LOS		D			E			D			D	
90th %ile Green (s)	10.0	31.0		18.0	39.0		7.0	36.0		13.0	42.0	
90th %ile Term Code	Max	Coord		Max	Coord		Max	Max		Max	Max	
70th %ile Green (s)	10.0	31.0		18.0	39.0		7.0	36.0		13.0	42.0	
70th %ile Term Code	Max	Coord		Max	Coord		Max	Max		Max	Max	
50th %ile Green (s)	10.0	31.0		18.0	39.0		7.0	36.0		13.0	42.0	
50th %ile Term Code	Max	Coord		Max	Coord		Max	Hold		Max	Max	
30th %ile Green (s)	9.7	31.0		18.0	39.3		7.0	36.0		13.0	42.0	
30th %ile Term Code	Gap	Coord		Max	Coord		Max	Hold		Max	Max	
10th %ile Green (s)	7.0	31.0		18.0	42.0		7.0	38.3		10.7	42.0	
10th %ile Term Code	Gap	Coord		Max	Coord		Max	Hold		Gap	Max	
Stops (vph)	79	265		230	341		160	901		236	1480	
Fuel Used(gal)	2	13		14	16		5	23		7	40	
CO Emissions (g/hr)	170	882		946	1089		372	1631		466	2812	
NOx Emissions (g/hr)	33	172		184	212		72	317		91	547	
VOC Emissions (g/hr)	39	204		219	252		86	378		108	652	
Dilemma Vehicles (#)	0	66		0	10		0	45		0	66	
Queue Length 50th (ft)	74	71		~243	111		72	276		104	484	
Queue Length 95th (ft)	127	#425		#423	134		#130	330		150	#600	
Internal Link Dist (ft)		673			239			762			661	
Turn Bay Length (ft)	350			350			155			170		
Base Capacity (vph)	157	915		271	1157		229	1591		401	1819	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Reduced v/c Ratio	0.57	0.95		1.04	0.51		0.79	0.71		0.67	0.97	

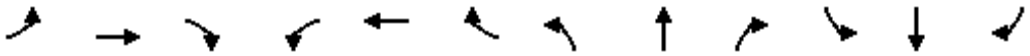
Intersection Summary		
Area Type:	Other	
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 6 (5%), Referenced to phase 2:WBT and 6:EBT, Start of Green		
Natural Cycle: 100		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.04		
Intersection Signal Delay: 50.1	Intersection LOS: D	
Intersection Capacity Utilization 87.7%	ICU Level of Service E	
Analysis Period (min) 15		
~ Volume exceeds capacity, queue is theoretically infinite.		
Queue shown is maximum after two cycles.		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

Splits and Phases: 3900: Main Street & Alma School Rd





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	973	161	154	590	155	166	1019	203	330	1105	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	300		0	375		0	400		0
Storage Lanes	2		0	2		0	2		0	2		0
Taper Length (ft)	25		0	25		0	25		25	25		0
Lane Util. Factor	0.97	0.91	0.91	0.97	0.91	0.91	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.979			0.969			0.975			0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4979	0	3433	4928	0	3433	4958	0	3433	5009	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4979	0	3433	4928	0	3433	4958	0	3433	5009	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			67			42			18	
Link Speed (mph)		35			35			35			40	
Link Distance (ft)		437			1176			778			778	
Travel Time (s)		8.5			22.9			15.2			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	286	1058	175	167	641	168	180	1108	221	359	1201	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	286	1233	0	167	809	0	180	1329	0	359	1331	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template		Thru			Thru							
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases												
Detector Phase	7	4		3	8		1	6		5	2	

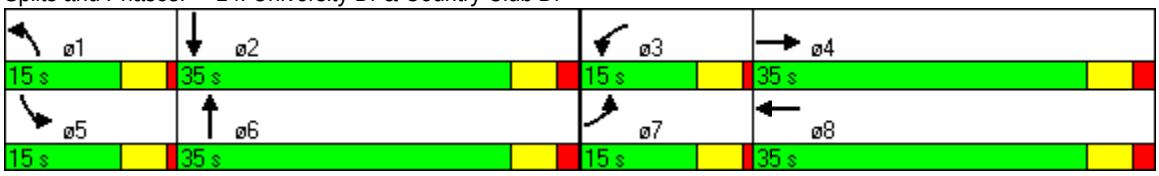


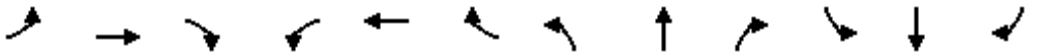
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		10.0	23.0		10.0	23.0	
Total Split (s)	15.0	35.0	0.0	15.0	35.0	0.0	15.0	35.0	0.0	15.0	35.0	0.0
Total Split (%)	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%	15.0%	35.0%	0.0%
Maximum Green (s)	10.0	29.0		10.0	29.0		10.0	29.0		10.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	4.0	5.0	6.0	4.0	5.0	6.0	4.0	5.0	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		4.0			4.0			4.0			4.0	
Flash Dont Walk (s)		18.0			18.0			13.0			13.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	10.0	28.7		9.3	28.0		9.4	29.0		11.0	30.6	
Actuated g/C Ratio	0.10	0.29		0.09	0.28		0.09	0.29		0.11	0.31	
v/c Ratio	0.83	0.85		0.53	0.57		0.56	0.91		0.95	0.86	
Control Delay	65.7	39.3		49.3	29.7		50.2	43.1		81.4	39.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	65.7	39.3		49.3	29.7		50.2	43.1		81.4	39.7	
LOS	E	D		D	C		D	D		F	D	
Approach Delay		44.3			33.0			44.0			48.5	
Approach LOS		D			C			D			D	
90th %ile Green (s)	10.0	29.0		10.0	29.0		10.0	29.0		10.0	29.0	
90th %ile Term Code	Max	Max		Max	Hold		Max	Coord		Max	Coord	
70th %ile Green (s)	10.0	29.0		10.0	29.0		10.0	29.0		10.0	29.0	
70th %ile Term Code	Max	Max		Max	Hold		Max	Coord		Max	Coord	
50th %ile Green (s)	10.0	29.0		10.0	29.0		10.0	29.0		10.0	29.0	
50th %ile Term Code	Max	Max		Max	Hold		Max	Coord		Max	Coord	
30th %ile Green (s)	10.0	30.0		9.0	29.0		9.4	29.0		10.0	29.6	
30th %ile Term Code	Max	Max		Gap	Hold		Gap	Coord		Max	Coord	
10th %ile Green (s)	10.0	26.5		7.4	23.9		7.6	29.0		15.1	36.5	
10th %ile Term Code	Max	Gap		Gap	Hold		Gap	Coord		Max	Coord	
Stops (vph)	239	1005		143	564		155	1081		275	1077	
Fuel Used(gal)	7	24		4	15		4	26		10	27	
CO Emissions (g/hr)	489	1670		275	1052		265	1799		693	1883	
NOx Emissions (g/hr)	95	325		53	205		52	350		135	366	
VOC Emissions (g/hr)	113	387		64	244		61	417		161	437	
Dilemma Vehicles (#)	0	54		0	27		0	60		0	60	
Queue Length 50th (ft)	93	263		52	145		57	289		~128	295	
Queue Length 95th (ft)	#162	320		86	187		92	#377		#219	#383	
Internal Link Dist (ft)		357			1096			698			698	
Turn Bay Length (ft)	300			300			375			400		
Base Capacity (vph)	343	1477		343	1477		343	1468		378	1546	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.83	0.83		0.49	0.55		0.52	0.91		0.95	0.86	

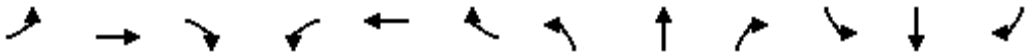
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 43.5		Intersection LOS: D	
Intersection Capacity Utilization 78.7%		ICU Level of Service D	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 14: University Dr & Country Club Dr





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	256	978	98	217	642	98	107	1060	269	366	1021	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		0	275		0	325		0	325		0
Storage Lanes	2		0	2		0	2		0	2		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	0.91	0.91	0.97	0.91	0.91	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.986			0.980			0.970			0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5014	0	3433	4984	0	3433	4933	0	3433	5029	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5014	0	3433	4984	0	3433	4933	0	3433	5029	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			27			63			14	
Link Speed (mph)		35			35			35			40	
Link Distance (ft)		481			744			1203			621	
Travel Time (s)		9.4			14.5			23.4			10.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	278	1063	107	236	698	107	116	1152	292	398	1110	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	278	1170	0	236	805	0	116	1444	0	398	1195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases												
Detector Phase	7	4		3	8		1	6		5	2	

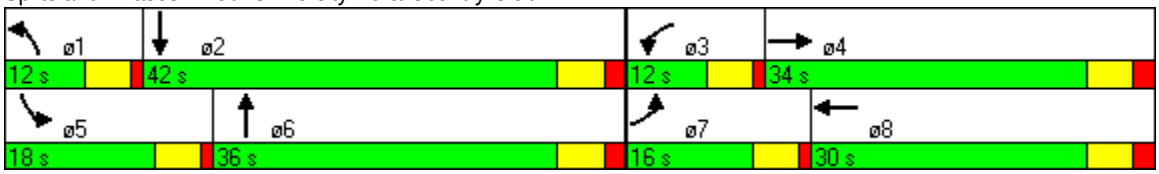


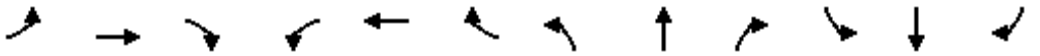
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		10.0	23.0		10.0	23.0	
Total Split (s)	16.0	34.0	0.0	12.0	30.0	0.0	12.0	36.0	0.0	18.0	42.0	0.0
Total Split (%)	16.0%	34.0%	0.0%	12.0%	30.0%	0.0%	12.0%	36.0%	0.0%	18.0%	42.0%	0.0%
Maximum Green (s)	11.0	28.0		7.0	24.0		7.0	30.0		13.0	36.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	4.0	5.0	6.0	4.0	5.0	6.0	4.0	5.0	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Ped		None	Ped		None	C-Max		None	C-Max	
Walk Time (s)		4.0			4.0			4.0			4.0	
Flash Dont Walk (s)		18.0			18.0			13.0			13.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	10.8	27.5		7.0	23.7		6.9	30.4		13.1	36.6	
Actuated g/C Ratio	0.11	0.28		0.07	0.24		0.07	0.30		0.13	0.37	
v/c Ratio	0.75	0.84		0.98	0.67		0.49	0.94		0.89	0.65	
Control Delay	56.9	40.2		102.0	36.5		52.3	45.0		65.5	28.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	56.9	40.2		102.0	36.5		52.3	45.0		65.5	28.1	
LOS	E	D		F	D		D	D		E	C	
Approach Delay		43.4			51.4			45.5			37.4	
Approach LOS		D			D			D			D	
90th %ile Green (s)	11.0	28.0		7.0	24.0		7.0	30.0		13.0	36.0	
90th %ile Term Code	Max	Max		Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	11.0	28.0		7.0	24.0		7.0	30.0		13.0	36.0	
70th %ile Term Code	Max	Max		Max	Max		Max	Coord		Max	Coord	
50th %ile Green (s)	11.0	28.0		7.0	24.0		7.0	30.0		13.0	36.0	
50th %ile Term Code	Max	Max		Max	Hold		Max	Coord		Max	Coord	
30th %ile Green (s)	11.0	28.0		7.0	24.0		7.0	30.0		13.0	36.0	
30th %ile Term Code	Max	Max		Max	Hold		Max	Coord		Max	Coord	
10th %ile Green (s)	9.9	25.4		7.0	22.5		6.4	32.1		13.5	39.2	
10th %ile Term Code	Gap	Gap		Max	Hold		Gap	Coord		Gap	Coord	
Stops (vph)	238	968		188	630		101	1151		329	873	
Fuel Used(gal)	6	22		7	14		3	32		10	19	
CO Emissions (g/hr)	434	1552		495	995		198	2261		675	1363	
NOx Emissions (g/hr)	84	302		96	194		38	440		131	265	
VOC Emissions (g/hr)	101	360		115	231		46	524		156	316	
Dilemma Vehicles (#)	0	51		0	32		0	64		0	55	
Queue Length 50th (ft)	89	252		78	164		37	316		130	228	
Queue Length 95th (ft)	#144	308		#157	210		65	#417		#214	278	
Internal Link Dist (ft)		401			664			1123			541	
Turn Bay Length (ft)	330			275			325			325		
Base Capacity (vph)	378	1416		240	1217		240	1544		449	1851	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.74	0.83		0.98	0.66		0.48	0.94		0.89	0.65	

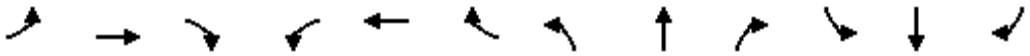
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 43.8		Intersection LOS: D	
Intersection Capacity Utilization 82.5%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 50: University Rd & Country Club Dr





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	257	967	162	156	586	152	172	1026	192	342	1100	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	330		0	275		0	325		0	325		0
Storage Lanes	2		0	2		0	2		0	2		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.97	0.91	0.91	0.97	0.91	0.91	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.978			0.969			0.976			0.986	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	4973	0	3433	4928	0	3433	4963	0	3433	5014	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	4973	0	3433	4928	0	3433	4963	0	3433	5014	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			59			40			19	
Link Speed (mph)		35			35			35			40	
Link Distance (ft)		472			1116			952			777	
Travel Time (s)		9.2			21.7			18.5			13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	279	1051	176	170	637	165	187	1115	209	372	1196	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	279	1227	0	170	802	0	187	1324	0	372	1318	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases												
Detector Phase	7	4		3	8		1	6		5	2	

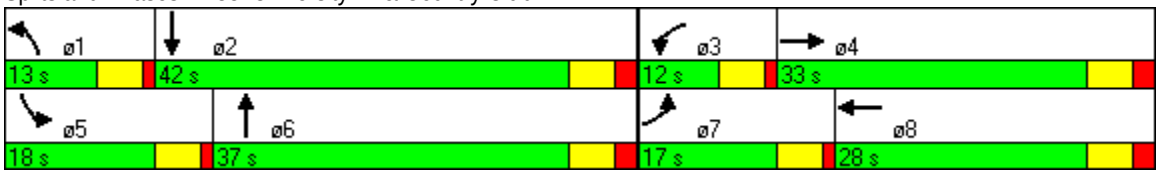


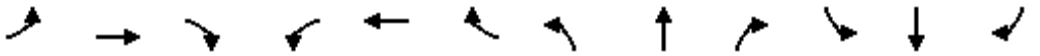
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	28.0		11.0	28.0		10.0	23.0		10.0	23.0	
Total Split (s)	17.0	33.0	0.0	12.0	28.0	0.0	13.0	37.0	0.0	18.0	42.0	0.0
Total Split (%)	17.0%	33.0%	0.0%	12.0%	28.0%	0.0%	13.0%	37.0%	0.0%	18.0%	42.0%	0.0%
Maximum Green (s)	12.0	27.0		7.0	22.0		8.0	31.0		13.0	36.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	4.0	5.0	6.0	4.0	5.0	6.0	4.0	5.0	6.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Ped		None	Ped		None	C-Max		None	C-Max	
Walk Time (s)		4.0			4.0			4.0			4.0	
Flash Dont Walk (s)		18.0			18.0			13.0			13.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	11.5	27.0		7.0	22.5		8.0	31.2		12.9	36.1	
Actuated g/C Ratio	0.12	0.27		0.07	0.22		0.08	0.31		0.13	0.36	
v/c Ratio	0.71	0.90		0.71	0.70		0.68	0.84		0.84	0.72	
Control Delay	53.0	44.5		62.4	36.7		58.2	37.1		60.7	30.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	53.0	44.5		62.4	36.7		58.2	37.1		60.7	30.1	
LOS	D	D		E	D		E	D		E	C	
Approach Delay		46.1			41.2			39.7			36.8	
Approach LOS		D			D			D			D	
90th %ile Green (s)	12.0	27.0		7.0	22.0		8.0	31.0		13.0	36.0	
90th %ile Term Code	Max	Max		Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	12.0	27.0		7.0	22.0		8.0	31.0		13.0	36.0	
70th %ile Term Code	Max	Max		Max	Max		Max	Coord		Max	Coord	
50th %ile Green (s)	12.0	27.0		7.0	22.0		8.0	31.0		13.0	36.0	
50th %ile Term Code	Max	Max		Max	Ped		Max	Coord		Max	Coord	
30th %ile Green (s)	11.8	27.0		7.0	22.2		8.0	31.0		13.0	36.0	
30th %ile Term Code	Gap	Max		Max	Hold		Max	Coord		Max	Coord	
10th %ile Green (s)	9.7	26.8		7.0	24.1		7.9	31.8		12.4	36.3	
10th %ile Term Code	Gap	Gap		Max	Hold		Gap	Coord		Gap	Coord	
Stops (vph)	243	1005		144	614		161	1065		313	1000	
Fuel Used(gal)	7	26		4	16		4	26		9	24	
CO Emissions (g/hr)	457	1840		302	1124		310	1788		636	1652	
NOx Emissions (g/hr)	89	358		59	219		60	348		124	322	
VOC Emissions (g/hr)	106	426		70	261		72	414		147	383	
Dilemma Vehicles (#)	0	53		0	34		0	60		0	61	
Queue Length 50th (ft)	89	269		55	161		60	279		121	259	
Queue Length 95th (ft)	132	#352		#102	207		#105	339		#194	313	
Internal Link Dist (ft)		392			1036			872			697	
Turn Bay Length (ft)	330			275			325			325		
Base Capacity (vph)	412	1366		240	1152		275	1574		446	1820	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.68	0.90		0.71	0.70		0.68	0.84		0.83	0.72	

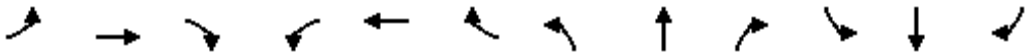
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 40 (40%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 40.8		Intersection LOS: D	
Intersection Capacity Utilization 78.9%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 38: University Dr & Country Club Dr





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	661	146	193	386	110	134	1139	242	133	1237	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		200	160		90	400		0	200		0
Storage Lanes	2		1	2		1	2		0	2		0
Taper Length (ft)	25		25	25		25	25		0	25		0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor			0.96			0.92		1.00			0.99	
Frt			0.850			0.850		0.974			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3497	1583	3433	3322	1583	3433	4920	0	3433	4928	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3497	1525	3433	3322	1454	3433	4920	0	3433	4928	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			166			122		50			37	
Link Speed (mph)		35			30			35			35	
Link Distance (ft)		1303			1003			793			1359	
Travel Time (s)		25.4			22.8			15.4			26.5	
Confl. Peds. (#/hr)			9			38			4			17
Confl. Bikes (#/hr)			13			6			5			4
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.87	0.87	0.87	0.91	0.91	0.91
Bus Blockages (#/hr)	0	6	0	0	6	0	0	2	0	0	2	0
Parking (#/hr)					0							
Adj. Flow (vph)	188	751	166	214	429	122	154	1309	278	146	1359	235
Shared Lane Traffic (%)												
Lane Group Flow (vph)	188	751	166	214	429	122	154	1587	0	146	1594	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.02	1.00	1.00	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50	50	50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	1	6		5	2	

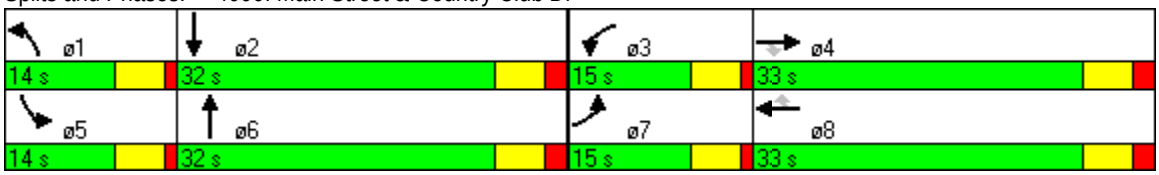


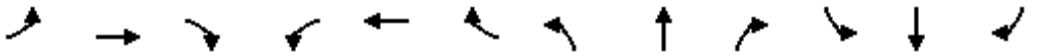
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	23.0	23.0	5.0	23.0	23.0	5.0	23.0		5.0	23.0	
Minimum Split (s)	10.0	29.0	29.0	10.0	33.0	33.0	10.0	29.0		10.0	29.0	
Total Split (s)	15.0	33.0	33.0	15.0	33.0	33.0	14.0	32.0	0.0	14.0	32.0	0.0
Total Split (%)	16.0%	35.1%	35.1%	16.0%	35.1%	35.1%	14.9%	34.0%	0.0%	14.9%	34.0%	0.0%
Maximum Green (s)	10.0	27.0	27.0	10.0	27.0	27.0	9.0	26.0		9.0	26.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	0.0	-1.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	Max	Max	None	Max	Max	None	C-Max		None	C-Max	
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	9.2	30.3	30.3	9.7	30.8	30.8	8.4	29.7		8.3	29.6	
Actuated g/C Ratio	0.10	0.32	0.32	0.10	0.33	0.33	0.09	0.32		0.09	0.31	
v/c Ratio	0.56	0.67	0.27	0.60	0.39	0.22	0.50	1.00		0.48	1.01	
Control Delay	60.2	19.0	1.8	47.7	26.2	5.7	46.4	54.4		46.1	57.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	60.2	19.0	1.8	47.7	26.2	5.7	46.4	54.4		46.1	57.6	
LOS	E	B	A	D	C	A	D	D		D	E	
Approach Delay		23.4			28.9			53.7			56.6	
Approach LOS		C			C			D			E	
90th %ile Green (s)	10.0	27.0	27.0	10.0	27.0	27.0	9.0	26.0		9.0	26.0	
90th %ile Term Code	Max	MaxR	MaxR	Max	MaxR	MaxR	Max	Coord		Max	Coord	
70th %ile Green (s)	9.8	27.0	27.0	10.0	27.2	27.2	8.7	26.5		8.5	26.3	
70th %ile Term Code	Gap	MaxR	MaxR	Max	MaxR	MaxR	Gap	Coord		Gap	Coord	
50th %ile Green (s)	8.5	27.7	27.7	9.3	28.5	28.5	7.6	27.6		7.4	27.4	
50th %ile Term Code	Gap	MaxR	MaxR	Gap	MaxR	MaxR	Gap	Coord		Gap	Coord	
30th %ile Green (s)	7.3	29.0	29.0	8.0	29.7	29.7	6.5	28.6		6.4	28.5	
30th %ile Term Code	Gap	MaxR	MaxR	Gap	MaxR	MaxR	Gap	Coord		Gap	Coord	
10th %ile Green (s)	5.6	30.9	30.9	6.1	31.4	31.4	5.0	30.0		5.0	30.0	
10th %ile Term Code	Gap	MaxR	MaxR	Gap	MaxR	MaxR	Min	Coord		Min	Coord	
Stops (vph)	161	348	7	179	290	16	124	1169		123	1228	
Fuel Used(gal)	5	11	1	4	7	1	3	32		3	40	
CO Emissions (g/hr)	334	796	103	306	467	75	207	2236		243	2829	
NOx Emissions (g/hr)	65	155	20	59	91	15	40	435		47	550	
VOC Emissions (g/hr)	78	185	24	71	108	17	48	518		56	656	
Dilemma Vehicles (#)	0	45	0	0	0	0	0	68		0	71	
Queue Length 50th (ft)	60	96	1	63	103	0	45	~337		43	~352	
Queue Length 95th (ft)	m89	148	m12	99	150	39	73	#444		72	#479	
Internal Link Dist (ft)		1223			923			713			1279	
Turn Bay Length (ft)	200		200	160		90	400			200		
Base Capacity (vph)	402	1128	604	402	1087	558	365	1591		365	1579	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.47	0.67	0.27	0.53	0.39	0.22	0.42	1.00		0.40	1.01	

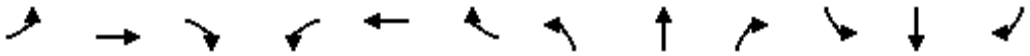
Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 94			
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 44.8		Intersection LOS: D	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 4000: Main Street & Country Club Dr





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	454	241	220	147	174	61	224	1142	145	111	1240	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	350		250	200		0	330		0	330		0
Storage Lanes	1		1	1		0	2		0	1		0
Taper Length (ft)	25		25	25		0	25		0	25		0
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.97	0.91	0.91	1.00	0.91	0.91
Ped Bike Factor	0.94		0.95	0.98	0.97		0.99	0.96		0.95	0.99	
Frt			0.850		0.961			0.983			0.969	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1786	1531	1711	2980	0	3433	4749	0	1770	4847	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1603	1786	1458	1684	2980	0	3412	4749	0	1683	4847	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			238		36			22			60	
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		499			263			645			1077	
Travel Time (s)		9.7			7.2			12.6			21.0	
Confl. Peds. (#/hr)	40		10	10		40	18		102	102		18
Confl. Bikes (#/hr)			13			7			5			4
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.87	0.87	0.87	0.91	0.91	0.91
Bus Blockages (#/hr)	0	2	0	0	4	0	0	4	0	0	4	0
Parking (#/hr)					4							
Adj. Flow (vph)	516	274	250	163	193	68	257	1313	167	122	1363	352
Shared Lane Traffic (%)												
Lane Group Flow (vph)	516	274	250	163	261	0	257	1480	0	122	1715	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.06	1.04	1.04	1.14	1.04	1.00	1.01	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									

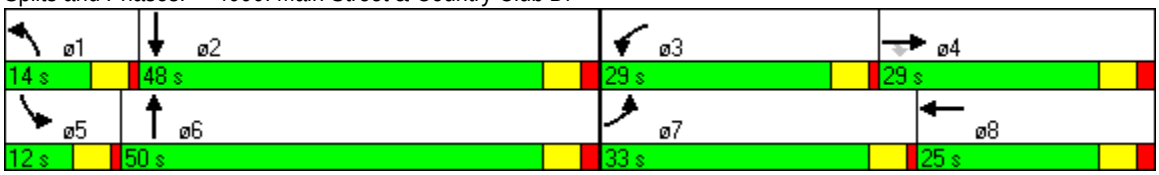


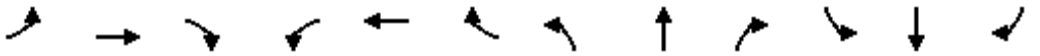
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	23.0	23.0	5.0	19.0		5.0	23.0		5.0	23.0	
Minimum Split (s)	10.0	29.0	29.0	10.0	25.0		10.0	29.0		10.0	29.0	
Total Split (s)	33.0	29.0	29.0	29.0	25.0	0.0	14.0	50.0	0.0	12.0	48.0	0.0
Total Split (%)	27.5%	24.2%	24.2%	24.2%	20.8%	0.0%	11.7%	41.7%	0.0%	10.0%	40.0%	0.0%
Maximum Green (s)	28.0	23.0	23.0	24.0	19.0		9.0	44.0		7.0	42.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	0.0	-1.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	Max	Max	None	Max		None	C-Max		None	C-Max	
Walk Time (s)		5.0	5.0		5.0			5.0			5.0	
Flash Dont Walk (s)		11.0	11.0		11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0			0			0	
Act Effct Green (s)	29.0	32.3	32.3	17.7	21.0		10.0	46.0		8.0	44.0	
Actuated g/C Ratio	0.24	0.27	0.27	0.15	0.18		0.08	0.38		0.07	0.37	
v/c Ratio	1.25	0.57	0.44	0.65	0.47		0.90	0.81		1.03	0.94	
Control Delay	176.5	42.0	12.0	58.0	22.5		87.3	36.8		146.8	47.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	176.5	42.0	12.0	58.0	22.5		87.3	36.8		146.8	47.4	
LOS	F	D	B	E	C		F	D		F	D	
Approach Delay		101.5			36.2			44.2			54.0	
Approach LOS		F			D			D			D	
90th %ile Green (s)	28.0	24.2	24.2	22.8	19.0		9.0	44.0		7.0	42.0	
90th %ile Term Code	Max	MaxR	MaxR	Gap	MaxR		Max	Coord		Max	Coord	
70th %ile Green (s)	28.0	27.8	27.8	19.2	19.0		9.0	44.0		7.0	42.0	
70th %ile Term Code	Max	MaxR	MaxR	Gap	MaxR		Max	Coord		Max	Coord	
50th %ile Green (s)	28.0	30.3	30.3	16.7	19.0		9.0	44.0		7.0	42.0	
50th %ile Term Code	Max	MaxR	MaxR	Gap	MaxR		Max	Coord		Max	Coord	
30th %ile Green (s)	28.0	32.9	32.9	14.1	19.0		9.0	44.0		7.0	42.0	
30th %ile Term Code	Max	MaxR	MaxR	Gap	MaxR		Max	Coord		Max	Coord	
10th %ile Green (s)	28.0	36.5	36.5	10.5	19.0		9.0	44.0		7.0	42.0	
10th %ile Term Code	Max	MaxR	MaxR	Gap	MaxR		Max	Coord		Max	Coord	
Stops (vph)	362	159	97	85	202		202	1104		89	1378	
Fuel Used(gal)	23	6	3	3	3		7	24		5	38	
CO Emissions (g/hr)	1629	386	233	192	207		458	1673		339	2626	
NOx Emissions (g/hr)	317	75	45	37	40		89	326		66	511	
VOC Emissions (g/hr)	378	89	54	45	48		106	388		79	609	
Dilemma Vehicles (#)	0	22	0	0	0		0	54		0	63	
Queue Length 50th (ft)	~514	126	26	74	86		103	366		~102	454	
Queue Length 95th (ft)	#710	223	91	104	136		#171	406		#227	#562	
Internal Link Dist (ft)		419			183			565			997	
Turn Bay Length (ft)	350		250	200			330			330		
Base Capacity (vph)	413	481	567	356	551		286	1834		118	1815	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	1.25	0.57	0.44	0.46	0.47		0.90	0.81		1.03	0.94	

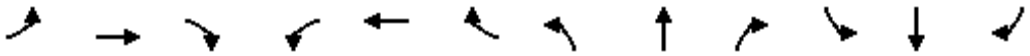
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 25 (21%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 130			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.25			
Intersection Signal Delay: 58.9		Intersection LOS: E	
Intersection Capacity Utilization 92.2%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 4000: Main Street & Country Club Dr





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	664	147	192	377	114	134	1138	236	128	1233	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	350		0	200		0	330		0	330		0
Storage Lanes	1		0	1		0	2		0	2		0
Taper Length (ft)	25		0	25		0	25		0	25		0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.97	0.91	0.91	0.97	0.91	0.91
Ped Bike Factor	0.96	0.99		0.99	0.98		0.99	0.96		0.96	0.99	
Frt		0.973			0.965			0.974			0.977	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	3289	0	1711	3011	0	3433	4725	0	3433	4902	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1639	3289	0	1700	3011	0	3408	4725	0	3287	4902	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			32			45			36	
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		1303			561			793			1547	
Travel Time (s)		25.4			15.3			15.4			30.1	
Confl. Peds. (#/hr)	40		10	10		40	18		102	102		18
Confl. Bikes (#/hr)			13			7			5			4
Peak Hour Factor	0.88	0.88	0.88	0.90	0.90	0.90	0.87	0.87	0.87	0.91	0.91	0.91
Bus Blockages (#/hr)	0	2	0	0	4	0	0	4	0	0	4	0
Parking (#/hr)					3							
Adj. Flow (vph)	184	755	167	213	419	127	154	1308	271	141	1355	242
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	922	0	213	546	0	154	1579	0	141	1597	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.05	1.04	1.04	1.14	1.04	1.00	1.01	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	23.0		5.0	23.0		5.0	23.0		5.0	23.0	
Minimum Split (s)	10.0	29.0		10.0	33.0		10.0	29.0		10.0	29.0	
Total Split (s)	20.0	36.0	0.0	20.0	36.0	0.0	11.0	53.0	0.0	11.0	53.0	0.0
Total Split (%)	16.7%	30.0%	0.0%	16.7%	30.0%	0.0%	9.2%	44.2%	0.0%	9.2%	44.2%	0.0%
Maximum Green (s)	15.0	30.0		15.0	30.0		6.0	47.0		6.0	47.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-2.0	0.0	-1.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	2.0	4.0	4.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Recall Mode	None	Max		None	Max		None	C-Max		None	C-Max	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	15.1	32.1		15.9	32.9		7.0	49.1		6.9	49.0	
Actuated g/C Ratio	0.13	0.27		0.13	0.27		0.06	0.41		0.06	0.41	
v/c Ratio	0.86	1.03		0.94	0.64		0.77	0.81		0.71	0.79	
Control Delay	78.9	86.7		126.5	7.5		80.4	34.3		75.3	33.8	
Queue Delay	0.0	0.4		0.0	0.0		0.0	0.3		0.0	0.0	
Total Delay	78.9	87.1		126.5	7.5		80.4	34.6		75.3	33.8	
LOS	E	F		F	A		F	C		E	C	
Approach Delay		85.7			40.9			38.7			37.1	
Approach LOS		F			D			D			D	
90th %ile Green (s)	15.0	30.0		15.0	30.0		6.0	47.0		6.0	47.0	
90th %ile Term Code	Max	MaxR		Max	MaxR		Max	Coord		Max	Coord	
70th %ile Green (s)	15.0	30.0		15.0	30.0		6.0	47.0		6.0	47.0	
70th %ile Term Code	Max	MaxR		Max	MaxR		Max	Coord		Max	Coord	
50th %ile Green (s)	15.0	30.0		15.0	30.0		6.0	47.0		6.0	47.0	
50th %ile Term Code	Max	MaxR		Max	MaxR		Max	Coord		Max	Coord	
30th %ile Green (s)	14.6	30.0		15.0	30.4		6.0	47.0		6.0	47.0	
30th %ile Term Code	Gap	MaxR		Max	MaxR		Max	Coord		Max	Coord	
10th %ile Green (s)	10.7	30.4		14.6	34.3		6.0	47.3		5.7	47.0	
10th %ile Term Code	Gap	MaxR		Gap	MaxR		Max	Coord		Gap	Coord	
Stops (vph)	136	670		174	60		124	1149		120	1208	
Fuel Used(gal)	5	27		7	3		4	26		4	35	
CO Emissions (g/hr)	360	1886		456	232		272	1825		300	2468	
NOx Emissions (g/hr)	70	367		89	45		53	355		58	480	
VOC Emissions (g/hr)	83	437		106	54		63	423		70	572	
Dilemma Vehicles (#)	0	59		0	0		0	57		0	61	
Queue Length 50th (ft)	118	~353		176	22		61	380		56	382	
Queue Length 95th (ft)	#243	#523		#326	33		#108	420		#102	444	
Internal Link Dist (ft)		1223			481			713			1467	
Turn Bay Length (ft)	350			200			330			330		
Base Capacity (vph)	228	894		228	849		200	1958		200	2023	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	

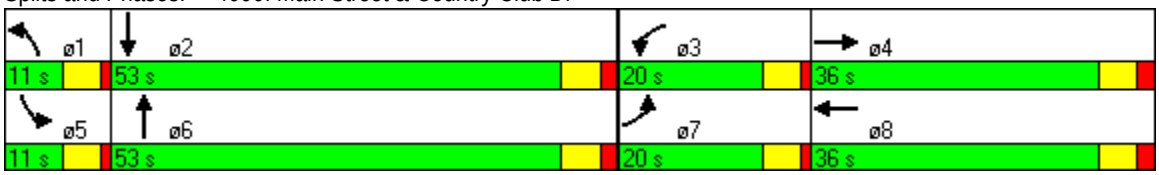
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	1		0	0		0	73		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.81	1.03		0.93	0.64		0.77	0.84		0.70	0.79	

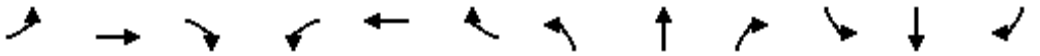
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 79 (66%), Referenced to phase 2:SBT and 6:NBT, Start of Green			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 48.2		Intersection LOS: D	
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

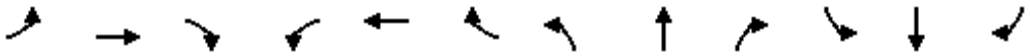
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4000: Main Street & Country Club Dr





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	923	165	190	492	120	112	745	166	283	984	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	130		125	125		145	145		0	205		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		0	25		0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00		0.95			0.97		0.99			1.00	
Frt			0.850			0.850		0.973			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3278	1583	1770	3287	1583	1770	3403	0	1770	3497	0
Flt Permitted	0.388			0.128			0.143			0.135		
Satd. Flow (perm)	721	3278	1511	238	3287	1540	266	3403	0	251	3497	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			117			126		30			6	
Link Speed (mph)		30			35			35			35	
Link Distance (ft)		1015			736			792			1031	
Travel Time (s)		23.1			14.3			15.4			20.1	
Confl. Peds. (#/hr)	5		17	17		5	1		17	17		1
Confl. Bikes (#/hr)			7			9			3			5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Bus Blockages (#/hr)	0	6	0	0	6	0	0	2	0	0	2	0
Parking (#/hr)		5			4							
Adj. Flow (vph)	61	972	174	200	518	126	118	784	175	298	1036	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	972	174	200	518	126	118	959	0	298	1089	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.01	1.00	1.00	1.01	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	50	50	50	50	50	50	50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases	6		6	2		2	8			4		
Detector Phase	1	6	6	5	2	2	3	8		7	4	

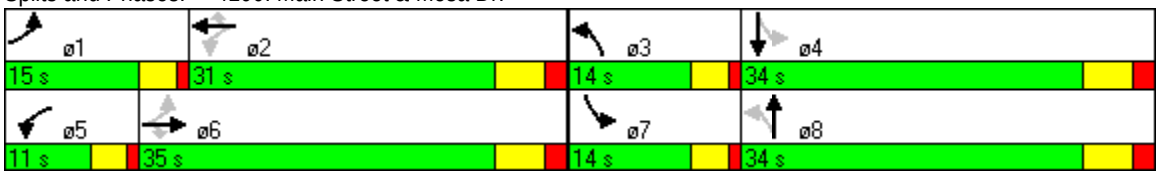


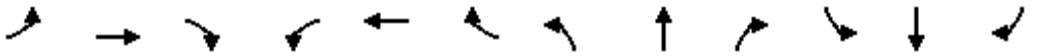
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	16.0	16.0	5.0	16.0	16.0	8.0	23.0		8.0	23.0	
Minimum Split (s)	9.0	22.0	22.0	9.0	22.0	22.0	12.0	29.0		12.0	29.0	
Total Split (s)	15.0	35.0	35.0	11.0	31.0	31.0	14.0	34.0	0.0	14.0	34.0	0.0
Total Split (%)	16.0%	37.2%	37.2%	11.7%	33.0%	33.0%	14.9%	36.2%	0.0%	14.9%	36.2%	0.0%
Maximum Green (s)	11.0	29.0	29.0	7.0	25.0	25.0	10.0	28.0		10.0	28.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	36.7	31.0	31.0	39.7	34.1	34.1	38.4	30.0		41.6	31.6	
Actuated g/C Ratio	0.39	0.33	0.33	0.42	0.36	0.36	0.41	0.32		0.44	0.34	
v/c Ratio	0.18	0.90	0.30	0.93	0.43	0.20	0.48	0.87		1.09	0.92	
Control Delay	16.4	42.6	10.2	75.7	25.1	7.2	21.6	39.0		105.7	44.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.4	42.6	10.2	75.7	25.1	7.2	21.6	39.0		105.7	44.4	
LOS	B	D	B	E	C	A	C	D		F	D	
Approach Delay		36.6			34.4			37.1			57.5	
Approach LOS		D			C			D			E	
90th %ile Green (s)	7.3	29.0	29.0	7.0	28.7	28.7	10.0	28.0		10.0	28.0	
90th %ile Term Code	Gap	Coord	Coord	Max	Coord	Coord	Max	MaxR		Max	MaxR	
70th %ile Green (s)	6.1	29.0	29.0	7.0	29.9	29.9	8.2	28.0		10.0	29.8	
70th %ile Term Code	Gap	Coord	Coord	Max	Coord	Coord	Gap	MaxR		Max	MaxR	
50th %ile Green (s)	5.3	29.0	29.0	7.0	30.7	30.7	8.0	28.0		10.0	30.0	
50th %ile Term Code	Gap	Coord	Coord	Max	Coord	Coord	Min	MaxR		Max	MaxR	
30th %ile Green (s)	5.0	29.0	29.0	7.0	31.0	31.0	8.0	28.0		10.0	30.0	
30th %ile Term Code	Min	Coord	Coord	Max	Coord	Coord	Min	MaxR		Max	MaxR	
10th %ile Green (s)	0.0	29.0	29.0	7.0	40.0	40.0	8.0	28.0		10.0	30.0	
10th %ile Term Code	Skip	Coord	Coord	Max	Coord	Coord	Min	MaxR		Max	MaxR	
Stops (vph)	33	819	46	126	346	42	65	788		159	903	
Fuel Used(gal)	1	20	2	5	8	1	2	18		9	24	
CO Emissions (g/hr)	58	1387	133	341	541	79	113	1285		657	1667	
NOx Emissions (g/hr)	11	270	26	66	105	15	22	250		128	324	
VOC Emissions (g/hr)	14	321	31	79	125	18	26	298		152	386	
Dilemma Vehicles (#)	0	0	0	0	67	0	0	47		0	53	
Queue Length 50th (ft)	20	287	23	94	120	0	39	273		~146	321	
Queue Length 95th (ft)	44	#407	72	#196	177	45	71	#384		#318	#476	
Internal Link Dist (ft)		935			656			712			951	
Turn Bay Length (ft)	130		125	125		145	145			205		
Base Capacity (vph)	445	1081	577	215	1191	638	273	1106		273	1178	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.14	0.90	0.30	0.93	0.43	0.20	0.43	0.87		1.09	0.92	

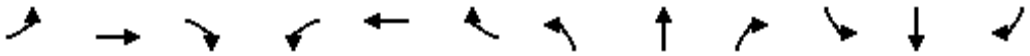
Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 94			
Offset: 44 (47%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 42.8		Intersection LOS: D	
Intersection Capacity Utilization 91.2%		ICU Level of Service F	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 4100: Main Street & Mesa Dr.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	437	75	147	219	162	83	886	135	244	1163	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	375		120	350		250	145		0	205		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		0	25		0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99		0.95	0.98		0.97		0.95			1.00	
Frt			0.850			0.850		0.980			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1757	1531	1711	1757	1531	1770	3267	0	1770	3442	0
Flt Permitted	0.950			0.950			0.092			0.084		
Satd. Flow (perm)	1697	1757	1449	1678	1757	1483	171	3267	0	156	3442	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			41			171		16			7	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1015			736			442			686	
Travel Time (s)		27.7			20.1			8.6			13.4	
Confl. Peds. (#/hr)	5		16	16		5	1		98	98		1
Confl. Bikes (#/hr)			8			10			3			5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Bus Blockages (#/hr)	0	6	0	0	6	0	0	4	0	0	8	0
Adj. Flow (vph)	65	460	79	155	231	171	87	933	142	257	1224	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	460	79	155	231	171	87	1075	0	257	1307	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.08	1.04	1.04	1.08	1.04	1.00	1.01	1.00	1.00	1.02	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50	0	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	50	50	0	50	50	50	50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Prot		Perm	Prot		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8			4		
Detector Phase	1	6	6	5	2	2	3	8		7	4	

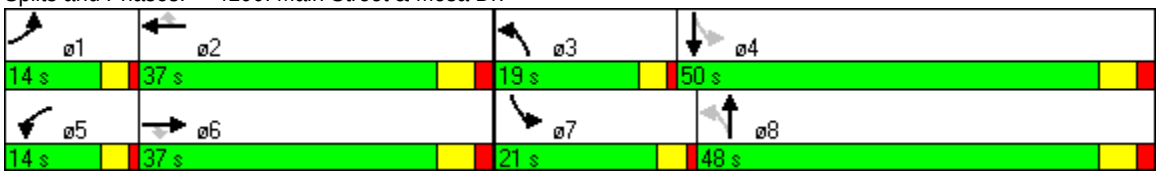


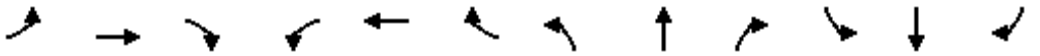
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	16.0	16.0	5.0	16.0	16.0	8.0	23.0		8.0	23.0	
Minimum Split (s)	9.0	22.0	22.0	9.0	22.0	22.0	12.0	29.0		12.0	29.0	
Total Split (s)	14.0	37.0	37.0	14.0	37.0	37.0	19.0	48.0	0.0	21.0	50.0	0.0
Total Split (%)	11.7%	30.8%	30.8%	11.7%	30.8%	30.8%	15.8%	40.0%	0.0%	17.5%	41.7%	0.0%
Maximum Green (s)	10.0	31.0	31.0	10.0	31.0	31.0	15.0	42.0		17.0	44.0	
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0	2.0	1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max		None	Max	
Walk Time (s)		5.0	5.0		5.0	5.0		5.0			5.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	8.8	33.0	33.0	10.0	36.2	36.2	54.4	45.5		64.9	52.1	
Actuated g/C Ratio	0.07	0.28	0.28	0.08	0.30	0.30	0.45	0.38		0.54	0.43	
v/c Ratio	0.52	0.95	0.18	1.08	0.44	0.30	0.44	0.86		0.88	0.87	
Control Delay	83.6	58.0	12.7	147.8	31.6	5.2	23.2	42.6		58.8	38.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3		0.1	0.0	
Total Delay	83.6	58.0	12.7	147.8	31.6	5.2	23.2	42.9		59.0	38.7	
LOS	F	E	B	F	C	A	C	D		E	D	
Approach Delay		54.8			55.8			41.4			42.1	
Approach LOS		D			E			D			D	
90th %ile Green (s)	10.0	31.0	31.0	10.0	31.0	31.0	11.1	42.0		17.0	47.9	
90th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Gap	MaxR		Max	MaxR	
70th %ile Green (s)	10.0	31.0	31.0	10.0	31.0	31.0	9.2	42.0		17.0	49.8	
70th %ile Term Code	Max	Coord	Coord	Max	Coord	Coord	Gap	MaxR		Max	MaxR	
50th %ile Green (s)	9.9	31.0	31.0	10.0	31.1	31.1	8.3	42.0		17.0	50.7	
50th %ile Term Code	Gap	Coord	Coord	Max	Coord	Coord	Gap	MaxR		Max	MaxR	
30th %ile Green (s)	8.3	31.0	31.0	10.0	32.7	32.7	8.0	43.7		15.3	51.0	
30th %ile Term Code	Gap	Coord	Coord	Max	Coord	Coord	Min	MaxR		Gap	MaxR	
10th %ile Green (s)	0.0	31.0	31.0	10.0	45.0	45.0	8.0	47.7		11.3	51.0	
10th %ile Term Code	Skip	Coord	Coord	Max	Coord	Coord	Min	MaxR		Gap	MaxR	
Stops (vph)	61	338	36	115	178	46	45	886		164	1063	
Fuel Used(gal)	2	10	1	6	3	1	1	19		5	24	
CO Emissions (g/hr)	128	715	69	404	242	95	70	1313		375	1674	
NOx Emissions (g/hr)	25	139	13	79	47	19	14	255		73	326	
VOC Emissions (g/hr)	30	166	16	94	56	22	16	304		87	388	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	42		0	51	
Queue Length 50th (ft)	54	242	8	~133	151	25	31	403		142	468	
Queue Length 95th (ft)	m95	#549	m41	#267	232	47	63	#529		#279	#636	
Internal Link Dist (ft)		935			656			362			606	
Turn Bay Length (ft)	375		120	350		250	145			205		
Base Capacity (vph)	143	483	428	143	529	566	286	1248		313	1498	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	15		1	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.45	0.95	0.18	1.08	0.44	0.30	0.30	0.87		0.82	0.87	

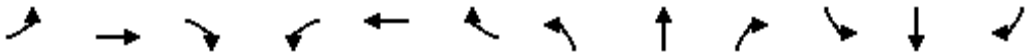
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 75 (63%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 45.8		Intersection LOS: D	
Intersection Capacity Utilization 87.6%		ICU Level of Service E	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 4100: Main Street & Mesa Dr.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	917	164	189	488	121	111	742	163	286	981	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	12	12	12	12	12	12
Storage Length (ft)	240		0	250		0	145		0	205		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		0	25		0	25		0	25		0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	0.99		0.99	0.99			0.96			1.00	
Frt		0.977			0.970			0.973			0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	3088	0	1711	3260	0	1770	3275	0	1770	3455	0
Flt Permitted	0.950			0.950			0.118			0.105		
Satd. Flow (perm)	1703	3088	0	1698	3260	0	220	3275	0	196	3455	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			30			22			5	
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		1015			736			436			601	
Travel Time (s)		27.7			20.1			8.5			11.7	
Confl. Peds. (#/hr)	5		16	16		5	1		98	98		1
Confl. Bikes (#/hr)			8			10			3			5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Bus Blockages (#/hr)	0	6	0	0	6	0	0	4	0	0	8	0
Parking (#/hr)		3										
Adj. Flow (vph)	61	965	173	199	514	127	117	781	172	301	1033	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	1138	0	199	641	0	117	953	0	301	1085	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.14	1.04	1.04	1.06	1.04	1.00	1.01	1.00	1.00	1.02	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases							8			4		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	1	6		5	2		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	16.0		5.0	16.0		8.0	23.0		8.0	23.0	
Minimum Split (s)	9.0	22.0		9.0	22.0		12.0	29.0		12.0	29.0	
Total Split (s)	11.0	47.0	0.0	16.0	52.0	0.0	11.0	40.0	0.0	17.0	46.0	0.0
Total Split (%)	9.2%	39.2%	0.0%	13.3%	43.3%	0.0%	9.2%	33.3%	0.0%	14.2%	38.3%	0.0%
Maximum Green (s)	7.0	41.0		12.0	46.0		7.0	34.0		13.0	40.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0		1.0	2.0	
Lost Time Adjust (s)	0.0	-2.0	-2.0	0.0	-2.0	-2.0	0.0	-2.0	0.0	0.0	-2.0	0.0
Total Lost Time (s)	4.0	4.0	2.0	4.0	4.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Recall Mode	None	C-Max		None	C-Max		None	Max		None	Max	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.5	43.0		12.0	50.3		43.0	36.0		53.0	42.0	
Actuated g/C Ratio	0.05	0.36		0.10	0.42		0.36	0.30		0.44	0.35	
v/c Ratio	0.66	1.02		1.16	0.46		0.69	0.95		1.17	0.89	
Control Delay	94.1	33.6		184.9	3.0		43.9	60.1		140.0	47.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	94.1	33.6		184.9	3.0		43.9	60.1		140.0	47.5	
LOS	F	C		F	A		D	E		F	D	
Approach Delay		36.7			46.1			58.3			67.6	
Approach LOS		D			D			E			E	
90th %ile Green (s)	7.0	41.0		12.0	46.0		7.0	34.0		13.0	40.0	
90th %ile Term Code	Max	Coord		Max	Coord		Max	MaxR		Max	MaxR	
70th %ile Green (s)	7.0	41.0		12.0	46.0		7.0	34.0		13.0	40.0	
70th %ile Term Code	Max	Coord		Max	Coord		Max	MaxR		Max	MaxR	
50th %ile Green (s)	7.0	41.0		12.0	46.0		7.0	34.0		13.0	40.0	
50th %ile Term Code	Max	Coord		Max	Coord		Max	MaxR		Max	MaxR	
30th %ile Green (s)	6.4	41.0		12.0	46.6		7.0	34.0		13.0	40.0	
30th %ile Term Code	Gap	Coord		Max	Coord		Max	MaxR		Max	MaxR	
10th %ile Green (s)	0.0	41.0		12.0	57.0		7.0	34.0		13.0	40.0	
10th %ile Term Code	Skip	Coord		Max	Coord		Max	MaxR		Max	MaxR	
Stops (vph)	54	730		154	59		69	800		171	923	
Fuel Used(gal)	2	20		9	4		2	20		11	21	
CO Emissions (g/hr)	127	1367		621	309		130	1394		747	1495	
NOx Emissions (g/hr)	25	266		121	60		25	271		145	291	
VOC Emissions (g/hr)	29	317		144	72		30	323		173	347	
Dilemma Vehicles (#)	0	0		0	0		0	36		0	42	
Queue Length 50th (ft)	51	~175		~188	27		53	373		~225	414	
Queue Length 95th (ft)	m57	m#588		#342	31		#119	#511		#405	#540	
Internal Link Dist (ft)		935			656			356			521	
Turn Bay Length (ft)	240			250			145			205		
Base Capacity (vph)	100	1119		171	1384		169	998		257	1213	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.61	1.02		1.16	0.46		0.69	0.95		1.17	0.89	

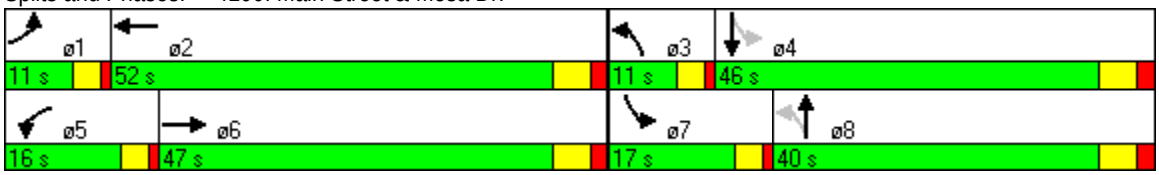
Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 10 (8%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.17			
Intersection Signal Delay: 53.1		Intersection LOS: D	
Intersection Capacity Utilization 97.2%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4100: Main Street & Mesa Dr.



Appendix D. CAL3QHC Output Files

JOB: BROADWAY & ALMA SCHOOL NO BUILD RUN: MESA LRT EXTENSION NO BUILD

DATE : 4/12/10
TIME : 13: 3:25

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. AS NB LT Q	-2.0	-107.0	-2.0	-151.5	45.	180.	AG	168.	100.0	0.0	24.0	0.43	2.3
2. AS NB TH APP	25.0	0.0	25.0	-985.0	985.	180.	AG	974.	5.5	0.0	61.0		
3. AS NB TH DEP	25.0	0.0	25.0	985.0	985.	360.	AG	1579.	5.5	0.0	61.0		
4. AS NB TH Q	25.0	-110.0	25.0	-260.6	151.	180.	AG	195.	100.0	0.0	41.0	0.25	7.7
5. AS NB R APP	65.0	0.0	65.0	-985.0	985.	180.	AG	215.	5.5	0.0	32.0		
6. AS NB R Q	65.0	0.0	65.0	-99.9	100.	180.	AG	65.	100.0	0.0	12.0	0.53	5.1
7. AS SB LT Q	0.0	92.0	0.0	208.2	116.	360.	AG	148.	100.0	0.0	26.0	0.40	5.9
8. AS SB TH APP	-35.0	0.0	-35.0	985.0	985.	360.	AG	1674.	5.5	0.0	65.0		
9. AS SB TH DEP	-35.0	0.0	-35.0	985.0	985.	360.	AG	2104.	5.5	0.0	65.0		
10. AS SB TH Q	-35.0	90.0	-35.0	309.7	220.	360.	AG	165.	100.0	0.0	45.0	0.31	11.2
11. B EB LT Q	-94.0	0.0	-193.2	0.0	99.	270.	AG	147.	100.0	0.0	24.0	0.33	5.0
12. B EB TH APP	0.0	-35.0	-985.0	-35.0	985.	270.	AG	1634.	5.8	0.0	62.0		
13. B EB TH DEP	0.0	-35.0	985.0	-35.0	985.	90.	AG	2287.	5.8	0.0	62.0		
14. B EB TH Q	-93.0	-35.0	-316.1	-35.0	223.	270.	AG	172.	100.0	0.0	42.0	0.31	11.3
15. AS EB R APP	0.0	-67.0	-985.0	-67.0	985.	270.	AG	291.	5.5	0.0	32.0		
16. AS EB R Q	-93.0	-67.0	-212.3	-67.0	119.	270.	AG	57.	100.0	0.0	12.0	0.54	6.1
17. B WB LT Q	95.0	0.0	198.6	0.0	104.	90.	AG	157.	100.0	0.0	24.0	0.50	5.3
18. B WB TH APP	0.0	33.0	985.0	33.0	985.	90.	AG	1002.	5.5	0.0	62.0		
19. B WB TH DEP	0.0	33.0	-985.0	33.0	985.	270.	AG	1153.	5.5	0.0	62.0		
20. B WB TH Q	92.0	33.0	241.8	33.0	150.	90.	AG	188.	100.0	0.0	42.0	0.24	7.6

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. AS NB LT Q	120	110	2.0	148	3433	34.20	2	3
4. AS NB TH Q	120	85	2.0	974	5085	34.20	2	3
6. AS NB R Q	120	85	2.0	215	1583	34.20	2	3
7. AS SB LT Q	120	97	2.0	438	3433	34.20	2	3
10. AS SB TH Q	120	72	2.0	1674	4914	34.20	2	3
11. B EB LT Q	120	96	2.0	379	3433	34.20	2	3
14. B EB TH Q	120	75	2.0	1634	5085	34.20	2	3
16. AS EB R Q	120	75	2.0	291	1583	34.20	2	3
17. B WB LT Q	120	103	2.0	368	3433	34.20	2	3
20. B WB TH Q	120	82	2.0	1002	4912	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	75.0	77.0	5.9
2. REC 2 (N 25)	75.0	159.0	5.9
3. REC 3 (N 50)	75.0	241.0	5.9
4. REC 4 (E 25)	157.0	77.0	5.9
5. REC 5 (E 50)	239.0	77.0	5.9
6. REC 6 (N 25 E 25)	157.0	159.0	5.9
7. REC 7 (N 25 E 50)	239.0	159.0	5.9
8. REC 8 (N 50 E 25)	157.0	241.0	5.9
9. REC 9 (N 50 E 50)	239.0	241.0	5.9
10. REC 10(SE CORNER)	85.0	-75.0	5.9
11. REC 11(S 25)	85.0	-157.0	5.9
12. REC 12(S 50)	85.0	-239.0	5.9
13. REC 13(E 25)	167.0	-157.0	5.9
14. REC 14(E 50)	249.0	-157.0	5.9
15. REC 15(S 25 E 25)	167.0	-239.0	5.9
16. REC 16(S 25 E 50)	249.0	-239.0	5.9
17. REC 17(S 50 E 25)	167.0	-239.0	5.9
18. REC 18(S 50 E 50)	249.0	-239.0	5.9
19. REC 19(SW CORNER)	-75.0	-94.0	5.9
20. REC 20(S 25)	-75.0	-176.0	5.9
21. REC 21(S 50)	-75.0	-258.0	5.9
22. REC 22(W 25)	-157.0	-94.0	5.9
23. REC 23(W 50)	-239.0	-94.0	5.9
24. REC 24(S 25 W 25)	-157.0	-176.0	5.9
25. REC 25(S 25 W 50)	-239.0	-176.0	5.9
26. REC 26(S 50 W 25)	-157.0	-258.0	5.9
27. REC 27(S 50 W 50)	-239.0	-258.0	5.9
28. REC 28(NW CORNER)	-74.0	75.0	5.9
29. REC 29(N 25)	-74.0	157.0	5.9
30. REC 30(N 50)	-74.0	239.0	5.9
31. REC 31(W 25)	-156.0	75.0	5.9
32. REC 32(W 50)	-238.0	75.0	5.9
33. REC 33(N 25 W 25)	-156.0	157.0	5.9
34. REC 34(N 25 W 50)	-238.0	157.0	5.9
35. REC 35(N 50 W 25)	-156.0	239.0	5.9
36. REC 36(N 50 W 50)	-238.0	239.0	6.0

JOB: BROADWAY & ALMA SCHOOL NO BUILD RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.9	0.5	0.6	0.4	0.3	0.2	0.3	0.2	1.0	0.9
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.6	0.3	0.5	0.3	0.2	0.1	0.2	0.1	1.2	0.7
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	0.3	0.4	0.3	0.1	0.1	0.1	0.1	1.1	0.5
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.2	0.3	0.3	0.1	0.1	0.1	0.1	0.5	0.4
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.6	0.4
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.3	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.7	0.8
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.7	0.8
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.8	0.7
80.	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.7	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.5	0.6
90.	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.5
100.	0.7	0.2	0.0	0.5	0.4	0.2	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
110.	0.9	0.2	0.2	0.6	0.4	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
120.	1.0	0.3	0.2	0.7	0.4	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3
130.	1.0	0.4	0.2	0.8	0.4	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2
140.	1.0	0.5	0.3	1.0	0.4	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2
150.	0.8	0.5	0.3	0.9	0.3	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1
160.	0.6	0.5	0.3	0.9	0.4	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
170.	0.5	0.4	0.4	0.9	0.5	0.5	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
180.	0.6	0.6	0.5	0.9	0.6	0.5	0.3	0.4	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	0.6	0.5	0.5	1.0	0.6	0.7	0.4	0.6	0.3	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
200.	0.6	0.6	0.5	1.1	0.9	0.7	0.6	0.4	0.4	0.6	0.4	0.3	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0
210.	0.6	0.5	1.0	1.1	1.0	0.5	0.7	0.2	0.4	0.7	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
220.	0.5	0.8	1.2	1.1	1.3	0.3	0.6	0.4	0.2	0.6	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
230.	0.8	1.1	1.2	1.0	1.2	0.4	0.3	0.8	0.3	0.6	0.5	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.0
240.	1.0	1.1	1.0	0.9	1.1	0.6	0.5	0.8	0.8	0.5	0.5	0.2	0.2	0.1	0.1	0.0	0.1	0.0	0.0	0.0
250.	1.0	1.2	1.0	0.8	1.0	0.8	0.6	0.7	0.7	0.4	0.5	0.3	0.3	0.1	0.1	0.0	0.1	0.0	0.0	0.0
260.	1.1	1.1	0.7	0.8	0.8	0.7	0.7	0.5	0.5	0.6	0.5	0.4	0.3	0.1	0.2	0.1	0.2	0.1	0.1	0.0
270.	0.8	0.9	0.7	0.7	0.7	0.5	0.5	0.4	0.4	0.8	0.7	0.4	0.4	0.2	0.3	0.1	0.3	0.1	0.3	0.0
280.	0.8	0.9	0.7	0.6	0.5	0.5	0.5	0.4	0.4	1.2	0.8	0.6	0.7	0.4	0.4	0.2	0.4	0.2	0.8	0.1
290.	0.8	0.9	0.7	0.5	0.5	0.5	0.4	0.4	0.3	1.1	0.9	0.7	0.5	0.4	0.5	0.3	0.5	0.3	0.9	0.3
300.	0.9	0.8	0.6	0.5	0.4	0.4	0.4	0.3	0.3	1.0	0.9	0.8	0.5	0.3	0.6	0.4	0.6	0.4	1.1	0.3
310.	0.9	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.3	1.1	0.7	0.9	0.5	0.6	0.5	0.1	0.5	0.1	1.0	0.4
320.	1.0	0.8	0.6	0.4	0.3	0.3	0.3	0.3	0.3	1.3	0.7	0.8	0.6	0.9	0.4	0.5	0.4	0.5	0.9	0.4
330.	1.0	0.8	0.7	0.3	0.3	0.3	0.3	0.3	0.3	1.5	0.7	0.9	0.6	0.9	0.5	0.7	0.5	0.7	0.9	0.5
340.	0.9	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.2	1.3	1.1	0.9	0.9	0.8	0.5	0.6	0.5	0.6	0.6	0.4
350.	0.6	0.6	0.5	0.3	0.0	0.3	0.0	0.2	0.0	1.3	0.9	0.8	0.8	0.5	0.6	0.3	0.6	0.3	0.8	0.6
MAX	1.1	1.2	1.2	1.1	1.3	0.8	0.7	0.8	0.8	1.5	1.1	0.9	0.9	0.9	0.6	0.7	0.6	0.7	1.2	0.9
DEGR.	260	250	220	200	220	250	260	230	240	330	340	310	340	320	300	330	300	330	10	0

JOB: BROADWAY & ALMA SCHOOL NO BUILD RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.7	1.1	0.6	0.7	0.4	0.5	0.2	1.0	0.9	0.8	0.2	0.0	0.2	0.0	0.1	0.0
10.	0.5	1.4	0.8	1.0	0.6	0.6	0.4	1.4	1.3	1.1	0.3	0.2	0.3	0.1	0.2	0.1
20.	0.7	1.4	1.1	0.9	0.9	0.6	0.7	1.7	1.5	1.3	0.5	0.3	0.4	0.3	0.4	0.2
30.	0.5	1.4	1.1	0.6	0.9	0.4	0.6	1.5	1.4	1.2	0.6	0.3	0.6	0.3	0.4	0.3
40.	0.6	1.3	1.2	0.3	0.7	0.1	0.3	1.5	1.4	1.3	0.6	0.4	0.5	0.3	0.4	0.3
50.	0.6	1.0	1.4	0.3	0.3	0.4	0.1	1.4	1.4	1.2	0.7	0.4	0.6	0.4	0.5	0.3
60.	0.5	0.9	1.2	0.4	0.3	0.3	0.2	1.2	1.2	1.1	0.7	0.4	0.6	0.4	0.5	0.3
70.	0.4	0.8	0.9	0.6	0.2	0.4	0.2	0.9	1.2	1.0	0.7	0.5	0.7	0.4	0.6	0.4
80.	0.4	0.6	0.8	0.5	0.2	0.3	0.2	1.0	1.2	1.0	0.6	0.5	0.7	0.5	0.6	0.4
90.	0.2	0.4	0.4	0.4	0.2	0.2	0.1	1.0	1.3	1.1	0.9	0.8	0.7	0.5	0.6	0.4
100.	0.2	0.4	0.2	0.3	0.1	0.1	0.0	1.4	1.5	1.0	0.9	0.8	1.0	0.8	0.8	0.6
110.	0.1	0.3	0.1	0.2	0.1	0.1	0.0	1.2	1.5	1.3	0.9	0.6	1.0	0.7	0.9	0.7
120.	0.1	0.3	0.1	0.2	0.0	0.1	0.0	1.2	1.8	1.5	0.6	0.6	0.8	0.4	1.0	0.7
130.	0.1	0.2	0.0	0.1	0.0	0.1	0.0	1.1	1.7	1.8	0.8	0.8	0.6	0.4	0.9	0.4
140.	0.1	0.2	0.0	0.1	0.0	0.1	0.0	1.1	1.5	1.8	0.7	0.7	0.5	0.5	0.6	0.2
150.	0.1	0.1	0.0	0.1	0.0	0.1	0.0	1.1	1.4	1.6	0.8	0.6	0.5	0.5	0.4	0.4
160.	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.9	1.4	1.6	0.9	0.5	0.6	0.4	0.6	0.4
170.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.0	1.2	0.7	0.5	0.4	0.3	0.4	0.3
180.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.7	0.7	0.5	0.4	0.3	0.4	0.3
190.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.6	0.7	0.5	0.4	0.3	0.3	0.3
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.4	0.6	0.5	0.3	0.3	0.3	0.2
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.3	0.6	0.5	0.3	0.2	0.3	0.2
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4	0.3	0.5	0.4	0.3	0.2	0.2	0.2
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.2	0.6	0.4	0.2	0.2	0.2	0.2
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.2	0.5	0.4	0.2	0.2	0.2	0.2
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.2	0.5	0.5	0.2	0.2	0.2	0.1
260.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.4	0.3	0.2	0.1	0.0	0.0
270.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0
280.	0.0	0.6	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.1	0.8	0.6	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.1	0.9	0.6	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.3	0.9	0.6	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.2	0.8	0.6	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.2	0.7	0.6	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.2	0.8	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.4	0.8	0.6	0.5	0.4	0.2	0.2	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.7	1.4	1.4	1.0	0.9	0.6	0.7	1.7	1.8	1.8	0.9	0.8	1.0	0.8	1.0	0.7
DEGR.	0	10	50	10	20	10	20	20	120	130	90	90	100	100	120	110

THE HIGHEST CONCENTRATION OF 1.80 PPM OCCURRED AT RECEPTOR REC29.

JOB: MAIN & ALMA SCHOOL NO BUILD RUN: MESA LRT EXTENSION NO BUILD

DATE : 4/12/10
TIME : 13: 3:49

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. AS NB LT Q	0.0	-90.0	0.0	-142.2	52.	180. AG	161.	100.0	0.0	24.0	0.29	2.7
2. AS NB TH APP	32.0	0.0	32.0	-985.0	985.	180. AG	1139.	5.5	0.0	61.0		
3. AS NB TH DEP	32.0	0.0	32.0	985.0	985.	360. AG	1158.	5.5	0.0	61.0		
4. AS NB TH Q	32.0	-87.0	32.0	-246.6	160.	180. AG	177.	100.0	0.0	41.0	0.24	8.1
5. AS SB LT Q	0.0	96.0	0.0	166.7	71.	360. AG	154.	100.0	0.0	24.0	0.30	3.6
6. AS SB TH APP	-32.0	0.0	-32.0	985.0	985.	360. AG	1773.	5.5	0.0	61.0		
7. AS SB TH DEP	-32.0	0.0	-32.0	-985.0	985.	180. AG	2134.	5.5	0.0	61.0		
8. AS SB TH Q	-32.0	96.0	-32.0	331.9	236.	360. AG	167.	100.0	0.0	41.0	0.33	12.0
9. M EB LT Q	-84.0	6.0	-137.5	6.0	54.	270. AG	79.	100.0	0.0	12.0	0.50	2.7
10. M EB TH APP	0.0	-13.0	-985.0	-13.0	985.	270. AG	697.	5.6	0.0	48.0		
11. M EB TH DEP	0.0	-13.0	985.0	-13.0	985.	90. AG	1150.	5.6	0.0	48.0		
12. M EB TH Q	-85.0	-13.0	-250.6	-13.0	166.	270. AG	133.	100.0	0.0	26.0	0.41	8.4
13. M EB R APP	0.0	-60.0	-985.0	-60.0	985.	270. AG	172.	5.6	0.0	38.0		
14. M EB R Q	-87.0	-57.0	-168.8	-57.0	82.	270. AG	67.	100.0	0.0	18.0	0.45	4.2
15. M WB LT Q	85.0	10.0	253.0	10.0	168.	90. AG	73.	100.0	0.0	10.0	0.91	8.5
16. M WB TH APP	0.0	35.0	985.0	35.0	985.	90. AG	599.	5.6	0.0	46.0		
17. M WB TH DEP	0.0	35.0	-985.0	35.0	985.	270. AG	754.	5.6	0.0	46.0		
18. M WB TH Q	85.0	35.0	214.2	35.0	129.	90. AG	121.	100.0	0.0	26.0	0.29	6.6

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. AS NB LT Q	120	105	2.0	183	3433	34.20	2	3
4. AS NB TH Q	120	77	2.0	1139	4896	34.20	2	3
5. AS SB LT Q	120	101	2.0	257	3433	34.20	2	3
8. AS SB TH Q	120	73	2.0	1773	5018	34.20	2	3
9. M EB LT Q	120	103	2.0	95	1770	34.20	2	3
12. M EB TH Q	120	87	2.0	697	3497	34.20	2	3
14. M EB R Q	120	87	2.0	172	1583	34.20	2	3
15. M WB LT Q	120	95	2.0	281	1770	34.20	2	3
18. M WB TH Q	120	79	2.0	599	3352	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	75.0	80.0	5.9
2. REC 2 (N 25)	75.0	162.0	5.9
3. REC 3 (N 50)	75.0	244.0	5.9
4. REC 4 (E 25)	157.0	80.0	5.9
5. REC 5 (E 50)	239.0	80.0	5.9
6. REC 6 (N 25 E 25)	157.0	162.0	5.9
7. REC 7 (N 25 E 50)	239.0	162.0	5.9
8. REC 8 (N 50 E 25)	157.0	244.0	5.9
9. REC 9 (N 50 E 50)	239.0	244.0	5.9
10. REC 10(SE CORNER)	68.0	-75.0	5.9
11. REC 11(S 25)	68.0	-157.0	5.9
12. REC 12(S 50)	68.0	-239.0	5.9
13. REC 13(E 25)	150.0	-75.0	5.9
14. REC 14(E 50)	232.0	-75.0	5.9
15. REC 15(S 25 E 25)	150.0	-157.0	5.9
16. REC 16(S 25 E 50)	232.0	-157.0	5.9
17. REC 17(S 50 E 25)	150.0	-239.0	5.9
18. REC 18(S 50 E 50)	232.0	-239.0	5.9
19. REC 19(SW CORNER)	-70.0	-70.0	5.9
20. REC 20(S 25)	-70.0	-152.0	5.9
21. REC 21(S 50)	-70.0	-234.0	5.9
22. REC 22(W 25)	-152.0	-70.0	5.9
23. REC 23(W 50)	-234.0	-70.0	5.9
24. REC 24(S 25 W 25)	-152.0	-152.0	5.9
25. REC 25(S 25 W 50)	-234.0	-152.0	5.9
26. REC 26(S 50 W 25)	-152.0	-234.0	5.9
27. REC 27(S 50 W 50)	-234.0	-234.0	5.9
28. REC 28(NW CORNER)	-72.0	62.0	5.9
29. REC 29(N 25)	-72.0	144.0	5.9
30. REC 30(N 50)	-72.0	226.0	5.9
31. REC 31(W 25)	-154.0	62.0	5.9
32. REC 32(W 50)	-236.0	62.0	5.9
33. REC 33(N 25 W 25)	-154.0	144.0	5.9
34. REC 34(N 25 W 50)	-236.0	144.0	5.9
35. REC 35(N 50 W 25)	-154.0	226.0	5.9
36. REC 36(N 50 W 50)	-236.0	226.0	6.0

JOB: MAIN & ALMA SCHOOL NO BUILD RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.5	0.3	0.2	0.2	0.1	0.2	0.1	0.8	0.6
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.3	0.3	0.1	0.2	0.1	0.1	0.1	1.0	0.7
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.8	0.7
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.7	0.5
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.6	0.7
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.6	0.9
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.7	0.8
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.3	0.1	0.1	0.0	0.0	0.8	0.9
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.6	0.8
90.	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.6	0.7
100.	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
110.	0.4	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
120.	0.5	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6
130.	0.6	0.2	0.1	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7
140.	0.5	0.2	0.1	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6
150.	0.5	0.2	0.1	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
160.	0.5	0.2	0.1	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
170.	0.4	0.3	0.1	0.5	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
180.	0.6	0.5	0.4	0.5	0.3	0.2	0.1	0.1	0.0	0.5	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
190.	0.8	0.6	0.6	0.8	0.3	0.5	0.2	0.4	0.2	0.9	0.7	0.5	0.2	0.0	0.2	0.0	0.2	0.0	0.2	0.2
200.	0.7	0.6	0.5	0.8	0.6	0.5	0.4	0.3	0.3	1.0	0.8	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
210.	0.7	0.4	0.6	0.8	0.7	0.5	0.5	0.2	0.4	0.9	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.6	0.5	0.7	0.8	0.8	0.2	0.5	0.3	0.1	1.0	0.9	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.0	0.0
230.	0.5	0.7	0.6	0.6	0.8	0.3	0.2	0.4	0.1	1.0	0.9	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.8	0.8	0.5	0.5	0.6	0.3	0.0	0.4	0.3	0.9	0.9	0.5	0.4	0.3	0.4	0.3	0.2	0.2	0.0	0.0
250.	0.6	0.8	0.5	0.6	0.5	0.5	0.2	0.3	0.3	0.8	0.8	0.6	0.5	0.3	0.4	0.3	0.2	0.2	0.0	0.0
260.	0.6	0.7	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.6	0.8	0.7	0.4	0.3	0.4	0.3	0.3	0.2	0.2	0.0
270.	0.5	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.8	1.0	0.7	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.0
280.	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.7	0.9	0.8	0.5	0.4	0.5	0.3	0.4	0.3	0.6	0.0
290.	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.7	1.1	0.8	0.6	0.1	0.7	0.3	0.4	0.3	0.7	0.1
300.	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.6	1.3	0.9	0.3	0.3	0.4	0.1	0.4	0.3	0.6	0.1
310.	0.7	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.6	1.2	1.0	0.4	0.6	0.3	0.2	0.5	0.3	0.5	0.2
320.	0.7	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.9	1.1	0.4	0.6	0.4	0.4	0.3	0.1	0.5	0.2
330.	0.7	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.7	0.9	1.1	0.5	0.6	0.4	0.5	0.4	0.3	0.5	0.2
340.	0.5	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.7	0.9	1.1	0.6	0.5	0.4	0.4	0.3	0.3	0.4	0.1
350.	0.3	0.3	0.3	0.2	0.0	0.2	0.0	0.1	0.0	0.7	0.8	0.8	0.5	0.3	0.4	0.2	0.3	0.1	0.5	0.4
MAX	0.8	0.8	0.7	0.8	0.8	0.5	0.5	0.4	0.4	1.0	1.3	1.1	0.6	0.6	0.7	0.5	0.5	0.3	1.0	0.9
DEGR.	190	240	220	190	220	190	210	190	210	200	300	320	290	310	290	330	310	270	10	50

JOB: MAIN & ALMA SCHOOL NO BUILD RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.5	0.7	0.4	0.3	0.1	0.2	0.1	0.5	0.5	0.4	0.1	0.0	0.1	0.0	0.0	0.0
10.	0.7	0.8	0.5	0.5	0.2	0.4	0.2	0.9	0.8	0.7	0.1	0.1	0.1	0.0	0.1	0.0
20.	0.8	1.1	0.6	0.5	0.3	0.4	0.4	0.9	0.9	0.8	0.4	0.1	0.3	0.1	0.2	0.1
30.	0.7	1.1	0.7	0.5	0.4	0.3	0.4	1.0	1.0	0.9	0.5	0.2	0.4	0.2	0.3	0.1
40.	0.9	0.9	0.7	0.3	0.4	0.2	0.2	0.8	0.9	0.8	0.4	0.3	0.4	0.2	0.3	0.2
50.	0.8	0.7	0.7	0.1	0.3	0.6	0.1	0.8	0.8	0.8	0.4	0.3	0.4	0.3	0.3	0.2
60.	0.7	0.7	0.4	0.4	0.1	0.5	0.3	0.6	0.8	0.8	0.5	0.3	0.4	0.3	0.4	0.3
70.	0.7	0.7	0.6	0.6	0.2	0.5	0.3	0.6	0.9	0.8	0.4	0.2	0.4	0.2	0.4	0.2
80.	0.6	0.5	0.6	0.6	0.3	0.4	0.2	0.5	0.9	0.8	0.4	0.3	0.5	0.2	0.4	0.2
90.	0.6	0.7	0.4	0.4	0.2	0.4	0.2	0.8	1.0	0.8	0.5	0.3	0.5	0.2	0.4	0.2
100.	0.5	0.6	0.2	0.4	0.2	0.4	0.1	0.8	1.1	0.8	0.4	0.4	0.6	0.3	0.4	0.2
110.	0.4	0.5	0.2	0.4	0.2	0.3	0.1	0.7	1.2	0.9	0.4	0.6	0.5	0.2	0.6	0.3
120.	0.4	0.4	0.3	0.4	0.1	0.3	0.1	0.5	1.2	1.0	0.7	0.6	0.3	0.1	0.6	0.3
130.	0.5	0.4	0.2	0.3	0.2	0.3	0.2	0.6	0.9	1.1	0.8	0.8	0.2	0.3	0.6	0.1
140.	0.5	0.4	0.2	0.3	0.2	0.3	0.2	0.6	0.8	1.1	0.8	0.7	0.5	0.5	0.2	0.1
150.	0.5	0.3	0.2	0.3	0.2	0.3	0.1	0.8	0.8	0.9	0.9	0.6	0.4	0.4	0.4	0.3
160.	0.6	0.3	0.1	0.3	0.1	0.3	0.1	1.0	0.8	1.1	0.8	0.5	0.6	0.3	0.3	0.2
170.	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.9	0.7	0.9	0.6	0.5	0.5	0.3	0.3	0.2
180.	0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.8	0.5	0.6	0.5	0.3	0.3	0.2	0.2	0.1
190.	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.3	0.4	0.3	0.2	0.1	0.1	0.0
200.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.3	0.2	0.1	0.1	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.4	0.2	0.2	0.1	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	0.4	0.2	0.1	0.1	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.0	0.4	0.3	0.1	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.4	0.3	0.1	0.1	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
260.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.0	0.0	0.0
270.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
280.	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.0	0.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.6	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.1	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.1	0.6	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.3	0.6	0.3	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.9	1.1	0.7	0.6	0.4	0.6	0.4	1.0	1.2	1.1	0.9	0.8	0.6	0.5	0.6	0.3
DEGR.	40	20	30	70	30	50	20	30	110	130	150	130	100	140	110	60

THE HIGHEST CONCENTRATION OF 1.30 PPM OCCURRED AT RECEPTOR REC11.

JOB: UNIVERSITY & COUNTRY CLUB 2 LANE RUN: MESA LRT EXTENSION NO BUILD

DATE : 4/12/10
TIME : 13: 4:10

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. CC NB LT Q	0.0	-69.0	0.0	-110.8	42.	180.	AG	156.	100.0	0.0	20.0	0.24	2.1
2. CC NB TH APP	36.0	0.0	36.0	-985.0	985.	180.	AG	1329.	5.5	0.0	53.0		
3. CC NB TH DEP	36.0	0.0	36.0	985.0	985.	360.	AG	1562.	5.5	0.0	53.0		
4. CC NB TH Q	36.0	-69.0	36.0	-226.5	157.	180.	AG	179.	100.0	0.0	33.0	0.29	8.0
5. CC SB LT Q	0.0	82.0	0.0	165.2	83.	360.	AG	156.	100.0	0.0	18.0	0.47	4.2
6. CC SB TH APP	-35.0	0.0	-35.0	985.0	985.	360.	AG	1331.	5.5	0.0	53.0		
7. CC SB TH DEP	-35.0	0.0	-35.0	-985.0	985.	180.	AG	1543.	5.5	0.0	53.0		
8. CC SB TH Q	-35.0	82.0	-35.0	239.5	157.	360.	AG	179.	100.0	0.0	33.0	0.29	8.0
9. U EB LT Q	-72.0	0.0	-138.5	0.0	66.	270.	AG	156.	100.0	0.0	20.0	0.38	3.4
10. U EB TH APP	0.0	-33.0	-985.0	-33.0	985.	270.	AG	1233.	5.8	0.0	53.0		
11. U EB TH DEP	0.0	-33.0	985.0	-33.0	985.	90.	AG	1638.	5.8	0.0	53.0		
12. U EB TH Q	-72.0	-33.0	-218.1	-33.0	146.	270.	AG	179.	100.0	0.0	33.0	0.27	7.4
13. U WB LT Q	70.0	2.0	108.6	2.0	39.	90.	AG	156.	100.0	0.0	20.0	0.22	2.0
14. U WB TH APP	0.0	35.0	985.0	35.0	985.	90.	AG	809.	5.6	0.0	53.0		
15. U WB TH DEP	0.0	35.0	-985.0	35.0	985.	270.	AG	951.	5.6	0.0	53.0		
16. U WB TH Q	70.0	35.0	165.6	35.0	96.	90.	AG	179.	100.0	0.0	33.0	0.18	4.9

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. CC NB LT Q	100	85	2.0	180	3433	34.20	2	3
4. CC NB TH Q	100	65	2.0	1329	4958	34.20	2	3
5. CC SB LT Q	100	85	2.0	359	3433	34.20	2	3
8. CC SB TH Q	100	65	2.0	1331	5009	34.20	2	3
9. U EB LT Q	100	85	2.0	286	3433	34.20	2	3
12. U EB TH Q	100	65	2.0	1233	4979	34.20	2	3
13. U WB LT Q	100	85	2.0	167	3433	34.20	2	3
16. U WB TH Q	100	65	2.0	809	4928	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	75.0	77.0	5.9
2. REC 2 (N 25)	75.0	159.0	5.9
3. REC 3 (N 50)	75.0	241.0	5.9
4. REC 4 (E 25)	157.0	77.0	5.9
5. REC 5 (E 50)	239.0	77.0	5.9
6. REC 6 (N 25 E 25)	157.0	159.0	5.9
7. REC 7 (N 25 E 50)	239.0	159.0	5.9
8. REC 8 (N 50 E 25)	157.0	241.0	5.9
9. REC 9 (N 50 E 50)	239.0	241.0	5.9
10. REC 10(SE CORNER)	73.0	-74.0	5.9
11. REC 11(S 25)	73.0	-156.0	5.9
12. REC 12(S 50)	73.0	-238.0	5.9
13. REC 13(E 25)	155.0	-74.0	5.9
14. REC 14(E 50)	237.0	-74.0	5.9
15. REC 15(S 25 E 25)	155.0	-156.0	5.9
16. REC 16(S 25 E 50)	237.0	-156.0	5.9
17. REC 17(S 50 E 25)	155.0	-238.0	5.9
18. REC 18(S 50 E 50)	237.0	-238.0	5.9
19. REC 19(SW CORNER)	-72.0	-77.0	5.9
20. REC 20(S 25)	-72.0	-159.0	5.9
21. REC 21(S 50)	-72.0	-241.0	5.9
22. REC 22(W 25)	-154.0	-77.0	5.9
23. REC 23(W 50)	-236.0	-77.0	5.9
24. REC 24(S 25 W 25)	-154.0	-159.0	5.9
25. REC 25(S 25 W 50)	-236.0	-159.0	5.9
26. REC 26(S 50 W 25)	-154.0	-241.0	5.9
27. REC 27(S 50 W 50)	-236.0	-241.0	5.9
28. REC 28(NW CORNER)	-70.0	77.0	5.9
29. REC 29(N 25)	-70.0	159.0	5.9
30. REC 30(N 50)	-70.0	241.0	5.9
31. REC 31(W 25)	-152.0	77.0	5.9
32. REC 32(W 50)	-234.0	77.0	5.9
33. REC 33(N 25 W 25)	-152.0	159.0	5.9
34. REC 34(N 25 W 50)	-234.0	159.0	5.9
35. REC 35(N 50 W 25)	-152.0	241.0	5.9
36. REC 36(N 50 W 50)	-234.0	241.0	6.0

JOB: UNIVERSITY & COUNTRY CLUB 2 LANE RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.7	0.5	0.3	0.3	0.1	0.3	0.1	1.1	0.7
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	0.5	0.4	0.3	0.1	0.1	0.1	0.1	1.1	0.6
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.1	0.3	0.3	0.1	0.1	0.1	0.1	1.0	0.7
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.7	0.7
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.5	0.8
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.8	0.8
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.8	0.8
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.5	0.5	0.1	0.1	0.1	0.1	0.8	0.6
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.4	0.4	0.1	0.1	0.0	0.0	0.9	0.6
90.	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.7	0.6
100.	0.4	0.2	0.0	0.3	0.3	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.7	0.5
110.	0.6	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
120.	0.7	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4
130.	0.6	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
140.	0.6	0.3	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4
150.	0.7	0.3	0.1	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
160.	0.7	0.4	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
170.	0.8	0.5	0.4	0.4	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
180.	1.0	0.7	0.6	0.5	0.2	0.4	0.2	0.3	0.1	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2
190.	1.1	0.8	0.5	0.8	0.2	0.7	0.3	0.5	0.2	0.7	0.5	0.4	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.1
200.	0.9	0.6	0.6	0.9	0.4	0.7	0.4	0.5	0.4	0.8	0.6	0.4	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.0
210.	0.7	0.5	0.7	1.0	0.5	0.6	0.6	0.2	0.5	0.9	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.7	0.8	0.9	1.0	0.5	0.3	0.6	0.1	0.2	0.8	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
230.	0.6	0.9	0.9	0.9	0.6	0.3	0.4	0.6	0.1	0.8	0.7	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.8	0.9	0.7	1.0	0.6	0.5	0.4	0.6	0.3	0.8	0.7	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
250.	0.8	0.9	0.6	0.7	0.6	0.6	0.3	0.5	0.5	0.8	0.7	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.0	0.0
260.	0.7	0.9	0.5	0.7	0.7	0.6	0.6	0.3	0.3	0.9	0.7	0.3	0.6	0.3	0.4	0.3	0.2	0.2	0.1	0.0
270.	0.7	0.6	0.4	0.6	0.6	0.4	0.3	0.3	0.3	1.0	0.7	0.4	0.6	0.6	0.4	0.3	0.3	0.3	0.3	0.0
280.	0.6	0.6	0.3	0.4	0.3	0.3	0.3	0.2	0.2	1.2	0.8	0.5	0.8	0.6	0.6	0.4	0.3	0.4	0.5	0.1
290.	0.7	0.5	0.3	0.4	0.3	0.3	0.2	0.2	0.2	1.0	1.0	0.7	0.7	0.4	0.7	0.5	0.5	0.4	0.7	0.2
300.	0.7	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.9	1.1	0.8	0.7	0.7	0.6	0.2	0.6	0.5	0.7	0.3
310.	0.8	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.7	1.1	0.9	0.8	0.8	0.3	0.1	0.6	0.2	0.8	0.3
320.	0.7	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.9	0.9	1.0	0.9	0.8	0.5	0.5	0.4	0.1	0.8	0.4
330.	0.6	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.8	1.1	1.0	1.0	0.7	0.5	0.4	0.6	0.4	0.9	0.4
340.	0.4	0.4	0.4	0.2	0.1	0.2	0.1	0.2	0.1	0.9	0.9	1.1	0.7	0.5	0.4	0.4	0.4	0.4	0.8	0.4
350.	0.4	0.4	0.4	0.1	0.0	0.1	0.0	0.1	0.0	1.2	0.8	0.9	0.7	0.4	0.4	0.2	0.4	0.2	0.9	0.4
MAX	1.1	0.9	0.9	1.0	0.7	0.7	0.6	0.6	0.5	1.2	1.1	1.1	1.0	0.8	0.7	0.5	0.6	0.5	1.1	0.8
DEGR.	190	230	220	210	260	190	210	230	210	280	300	340	330	310	290	290	300	300	0	40

JOB: UNIVERSITY & COUNTRY CLUB 2 LANE RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.7	0.7	0.3	0.4	0.2	0.3	0.1	0.5	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.6	1.1	0.4	0.7	0.3	0.5	0.3	0.7	0.5	0.4	0.2	0.0	0.1	0.0	0.1	0.0
20.	0.6	1.1	0.7	0.7	0.4	0.5	0.4	0.9	0.7	0.4	0.2	0.2	0.2	0.1	0.2	0.1
30.	0.6	1.2	0.9	0.6	0.6	0.2	0.5	1.0	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2
40.	0.7	1.1	0.9	0.4	0.7	0.2	0.3	1.0	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2
50.	0.7	0.9	1.1	0.3	0.3	0.4	0.2	0.9	0.8	0.3	0.4	0.3	0.3	0.2	0.2	0.2
60.	0.6	0.8	1.0	0.4	0.4	0.4	0.3	0.9	0.8	0.3	0.5	0.3	0.3	0.2	0.2	0.2
70.	0.6	0.8	0.8	0.4	0.3	0.4	0.4	0.8	0.7	0.3	0.5	0.3	0.4	0.3	0.2	0.2
80.	0.5	0.7	0.7	0.4	0.4	0.4	0.4	0.6	0.8	0.4	0.4	0.4	0.4	0.3	0.2	0.2
90.	0.4	0.7	0.5	0.4	0.4	0.3	0.2	0.8	0.8	0.5	0.7	0.6	0.5	0.3	0.3	0.3
100.	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.7	1.1	0.6	0.6	0.4	0.7	0.6	0.3	0.3
110.	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.8	1.2	0.8	0.5	0.4	0.8	0.5	0.5	0.4
120.	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.8	1.3	0.8	0.5	0.8	0.7	0.2	0.6	0.4
130.	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.6	1.3	1.1	0.8	0.9	0.3	0.1	0.6	0.3
140.	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.9	1.1	0.7	0.7	0.5	0.7	0.5	0.0
150.	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.8	1.2	1.1	0.8	0.6	0.5	0.5	0.5	0.3
160.	0.4	0.2	0.1	0.2	0.1	0.2	0.1	0.8	0.9	1.3	0.7	0.6	0.6	0.5	0.3	0.3
170.	0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.8	0.9	0.8	0.7	0.4	0.6	0.4	0.3	0.3
180.	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.7	0.6	0.3	0.4	0.3	0.3	0.1
190.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.5	0.4	0.2	0.3	0.2	0.2	0.1
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.2	0.4	0.2	0.3	0.2	0.1	0.1
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.2	0.4	0.3	0.2	0.2	0.2	0.2
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.3	0.2	0.2	0.0	0.0
260.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
270.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.3	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.1	0.5	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.1	0.5	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.1	0.6	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.2	0.7	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.2	0.7	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.2	0.7	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.4	0.7	0.3	0.3	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.7	1.2	1.1	0.7	0.7	0.5	0.5	1.0	1.3	1.3	0.8	0.9	0.8	0.7	0.6	0.4
DEGR.	0	30	50	10	40	10	30	30	120	160	150	130	110	140	120	110

THE HIGHEST CONCENTRATION OF 1.30 PPM OCCURRED AT RECEPTOR REC29.

JOB: MAIN & COUNTRY CLUB NO BUILD RUN: MESA LRT EXTENSION NO BUILD

DATE : 4/12/10
TIME : 13: 4:29

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. CC NB LT Q	0.0	-88.0	0.0	-121.7	34.	180. AG	156.	100.0	0.0	25.0	0.21	1.7
2. CC NB TH APP	32.0	0.0	32.0	-985.0	985.	180. AG	1587.	5.5	0.0	60.0		
3. CC NB TH DEP	32.0	0.0	32.0	985.0	985.	360. AG	1619.	5.5	0.0	60.0		
4. CC NB TH Q	32.0	-88.0	32.0	-267.3	179.	180. AG	182.	100.0	0.0	40.0	0.36	9.1
5. CC SB LT Q	-4.0	90.0	-4.0	121.9	32.	360. AG	156.	100.0	0.0	25.0	0.20	1.6
6. CC SB TH APP	-38.0	0.0	-38.0	985.0	985.	360. AG	1594.	5.5	0.0	60.0		
7. CC SB TH DEP	-38.0	0.0	-38.0	-985.0	985.	180. AG	1739.	5.5	0.0	60.0		
8. CC SB TH Q	-38.0	90.0	-38.0	270.0	180.	360. AG	182.	100.0	0.0	40.0	0.36	9.1
9. M EB LT Q	-90.0	-6.0	-130.6	-6.0	41.	270. AG	154.	100.0	0.0	24.0	0.23	2.1
10. M EB TH APP	0.0	-30.0	-985.0	-30.0	985.	270. AG	751.	6.3	0.0	46.0		
11. M EB TH DEP	0.0	-30.0	985.0	-30.0	985.	90. AG	1175.	6.3	0.0	46.0		
12. M EB TH Q	-90.0	-30.0	-215.1	-30.0	125.	270. AG	119.	100.0	0.0	26.0	0.35	6.4
13. M EB R APP	0.0	-55.0	-985.0	-55.0	985.	270. AG	166.	6.3	0.0	30.0		
14. M EB R Q	-90.0	-55.0	-145.3	-51.9	55.	273. AG	60.	100.0	0.0	10.0	0.34	2.8
15. M WB LT Q	88.0	0.0	134.2	0.0	46.	90. AG	154.	100.0	0.0	24.0	0.27	2.3
16. M WB TH APP	0.0	33.0	985.0	33.0	985.	90. AG	429.	5.6	0.0	62.0		
17. M WB TH DEP	0.0	33.0	-985.0	33.0	985.	270. AG	818.	5.6	0.0	62.0		
18. M WB TH Q	88.0	33.0	159.4	33.0	71.	90. AG	119.	100.0	0.0	42.0	0.21	3.6
19. M WB R APP	0.0	46.0	985.0	46.0	985.	90. AG	122.	5.6	0.0	35.0		
20. M WB R Q	88.0	46.0	128.7	46.0	41.	90. AG	60.	100.0	0.0	15.0	0.25	2.1

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. CC NB LT Q	94	80	2.0	154	3433	34.20	2	3
4. CC NB TH Q	94	62	2.0	1587	4920	34.20	2	3
5. CC SB LT Q	94	80	2.0	146	3433	34.20	2	3
8. CC SB TH Q	94	62	2.0	1594	4928	34.20	2	3
9. M EB LT Q	94	79	2.0	188	3433	34.20	2	3
12. M EB TH Q	94	61	2.0	751	3497	34.20	2	3
14. M EB R Q	94	61	2.0	166	1583	34.20	2	3
15. M WB LT Q	94	79	2.0	214	3433	34.20	2	3
18. M WB TH Q	94	61	2.0	429	3322	34.20	2	3
20. M WB R Q	94	61	2.0	122	1583	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	78.0	77.0	5.9
2. REC 2 (N 25)	78.0	159.0	5.9
3. REC 3 (N 50)	78.0	224.0	5.9
4. REC 4 (E 25)	160.0	77.0	5.9
5. REC 5 (E 50)	242.0	77.0	5.9
6. REC 6 (N 25 E 25)	160.0	159.0	5.9
7. REC 7 (N 25 E 50)	242.0	159.0	5.9
8. REC 8 (N 50 E 25)	160.0	241.0	5.9
9. REC 9 (N 50 E 50)	242.0	241.0	5.9
10. REC 10(SE CORNER)	76.0	-72.0	5.9
11. REC 11(S 25)	76.0	-154.0	5.9
12. REC 12(S 50)	76.0	-236.0	5.9
13. REC 13(E 25)	158.0	-72.0	5.9
14. REC 14(E 50)	240.0	-72.0	5.9
15. REC 15(S 25 E 25)	158.0	-154.0	5.9
16. REC 16(S 25 E 50)	240.0	-154.0	5.9
17. REC 17(S 50 E 25)	158.0	-236.0	5.9
18. REC 18(S 50 E 50)	240.0	-236.0	5.9
19. REC 19(SW CORNER)	-68.0	-80.0	5.9
20. REC 20(S 25)	-68.0	-162.0	5.9
21. REC 21(S 50)	-68.0	-244.0	5.9
22. REC 22(W 25)	-150.0	-80.0	5.9
23. REC 23(W 50)	-232.0	-80.0	5.9
24. REC 24(S 25 W 25)	-150.0	-162.0	5.9
25. REC 25(S 25 W 50)	-232.0	-162.0	5.9
26. REC 26(S 50 W 25)	-150.0	-244.0	5.9
27. REC 27(S 50 W 50)	-232.0	-244.0	5.9
28. REC 28(NW CORNER)	-70.0	74.0	5.9
29. REC 29(N 25)	-70.0	156.0	5.9
30. REC 30(N 50)	-70.0	238.0	5.9
31. REC 31(W 25)	-152.0	74.0	5.9
32. REC 32(W 50)	-234.0	74.0	5.9
33. REC 33(N 25 W 25)	-152.0	156.0	5.9
34. REC 34(N 25 W 50)	-234.0	156.0	5.9
35. REC 35(N 50 W 25)	-152.0	238.0	5.9
36. REC 36(N 50 W 50)	-234.0	238.0	5.9

JOB: MAIN & COUNTRY CLUB NO BUILD RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5	0.5	0.4	0.2	0.2	0.1	0.2	0.1	0.8	0.8
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	1.0	0.7
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.2	0.2	0.1	0.1	0.1	0.1	1.0	0.7
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.6	0.7
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.8
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.7	0.7
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.7	0.8
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.6	0.8
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.6	0.7
90.	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.7	0.6
100.	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.8	0.6
110.	0.3	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
120.	0.5	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
130.	0.5	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6
140.	0.7	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7
150.	0.6	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7
160.	0.6	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7
170.	0.5	0.4	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
180.	0.8	0.6	0.5	0.4	0.2	0.3	0.1	0.2	0.1	0.4	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
190.	0.8	0.7	0.5	0.8	0.3	0.5	0.2	0.5	0.2	0.7	0.6	0.4	0.2	0.0	0.2	0.0	0.1	0.0	0.2	0.2
200.	0.8	0.5	0.5	0.8	0.4	0.6	0.3	0.3	0.4	0.9	0.8	0.5	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
210.	0.8	0.5	0.6	0.9	0.5	0.5	0.5	0.3	0.3	1.0	0.9	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.5	0.5	0.5	0.9	0.5	0.3	0.5	0.1	0.1	0.9	0.9	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
230.	0.5	0.6	0.5	0.8	0.7	0.1	0.2	0.3	0.1	0.8	0.7	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.8	0.7	0.6	0.7	0.6	0.3	0.1	0.3	0.3	0.7	0.7	0.6	0.4	0.3	0.4	0.3	0.2	0.2	0.0	0.0
250.	0.6	0.7	0.6	0.6	0.4	0.4	0.3	0.3	0.3	0.6	0.7	0.6	0.4	0.3	0.4	0.3	0.3	0.2	0.0	0.0
260.	0.5	0.6	0.5	0.4	0.5	0.4	0.4	0.3	0.3	0.5	0.7	0.7	0.3	0.3	0.4	0.3	0.3	0.3	0.0	0.0
270.	0.6	0.5	0.5	0.4	0.5	0.3	0.3	0.3	0.3	0.5	0.7	0.7	0.5	0.5	0.4	0.3	0.4	0.3	0.1	0.0
280.	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.6	0.8	0.7	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.0
290.	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.7	1.0	0.7	0.5	0.3	0.6	0.3	0.4	0.3	0.5	0.1
300.	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.7	1.1	0.7	0.5	0.7	0.4	0.2	0.4	0.3	0.5	0.2
310.	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.6	1.0	0.7	0.6	0.7	0.2	0.3	0.4	0.2	0.6	0.2
320.	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.7	0.9	0.9	0.7	0.6	0.5	0.4	0.3	0.2	0.6	0.2
330.	0.5	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.9	0.9	0.7	0.4	0.4	0.3	0.5	0.4	0.4	0.2
340.	0.5	0.4	0.4	0.2	0.2	0.2	0.1	0.2	0.1	0.8	0.7	1.1	0.6	0.4	0.5	0.3	0.4	0.3	0.5	0.3
350.	0.4	0.4	0.4	0.2	0.0	0.1	0.0	0.1	0.0	0.8	0.8	0.7	0.6	0.3	0.5	0.2	0.3	0.2	0.6	0.5
MAX	0.8	0.7	0.6	0.9	0.7	0.6	0.5	0.5	0.4	1.0	1.1	1.1	0.7	0.7	0.6	0.4	0.5	0.4	1.0	0.8
DEGR.	180	190	210	210	230	200	210	190	200	210	300	340	320	300	290	280	330	330	20	0

JOB: MAIN & COUNTRY CLUB NO BUILD RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.6	0.5	0.2	0.3	0.1	0.2	0.0	0.8	0.7	0.5	0.1	0.0	0.1	0.0	0.0	0.0
10.	0.7	0.9	0.4	0.5	0.3	0.4	0.2	1.1	0.8	0.6	0.2	0.1	0.2	0.0	0.1	0.0
20.	0.8	1.0	0.5	0.5	0.5	0.4	0.4	1.2	1.1	0.7	0.3	0.2	0.2	0.2	0.2	0.1
30.	0.7	0.9	0.7	0.5	0.5	0.3	0.4	1.1	1.2	0.8	0.3	0.2	0.2	0.2	0.2	0.2
40.	0.8	0.9	0.7	0.2	0.5	0.2	0.2	1.0	1.1	0.8	0.4	0.3	0.3	0.2	0.2	0.2
50.	0.7	0.7	0.8	0.3	0.3	0.4	0.1	0.9	0.9	0.8	0.4	0.3	0.4	0.2	0.2	0.2
60.	0.7	0.5	0.7	0.3	0.2	0.4	0.4	0.8	0.9	0.8	0.4	0.3	0.4	0.3	0.2	0.2
70.	0.7	0.5	0.5	0.4	0.3	0.5	0.4	0.6	0.8	0.8	0.4	0.3	0.4	0.3	0.3	0.2
80.	0.6	0.3	0.4	0.4	0.4	0.3	0.3	0.6	0.9	0.9	0.3	0.3	0.4	0.3	0.3	0.3
90.	0.6	0.4	0.4	0.4	0.3	0.3	0.3	0.6	0.9	0.9	0.5	0.5	0.4	0.3	0.4	0.3
100.	0.5	0.4	0.3	0.4	0.3	0.3	0.2	0.8	1.0	0.9	0.4	0.3	0.5	0.4	0.4	0.3
110.	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.7	1.0	0.9	0.4	0.3	0.5	0.4	0.5	0.4
120.	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.6	1.1	1.0	0.5	0.8	0.4	0.2	0.5	0.4
130.	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.7	1.1	1.0	0.5	0.7	0.4	0.2	0.5	0.2
140.	0.6	0.4	0.2	0.3	0.2	0.3	0.2	0.8	1.1	1.1	0.6	0.6	0.5	0.4	0.3	0.2
150.	0.6	0.3	0.2	0.3	0.2	0.3	0.2	0.7	1.1	1.0	0.8	0.5	0.5	0.5	0.5	0.3
160.	0.7	0.3	0.2	0.3	0.2	0.3	0.1	0.9	0.9	1.4	0.8	0.5	0.4	0.4	0.4	0.2
170.	0.6	0.2	0.1	0.2	0.1	0.1	0.0	0.9	1.0	1.0	0.6	0.4	0.4	0.3	0.2	0.1
180.	0.5	0.1	0.0	0.1	0.0	0.1	0.0	0.7	0.7	0.7	0.4	0.2	0.3	0.1	0.2	0.0
190.	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.3	0.3	0.2	0.2	0.1	0.0	0.0
200.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.3	0.2	0.1	0.1	0.0	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.3	0.2	0.1	0.1	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.3	0.3	0.2	0.1	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
260.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
270.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.1	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.2	0.4	0.2	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.4	0.4	0.2	0.2	0.1	0.1	0.0	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.8	1.0	0.8	0.5	0.5	0.5	0.4	1.2	1.2	1.4	0.8	0.8	0.5	0.5	0.5	0.4
DEGR.	40	20	50	10	20	70	20	20	30	160	150	120	100	150	110	110

THE HIGHEST CONCENTRATION OF 1.40 PPM OCCURRED AT RECEPTOR REC30.

JOB: MAIN & MESA NO BUILD RUN: MESA LRT EXTENSION NO BUILD

DATE : 4/12/10
TIME : 13: 4:48

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. M NB LT Q	0.0	-83.0	0.0	-134.6	52.	180.	AG	78.	100.0	0.0	12.0	0.63	2.6
2. M NB TH APP	20.0	0.0	20.0	-985.0	985.	180.	AG	959.	5.5	0.0	48.0		
3. M NB TH DEP	20.0	0.0	20.0	985.0	985.	360.	AG	971.	5.5	0.0	48.0		
4. M NB TH Q	20.0	-80.0	20.0	-237.2	157.	180.	AG	117.	100.0	0.0	28.0	0.44	8.0
5. M SB LT Q	0.0	84.0	0.0	1377.5	1293.	360.	AG	78.	100.0	0.0	10.0	1.59	65.7
6. M SB TH APP	-20.0	0.0	-20.0	985.0	985.	360.	AG	1089.	5.5	0.0	46.0		
7. M SB TH DEP	-20.0	0.0	-20.0	-985.0	985.	180.	AG	1410.	5.5	0.0	46.0		
8. M SB TH Q	-20.0	96.0	-20.0	274.5	178.	360.	AG	117.	100.0	0.0	26.0	0.49	9.1
9. M EB LT Q	-63.0	-2.0	-89.4	-2.0	26.	270.	AG	77.	100.0	0.0	10.0	0.29	1.3
10. M EB TH APP	0.0	-21.0	-985.0	-21.0	985.	270.	AG	972.	5.8	0.0	46.0		
11. M EB TH DEP	0.0	-21.0	985.0	-21.0	985.	90.	AG	1445.	5.8	0.0	46.0		
12. M EB TH Q	-63.0	-21.0	-219.8	-21.0	157.	270.	AG	115.	100.0	0.0	26.0	0.45	8.0
13. M EB R APP	0.0	-50.0	-985.0	-50.0	985.	270.	AG	174.	5.8	0.0	36.0		
14. M EB R Q	-62.0	-50.0	-118.1	-50.0	56.	270.	AG	58.	100.0	0.0	16.0	0.33	2.9
15. M WB LT Q	62.0	5.0	897.7	5.3	836.	90.	AG	81.	100.0	0.0	10.0	1.53	42.5
16. M WB TH APP	0.0	24.0	985.0	24.0	985.	90.	AG	518.	5.5	0.0	48.0		
17. M WB TH DEP	0.0	24.0	-985.0	24.0	985.	270.	AG	689.	5.5	0.0	48.0		
18. M WB TH Q	62.0	24.0	151.2	24.0	89.	90.	AG	123.	100.0	0.0	28.0	0.27	4.5
19. M WB R APP	0.0	45.0	985.0	45.0	985.	90.	AG	126.	5.5	0.0	32.0		
20. M WB R Q	62.0	45.0	105.4	45.0	43.	90.	AG	61.	100.0	0.0	12.0	0.28	2.2

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. M NB LT Q	94	80	2.0	118	1770	34.20	2	3
4. M NB TH Q	94	60	2.0	959	3403	34.20	2	3
5. M SB LT Q	94	80	2.0	298	1770	34.20	2	3
8. M SB TH Q	94	60	2.0	1089	3497	34.20	2	3
9. M EB LT Q	94	79	2.0	61	1770	34.20	2	3
12. M EB TH Q	94	59	2.0	972	3278	34.20	2	3
14. M EB R Q	94	59	2.0	174	1583	34.20	2	3
15. M WB LT Q	94	83	2.0	200	1770	34.20	2	3
18. M WB TH Q	94	63	2.0	518	3287	34.20	2	3
20. M WB R Q	94	63	2.0	126	1583	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	58.0	60.0	5.9
2. REC 2 (N 25)	58.0	142.0	5.9
3. REC 3 (N 50)	58.0	224.0	5.9
4. REC 4 (E 25)	140.0	60.0	5.9
5. REC 5 (E 50)	222.0	60.0	5.9
6. REC 6 (N 25 E 25)	140.0	142.0	5.9
7. REC 7 (N 25 E 50)	222.0	142.0	5.9
8. REC 8 (N 50 E 25)	140.0	224.0	5.9
9. REC 9 (N 50 E 50)	222.0	224.0	5.9
10. REC 10(SE CORNER)	47.0	-60.0	5.9
11. REC 11(S 25)	47.0	-142.0	5.9
12. REC 12(S 50)	47.0	-224.0	5.9
13. REC 13(E 25)	129.0	-60.0	5.9
14. REC 14(E 50)	211.0	-60.0	5.9
15. REC 15(S 25 E 25)	129.0	-142.0	5.9
16. REC 16(S 25 E 50)	211.0	-142.0	5.9
17. REC 17(S 50 E 25)	129.0	-224.0	5.9
18. REC 18(S 50 E 50)	211.0	-224.0	5.9
19. REC 19(SW CORNER)	-45.0	-70.0	5.9
20. REC 20(S 25)	-45.0	-152.0	5.9
21. REC 21(S 50)	-45.0	-234.0	5.9
22. REC 22(W 25)	-127.0	-70.0	5.9
23. REC 23(W 50)	-209.0	-70.0	5.9
24. REC 24(S 25 W 25)	-127.0	-152.0	5.9
25. REC 25(S 25 W 50)	-209.0	-152.0	5.9
26. REC 26(S 50 W 25)	-127.0	-234.0	5.9
27. REC 27(S 50 W 50)	-209.0	-234.0	5.9
28. REC 28(NW CORNER)	-50.0	75.0	5.9
29. REC 29(N 25)	-50.0	157.0	5.9
30. REC 30(N 50)	-50.0	239.0	5.9
31. REC 31(W 25)	-132.0	75.0	5.9
32. REC 32(W 50)	-214.0	75.0	5.9
33. REC 33(N 25 W 25)	-132.0	157.0	5.9
34. REC 34(N 25 W 50)	-214.0	157.0	5.9
35. REC 35(N 50 W 25)	-132.0	239.0	5.9
36. REC 36(N 50 W 50)	-214.0	239.0	5.9

JOB: MAIN & MESA NO BUILD RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5	0.8	0.4	0.3	0.3	0.2	0.1	0.1	0.8	0.7
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.8	0.7
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.3	0.2	0.2	0.1	0.1	0.7	0.6
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.3	0.3	0.2	0.2	0.1	0.1	0.6	0.7
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.3	0.3	0.2	0.2	0.1	0.1	0.7	0.8
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.1	0.5	0.5	0.2	0.2	0.1	0.1	0.7	0.8
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.1	0.5	0.5	0.2	0.2	0.1	0.1	0.8	0.8
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.5	0.5	0.2	0.2	0.1	0.1	0.8	0.8
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.4	0.4	0.1	0.1	0.0	0.0	0.6	0.6
90.	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.8	0.6
100.	0.6	0.2	0.0	0.3	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.5
110.	0.7	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
120.	0.9	0.2	0.2	0.4	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
130.	0.9	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
140.	0.8	0.3	0.1	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5
150.	0.7	0.3	0.1	0.4	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5
160.	0.6	0.3	0.2	0.4	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
170.	0.7	0.2	0.2	0.5	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
180.	0.6	0.5	0.4	0.5	0.3	0.3	0.2	0.2	0.1	0.5	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
190.	0.7	0.5	0.3	0.8	0.3	0.5	0.2	0.4	0.1	0.8	0.7	0.5	0.2	0.0	0.2	0.0	0.2	0.0	0.2	0.2
200.	0.7	0.3	0.5	0.9	0.5	0.5	0.4	0.3	0.3	0.8	0.8	0.5	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1
210.	0.5	0.4	0.5	0.9	0.5	0.4	0.5	0.1	0.3	0.8	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.6	0.5	0.6	0.9	0.6	0.2	0.3	0.1	0.0	0.8	0.8	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
230.	0.6	0.7	0.6	0.8	0.6	0.1	0.2	0.3	0.0	0.7	0.7	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.6	0.7	0.5	0.7	0.5	0.4	0.0	0.4	0.0	0.5	0.6	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.0	0.0
250.	0.5	0.6	0.5	0.6	0.5	0.4	0.1	0.4	0.1	0.4	0.6	0.5	0.3	0.2	0.3	0.2	0.2	0.1	0.0	0.0
260.	0.5	0.4	0.5	0.7	0.4	0.4	0.1	0.4	0.1	0.4	0.6	0.6	0.4	0.2	0.3	0.2	0.3	0.1	0.0	0.0
270.	0.4	0.5	0.5	0.5	0.3	0.4	0.1	0.4	0.1	0.5	0.6	0.6	0.5	0.3	0.3	0.2	0.3	0.2	0.2	0.0
280.	0.2	0.5	0.5	0.2	0.0	0.4	0.1	0.4	0.0	0.7	0.8	0.6	0.6	0.4	0.4	0.3	0.3	0.2	0.6	0.1
290.	0.3	0.5	0.4	0.3	0.1	0.4	0.1	0.3	0.0	0.8	0.9	0.7	0.5	0.4	0.5	0.2	0.4	0.3	0.7	0.1
300.	0.4	0.5	0.4	0.4	0.1	0.4	0.0	0.3	0.0	0.7	0.9	0.7	0.2	0.5	0.5	0.1	0.4	0.3	0.6	0.1
310.	0.5	0.6	0.5	0.4	0.0	0.4	0.0	0.3	0.0	0.7	0.9	0.8	0.4	0.5	0.3	0.1	0.4	0.0	0.5	0.2
320.	0.6	0.5	0.4	0.4	0.2	0.3	0.2	0.3	0.2	0.6	0.9	1.0	0.7	0.7	0.1	0.2	0.3	0.1	0.5	0.2
330.	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.7	0.8	0.7	0.8	0.7	0.3	0.4	0.2	0.2	0.4	0.2
340.	0.5	0.5	0.4	0.3	0.1	0.3	0.0	0.3	0.0	0.7	0.9	0.8	0.8	0.5	0.5	0.5	0.3	0.3	0.3	0.3
350.	0.5	0.4	0.4	0.2	0.0	0.2	0.0	0.2	0.0	0.8	0.8	0.9	0.8	0.3	0.5	0.2	0.4	0.1	0.5	0.4
MAX	0.9	0.7	0.6	0.9	0.6	0.5	0.5	0.4	0.3	0.8	0.9	1.0	0.8	0.7	0.5	0.5	0.4	0.3	0.8	0.8
DEGR.	120	230	220	200	220	190	210	190	200	290	290	320	330	320	290	340	290	290	0	40

JOB: MAIN & MESA NO BUILD RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.6	0.4	0.4	0.2	0.2	0.1	0.0	0.6	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.7	0.7	0.4	0.5	0.2	0.4	0.1	0.8	0.7	0.5	0.2	0.0	0.2	0.0	0.2	0.0
20.	0.6	0.9	0.6	0.6	0.4	0.3	0.2	0.8	0.8	0.6	0.3	0.2	0.3	0.2	0.3	0.1
30.	0.7	0.9	0.8	0.3	0.4	0.1	0.1	0.7	0.7	0.5	0.4	0.2	0.3	0.2	0.3	0.2
40.	0.7	0.7	0.6	0.1	0.2	0.2	0.0	0.7	0.7	0.6	0.4	0.1	0.4	0.1	0.3	0.1
50.	0.7	0.5	0.5	0.2	0.2	0.4	0.2	0.6	0.7	0.6	0.4	0.2	0.4	0.1	0.3	0.1
60.	0.6	0.5	0.3	0.4	0.2	0.4	0.3	0.5	0.7	0.7	0.4	0.2	0.4	0.1	0.3	0.1
70.	0.6	0.5	0.4	0.5	0.3	0.4	0.3	0.5	0.7	0.7	0.3	0.2	0.4	0.2	0.4	0.1
80.	0.4	0.6	0.5	0.4	0.3	0.4	0.3	0.3	0.7	0.7	0.3	0.2	0.4	0.2	0.4	0.1
90.	0.5	0.4	0.3	0.3	0.3	0.3	0.1	0.6	0.7	0.7	0.4	0.3	0.4	0.2	0.4	0.2
100.	0.4	0.4	0.3	0.3	0.2	0.2	0.1	0.7	0.8	0.7	0.6	0.3	0.6	0.3	0.4	0.2
110.	0.3	0.3	0.2	0.3	0.1	0.2	0.1	0.8	0.9	0.8	0.4	0.2	0.5	0.3	0.5	0.3
120.	0.3	0.3	0.2	0.3	0.1	0.2	0.1	0.7	0.9	0.8	0.2	0.4	0.5	0.1	0.5	0.3
130.	0.4	0.3	0.1	0.2	0.1	0.2	0.1	0.4	1.0	0.8	0.4	0.4	0.2	0.0	0.4	0.1
140.	0.4	0.3	0.1	0.2	0.1	0.2	0.1	0.6	0.9	0.8	0.6	0.4	0.1	0.2	0.3	0.0
150.	0.4	0.2	0.1	0.2	0.1	0.2	0.1	0.7	0.6	0.8	0.6	0.4	0.2	0.3	0.1	0.1
160.	0.5	0.2	0.1	0.2	0.1	0.2	0.1	0.8	0.7	0.7	0.5	0.4	0.3	0.3	0.2	0.2
170.	0.5	0.1	0.0	0.1	0.0	0.1	0.0	0.7	0.6	0.6	0.5	0.4	0.4	0.3	0.2	0.2
180.	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.0
190.	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.0
200.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.3	0.2	0.2	0.1	0.0	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.2	0.1	0.1	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.2	0.1	0.1	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.2	0.2	0.2	0.2	0.0	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.2	0.2	0.2	0.2	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.0	0.0
260.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
270.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.4	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.0	0.5	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.1	0.5	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.1	0.4	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.1	0.4	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.1	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.2	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.2	0.4	0.3	0.2	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.7	0.9	0.8	0.6	0.4	0.4	0.3	0.8	1.0	0.8	0.6	0.4	0.6	0.3	0.5	0.3
DEGR.	10	20	30	20	20	10	60	110	130	110	100	120	100	100	110	110

THE HIGHEST CONCENTRATION OF 1.00 PPM OCCURRED AT RECEPTOR REC29.

JOB: BROADWAY & ALMA SCHOOL 2 LANE RUN: MESA LRT EXTENSION 2 LANE

DATE : 3/17/10
TIME : 15:31:44

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. AS NB LT Q	-2.0	-107.0	-2.0	-146.1	39.	180.	AG	168.	100.0	0.0	24.0	0.38	2.0
2. AS NB TH APP	25.0	0.0	25.0	-985.0	985.	180.	AG	966.	5.5	0.0	61.0		
3. AS NB TH DEP	25.0	0.0	25.0	985.0	985.	360.	AG	1621.	5.5	0.0	61.0		
4. AS NB TH Q	25.0	-110.0	25.0	-264.9	155.	180.	AG	202.	100.0	0.0	41.0	0.27	7.9
5. AS NB R APP	65.0	0.0	65.0	-985.0	985.	180.	AG	232.	5.5	0.0	32.0		
6. AS NB R Q	65.0	-110.0	65.0	-221.6	112.	180.	AG	67.	100.0	0.0	12.0	0.63	5.7
7. AS SB LT Q	0.0	92.0	0.0	214.5	123.	360.	AG	148.	100.0	0.0	26.0	0.43	6.2
8. AS SB TH APP	-35.0	0.0	-35.0	985.0	985.	360.	AG	1709.	5.5	0.0	65.0		
9. AS SB TH DEP	-35.0	0.0	-35.0	985.0	985.	360.	AG	2106.	5.5	0.0	65.0		
10. AS SB TH Q	-35.0	90.0	-35.0	323.3	233.	360.	AG	172.	100.0	0.0	45.0	0.33	11.9
11. B EB LT Q	-94.0	0.0	-191.6	0.0	98.	270.	AG	148.	100.0	0.0	24.0	0.34	5.0
12. B EB TH APP	0.0	-35.0	-985.0	-35.0	985.	270.	AG	1570.	5.8	0.0	62.0		
13. B EB TH DEP	0.0	-35.0	-985.0	-35.0	985.	270.	AG	2319.	5.8	0.0	62.0		
14. B EB TH Q	-93.0	-35.0	-293.2	-35.0	200.	270.	AG	161.	100.0	0.0	42.0	0.27	10.2
15. B EB R APP	0.0	-67.0	-985.0	-67.0	985.	270.	AG	326.	5.5	0.0	32.0		
16. B EB R Q	-93.0	-67.0	-217.8	-67.0	125.	270.	AG	54.	100.0	0.0	12.0	0.54	6.3
17. B WB LT Q	95.0	0.0	185.1	0.0	90.	90.	AG	161.	100.0	0.0	24.0	0.50	4.6
18. B WB TH APP	0.0	33.0	985.0	33.0	985.	90.	AG	1075.	5.5	0.0	62.0		
19. B WB TH DEP	0.0	33.0	-985.0	33.0	985.	270.	AG	1161.	5.5	0.0	62.0		
20. B WB TH Q	92.0	33.0	244.7	33.0	153.	90.	AG	179.	100.0	0.0	42.0	0.23	7.8

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. AS NB LT Q	120	110	2.0	130	3433	34.20	2	3
4. AS NB TH Q	120	88	2.0	966	5085	34.20	2	3
6. AS NB R Q	120	88	2.0	232	1583	34.20	2	3
7. AS SB LT Q	120	97	2.0	462	3433	34.20	2	3
10. AS SB TH Q	120	75	2.0	1709	4979	34.20	2	3
11. B EB LT Q	120	97	2.0	368	3433	34.20	2	3
14. B EB TH Q	120	70	2.0	1570	5085	34.20	2	3
16. B EB R Q	120	70	2.0	326	1583	34.20	2	3
17. B WB LT Q	120	105	2.0	314	3433	34.20	2	3
20. B WB TH Q	120	78	2.0	1075	4882	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	75.0	77.0	5.9
2. REC 2 (N 25)	75.0	159.0	5.9
3. REC 3 (N 50)	75.0	241.0	5.9
4. REC 4 (E 25)	157.0	77.0	5.9
5. REC 5 (E 50)	239.0	77.0	5.9
6. REC 6 (N 25 E 25)	157.0	159.0	5.9
7. REC 7 (N 25 E 50)	239.0	159.0	5.9
8. REC 8 (N 50 E 25)	157.0	241.0	5.9
9. REC 9 (N 50 E 50)	239.0	241.0	5.9
10. REC 10(SE CORNER)	85.0	-75.0	5.9
11. REC 11(S 25)	85.0	-157.0	5.9
12. REC 12(S 50)	85.0	-239.0	5.9
13. REC 13(E 25)	167.0	-75.0	5.9
14. REC 14(E 50)	249.0	-75.0	5.9
15. REC 15(S 25 E 25)	167.0	-157.0	5.9
16. REC 16(S 25 E 50)	249.0	-157.0	5.9
17. REC 17(S 50 E 25)	167.0	-239.0	5.9
18. REC 18(S 50 E 50)	249.0	-239.0	5.9
19. REC 19(SW CORNER)	-75.0	-94.0	5.9
20. REC 20(S 25)	-75.0	-176.0	5.9
21. REC 21(S 50)	-75.0	-258.0	5.9
22. REC 22(W 25)	-157.0	-94.0	5.9
23. REC 23(W 50)	-239.0	-94.0	5.9
24. REC 24(S 25 W 25)	-157.0	-176.0	5.9
25. REC 25(S 25 W 50)	-239.0	-176.0	5.9
26. REC 26(S 50 W 25)	-157.0	-258.0	5.9
27. REC 27(S 50 W 50)	-239.0	-258.0	5.9
28. REC 28(NW CORNER)	-74.0	75.0	5.9
29. REC 29(N 25)	-74.0	157.0	5.9
30. REC 30(N 50)	-74.0	239.0	5.9
31. REC 31(W 25)	-156.0	75.0	5.9
32. REC 32(W 50)	-238.0	75.0	5.9
33. REC 33(N 25 W 25)	-156.0	157.0	5.9
34. REC 34(N 25 W 50)	-238.0	157.0	5.9
35. REC 35(N 50 W 25)	-156.0	239.0	5.9
36. REC 36(N 50 W 50)	-238.0	239.0	6.0

JOB: BROADWAY & ALMA SCHOOL 2 LANE RUN: MESA LRT EXTENSION 2 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.5	0.5	0.2	0.3	0.2	0.3	0.1	1.4	1.1
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.2	0.4	0.1	0.3	0.1	0.1	0.0	1.6	0.9
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.2	0.4	0.1	0.2	0.1	0.0	0.0	1.4	0.6
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.1	0.3	0.1	0.1	0.1	0.0	0.0	1.0	0.4
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.9	0.4
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.8	0.6
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.7	0.6
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.6	0.5
80.	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.4
90.	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4
100.	0.5	0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4
110.	0.6	0.1	0.1	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
120.	0.7	0.2	0.1	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3
130.	0.8	0.2	0.1	0.6	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3
140.	0.7	0.4	0.2	0.6	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
150.	0.7	0.4	0.2	0.7	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1
160.	0.4	0.4	0.3	0.6	0.2	0.3	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
170.	0.3	0.3	0.3	0.7	0.3	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
180.	0.4	0.5	0.5	0.8	0.5	0.4	0.2	0.3	0.2	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	0.3	0.4	0.4	0.9	0.4	0.6	0.3	0.5	0.2	0.5	0.4	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
200.	0.4	0.6	0.6	0.9	0.6	0.5	0.5	0.4	0.5	0.7	0.6	0.3	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0
210.	0.6	0.6	1.0	1.0	0.9	0.4	0.6	0.2	0.3	0.7	0.7	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
220.	0.6	0.9	1.4	0.9	0.9	0.3	0.5	0.5	0.2	0.8	0.7	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
230.	1.0	1.2	1.3	0.9	1.0	0.6	0.3	0.9	0.4	0.5	0.7	0.2	0.4	0.1	0.2	0.0	0.1	0.0	0.0	0.0
240.	1.1	1.3	1.2	0.8	1.0	0.7	0.6	0.9	0.9	0.4	0.7	0.2	0.3	0.1	0.3	0.1	0.1	0.0	0.0	0.0
250.	1.3	1.2	1.1	1.1	1.0	0.9	0.7	0.8	0.8	0.3	0.7	0.3	0.2	0.1	0.3	0.1	0.2	0.0	0.0	0.0
260.	1.3	1.2	0.8	1.0	1.1	0.8	0.8	0.7	0.6	0.5	0.7	0.4	0.4	0.3	0.4	0.1	0.2	0.1	0.2	0.0
270.	0.9	0.9	0.7	0.8	0.9	0.5	0.5	0.4	0.4	0.9	1.0	0.5	0.7	0.5	0.6	0.3	0.3	0.1	0.6	0.1
280.	0.8	0.9	0.7	0.6	0.5	0.6	0.5	0.4	0.4	1.1	1.2	0.7	0.8	0.5	0.9	0.6	0.5	0.3	1.1	0.2
290.	0.8	0.9	0.7	0.5	0.5	0.5	0.4	0.4	0.3	0.9	1.2	0.7	0.4	0.5	0.7	0.4	0.6	0.4	1.3	0.4
300.	0.9	0.8	0.7	0.6	0.4	0.4	0.4	0.3	0.3	0.7	1.2	0.9	0.5	0.7	0.5	0.3	0.8	0.5	1.4	0.5
310.	0.9	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.6	1.1	1.0	0.6	0.8	0.6	0.5	0.7	0.1	1.2	0.5
320.	1.1	0.9	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.7	1.0	1.1	0.8	0.8	0.4	0.7	0.5	0.4	1.2	0.6
330.	1.0	0.8	0.7	0.4	0.3	0.3	0.3	0.3	0.3	1.0	0.8	1.2	1.0	0.7	0.5	0.7	0.4	0.6	1.1	0.7
340.	0.9	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.2	0.9	0.9	1.0	0.9	0.6	0.7	0.6	0.4	0.5	1.0	0.6
350.	0.6	0.6	0.5	0.3	0.0	0.3	0.0	0.2	0.0	0.8	1.0	0.8	0.8	0.4	0.6	0.3	0.5	0.2	1.1	0.8
MAX	1.3	1.3	1.4	1.1	1.1	0.9	0.8	0.9	0.9	1.1	1.2	1.2	1.0	0.8	0.9	0.7	0.8	0.6	1.6	1.1
DEGR.	250	240	220	250	260	250	260	230	240	280	280	330	330	310	280	320	300	330	10	0

JOB: BROADWAY & ALMA SCHOOL 2 LANE RUN: MESA LRT EXTENSION 2 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.7	1.5	1.0	0.9	0.6	0.6	0.3	1.0	1.0	0.9	0.2	0.0	0.2	0.0	0.1	0.0
10.	0.6	1.7	1.1	1.1	0.8	0.7	0.5	1.4	1.3	1.2	0.3	0.2	0.3	0.1	0.3	0.1
20.	0.7	1.8	1.5	1.1	1.1	0.6	0.8	1.7	1.6	1.4	0.6	0.3	0.4	0.3	0.4	0.2
30.	0.4	1.8	1.5	0.8	1.1	0.5	0.7	1.6	1.5	1.4	0.7	0.3	0.6	0.3	0.5	0.3
40.	0.4	1.6	1.6	0.4	1.0	0.0	0.4	1.5	1.5	1.4	0.6	0.4	0.6	0.3	0.4	0.3
50.	0.5	1.3	1.6	0.4	0.4	0.3	0.1	1.4	1.4	1.3	0.7	0.4	0.6	0.4	0.5	0.3
60.	0.4	1.1	1.5	0.2	0.4	0.2	0.1	1.2	1.4	1.2	0.7	0.5	0.6	0.4	0.5	0.3
70.	0.4	0.8	1.1	0.4	0.1	0.3	0.1	0.9	1.2	1.0	0.7	0.5	0.7	0.4	0.6	0.4
80.	0.3	0.4	0.8	0.2	0.1	0.2	0.1	1.0	1.3	1.1	0.7	0.5	0.7	0.5	0.6	0.4
90.	0.3	0.2	0.3	0.3	0.1	0.2	0.1	0.9	1.3	1.1	0.8	0.7	0.7	0.5	0.6	0.4
100.	0.2	0.3	0.1	0.3	0.1	0.2	0.0	1.2	1.5	1.2	0.7	0.6	0.9	0.7	0.7	0.5
110.	0.1	0.2	0.1	0.2	0.1	0.1	0.0	1.0	1.4	1.2	0.7	0.6	0.9	0.6	0.8	0.6
120.	0.1	0.3	0.1	0.2	0.0	0.1	0.0	1.1	1.6	1.6	0.6	0.7	0.7	0.3	0.9	0.7
130.	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.9	1.6	1.7	0.8	0.9	0.5	0.4	0.9	0.3
140.	0.1	0.2	0.0	0.1	0.0	0.1	0.0	1.2	1.4	1.7	0.9	0.9	0.5	0.6	0.5	0.4
150.	0.1	0.1	0.0	0.1	0.0	0.1	0.0	1.1	1.3	1.5	1.0	0.8	0.7	0.6	0.5	0.5
160.	0.1	0.1	0.0	0.1	0.0	0.1	0.0	1.1	1.3	1.5	1.1	0.7	0.7	0.5	0.7	0.5
170.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.3	0.9	0.7	0.5	0.4	0.5	0.4
180.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.9	0.7	0.5	0.4	0.5	0.4
190.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.9	0.7	0.5	0.4	0.4	0.4
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	0.5	0.8	0.6	0.4	0.4	0.4	0.3
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.4	0.8	0.6	0.4	0.3	0.3	0.3
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.4	0.7	0.5	0.4	0.3	0.3	0.3
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	0.3	0.6	0.5	0.3	0.3	0.3	0.3
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	0.3	0.7	0.6	0.4	0.3	0.3	0.3
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.3	0.3	0.7	0.7	0.3	0.3	0.3	0.2
260.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.6	0.3	0.0	0.6	0.5	0.3	0.2	0.0	0.0
270.	0.0	0.5	0.4	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0
280.	0.1	0.9	0.7	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.2	1.2	0.9	0.4	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.2	1.3	1.0	0.4	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.3	1.1	0.8	0.5	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.3	1.1	0.9	0.5	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.3	1.1	1.0	0.6	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.3	1.2	1.0	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.5	1.1	0.9	0.7	0.5	0.3	0.3	0.4	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.7	1.8	1.6	1.1	1.1	0.7	0.8	1.7	1.6	1.7	1.1	0.9	0.9	0.7	0.9	0.7
DEGR.	0	20	40	10	20	10	20	20	120	130	160	130	100	100	120	120

THE HIGHEST CONCENTRATION OF 1.80 PPM OCCURRED AT RECEPTOR REC22.

JOB: MAIN & ALMA SCHOOL 2 LANE RUN: MESA LRT EXTENSION 2 LANE

DATE : 3/17/10
TIME : 15:48:29

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. AS NB LT Q	0.0	-90.0	0.0	-146.7	57.	180.	AG	165.	100.0	0.0	24.0	0.42	2.9
2. AS NB TH APP	32.0	0.0	32.0	-985.0	985.	180.	AG	1160.	5.5	0.0	61.0		
3. AS NB TH DEP	32.0	0.0	32.0	985.0	985.	360.	AG	1098.	5.5	0.0	61.0		
4. AS NB TH Q	32.0	-87.0	32.0	-249.5	163.	180.	AG	177.	100.0	0.0	41.0	0.25	8.3
5. AS SB LT Q	0.0	101.0	0.0	182.7	82.	360.	AG	157.	100.0	0.0	24.0	0.39	4.1
6. AS SB TH APP	-32.0	0.0	-32.0	985.0	985.	360.	AG	1666.	5.5	0.0	61.0		
7. AS SB TH DEP	-32.0	0.0	-32.0	-985.0	985.	180.	AG	2187.	5.5	0.0	61.0		
8. AS SB TH Q	-32.0	101.0	-32.0	319.5	219.	360.	AG	165.	100.0	0.0	41.0	0.30	11.1
9. M EB LT Q	-84.0	-24.0	-144.8	-24.0	61.	270.	AG	77.	100.0	0.0	12.0	0.52	3.1
10. M EB TH APP	0.0	-44.0	-985.0	-44.0	985.	270.	AG	823.	5.6	0.0	48.0		
11. M EB TH DEP	0.0	-44.0	985.0	-44.0	985.	90.	AG	1122.	5.6	0.0	48.0		
12. M EB TH Q	-85.0	-44.0	-278.3	-44.0	193.	270.	AG	131.	100.0	0.0	28.0	0.52	9.8
13. M WB LT Q	84.0	36.0	517.0	36.1	433.	90.	AG	72.	100.0	0.0	12.0	1.06	22.0
14. M WB TH APP	0.0	56.0	985.0	56.0	985.	90.	AG	559.	5.6	0.0	48.0		
15. M WB TH DEP	0.0	56.0	-985.0	56.0	985.	270.	AG	727.	5.6	0.0	48.0		
16. M WB TH Q	84.0	56.0	204.5	56.0	121.	90.	AG	121.	100.0	0.0	28.0	0.27	6.1

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. AS NB LT Q	120	108	2.0	192	3433	34.20	2	3
4. AS NB TH Q	120	77	2.0	1160	4821	34.20	2	3
5. AS SB LT Q	120	103	2.0	291	3433	34.20	2	3
8. AS SB TH Q	120	72	2.0	1666	4969	34.20	2	3
9. M EB LT Q	120	101	2.0	110	1711	34.20	2	3
12. M EB TH Q	120	86	2.0	823	3181	34.20	2	3
13. M WB LT Q	120	94	2.0	333	1711	34.20	2	3
16. M WB TH Q	120	79	2.0	559	3299	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	75.0	92.0	5.9
2. REC 2 (N 25)	75.0	174.0	5.9
3. REC 3 (N 50)	75.0	256.0	5.9
4. REC 4 (E 25)	157.0	92.0	5.9
5. REC 5 (E 50)	239.0	92.0	5.9
6. REC 6 (N 25 E 25)	157.0	174.0	5.9
7. REC 7 (N 25 E 50)	239.0	174.0	5.9
8. REC 8 (N 50 E 25)	157.0	256.0	5.9
9. REC 9 (N 50 E 50)	239.0	256.0	5.9
10. REC 10(SE CORNER)	75.0	-77.0	5.9
11. REC 11(S 25)	75.0	-159.0	5.9
12. REC 12(S 50)	75.0	-241.0	5.9
13. REC 13(E 25)	157.0	-77.0	5.9
14. REC 14(E 50)	239.0	-77.0	5.9
15. REC 15(S 25 E 25)	157.0	-159.0	5.9
16. REC 16(S 25 E 50)	239.0	-159.0	5.9
17. REC 17(S 50 E 25)	157.0	-241.0	5.9
18. REC 18(S 50 E 50)	239.0	-241.0	5.9
19. REC 19(SW CORNER)	-80.0	-85.0	5.9
20. REC 20(S 25)	-80.0	-167.0	5.9
21. REC 21(S 50)	-80.0	-249.0	5.9
22. REC 22(W 25)	-162.0	-85.0	5.9
23. REC 23(W 50)	-244.0	-85.0	5.9
24. REC 24(S 25 W 25)	-162.0	-167.0	5.9
25. REC 25(S 25 W 50)	-244.0	-167.0	5.9
26. REC 26(S 50 W 25)	-162.0	-249.0	5.9
27. REC 27(S 50 W 50)	-244.0	-249.0	5.9
28. REC 28(NW CORNER)	-77.0	90.0	5.9
29. REC 29(N 25)	-77.0	172.0	5.9
30. REC 30(N 50)	-77.0	254.0	5.9
31. REC 31(W 25)	-159.0	90.0	5.9
32. REC 32(W 50)	-241.0	90.0	5.9
33. REC 33(N 25 W 25)	-159.0	172.0	5.9
34. REC 34(N 25 W 50)	-241.0	172.0	5.9
35. REC 35(N 50 W 25)	-159.0	254.0	5.9
36. REC 36(N 50 W 50)	-241.0	254.0	6.0

JOB: MAIN & ALMA SCHOOL 2 LANE RUN: MESA LRT EXTENSION 2 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.5	0.5
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.4	0.3	0.1	0.1	0.1	0.1	0.6	0.7
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.3	0.1	0.1	0.1	0.1	0.8	0.6
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.5	0.4
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.6	0.6
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.6	0.7
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.7	0.9
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.7	0.8
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0	0.7	0.8
90.	0.3	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.7	0.6
100.	0.5	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.8	0.6
110.	0.5	0.1	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6
120.	0.6	0.2	0.0	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
130.	0.6	0.3	0.0	0.5	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5
140.	0.6	0.3	0.0	0.5	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5
150.	0.5	0.3	0.1	0.6	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
160.	0.5	0.2	0.1	0.6	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
170.	0.4	0.3	0.1	0.6	0.3	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
180.	0.6	0.5	0.4	0.6	0.3	0.3	0.2	0.1	0.0	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
190.	0.8	0.5	0.6	0.9	0.3	0.5	0.3	0.4	0.1	0.7	0.5	0.4	0.2	0.0	0.2	0.0	0.2	0.0	0.1	0.1
200.	0.7	0.6	0.5	0.9	0.5	0.4	0.5	0.3	0.3	0.8	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
210.	0.5	0.4	0.6	0.9	0.7	0.4	0.6	0.2	0.4	0.9	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.4	0.6	0.7	0.9	0.7	0.2	0.4	0.3	0.1	0.9	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
230.	0.7	0.7	0.6	0.7	0.8	0.2	0.2	0.4	0.1	0.9	0.8	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.7	0.7	0.5	0.7	0.5	0.3	0.0	0.4	0.3	0.9	0.8	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
250.	0.6	0.8	0.5	0.6	0.4	0.5	0.2	0.3	0.3	0.9	0.8	0.5	0.5	0.3	0.4	0.3	0.2	0.2	0.0	0.0
260.	0.5	0.8	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.8	0.8	0.6	0.4	0.4	0.4	0.3	0.3	0.2	0.0	0.0
270.	0.6	0.6	0.5	0.5	0.6	0.4	0.3	0.3	0.3	0.8	0.9	0.7	0.6	0.6	0.4	0.3	0.3	0.3	0.2	0.0
280.	0.5	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.7	1.1	0.8	0.6	0.4	0.7	0.4	0.4	0.3	0.4	0.1
290.	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.8	1.2	0.8	0.5	0.2	0.7	0.3	0.4	0.3	0.6	0.1
300.	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.7	1.2	0.9	0.3	0.3	0.3	0.1	0.5	0.3	0.6	0.2
310.	0.7	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.6	1.1	0.9	0.5	0.6	0.4	0.2	0.5	0.3	0.5	0.2
320.	0.7	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.8	1.1	0.5	0.7	0.4	0.4	0.3	0.1	0.5	0.2
330.	0.7	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.9	1.1	0.6	0.6	0.4	0.5	0.4	0.4	0.5	0.2
340.	0.5	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.0	0.8	0.8	1.0	0.6	0.6	0.4	0.4	0.4	0.3	0.4	0.2
350.	0.3	0.3	0.3	0.2	0.0	0.2	0.0	0.1	0.0	0.8	0.6	0.7	0.6	0.3	0.4	0.1	0.3	0.1	0.5	0.3
MAX	0.8	0.8	0.7	0.9	0.8	0.5	0.6	0.4	0.4	0.9	1.2	1.1	0.6	0.7	0.7	0.5	0.5	0.4	0.8	0.9
DEGR.	190	250	220	190	230	190	210	190	210	220	290	320	270	320	280	330	300	330	20	60

JOB: MAIN & ALMA SCHOOL 2 LANE RUN: MESA LRT EXTENSION 2 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.3	0.5	0.4	0.3	0.2	0.2	0.1	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.6	0.6	0.5	0.4	0.3	0.3	0.2	0.7	0.6	0.4	0.1	0.0	0.1	0.0	0.1	0.0
20.	0.7	0.8	0.5	0.5	0.4	0.5	0.3	0.8	0.7	0.5	0.3	0.1	0.2	0.1	0.2	0.1
30.	0.7	0.8	0.7	0.6	0.5	0.2	0.3	0.9	0.8	0.6	0.3	0.1	0.3	0.1	0.2	0.1
40.	0.8	0.8	0.7	0.3	0.4	0.1	0.1	0.9	0.8	0.7	0.4	0.3	0.3	0.2	0.2	0.2
50.	0.7	0.8	0.6	0.1	0.3	0.6	0.1	1.0	0.8	0.8	0.4	0.2	0.4	0.2	0.2	0.1
60.	0.7	0.4	0.5	0.3	0.1	0.5	0.3	0.8	0.7	0.7	0.5	0.2	0.4	0.2	0.3	0.1
70.	0.7	0.4	0.5	0.6	0.2	0.5	0.3	0.7	0.7	0.7	0.5	0.2	0.4	0.2	0.3	0.2
80.	0.6	0.5	0.5	0.6	0.3	0.4	0.2	0.6	0.8	0.7	0.4	0.3	0.4	0.2	0.4	0.2
90.	0.5	0.6	0.5	0.4	0.2	0.4	0.2	0.8	0.8	0.7	0.6	0.3	0.5	0.2	0.4	0.2
100.	0.5	0.6	0.2	0.4	0.2	0.3	0.1	0.8	0.9	0.7	0.6	0.3	0.5	0.3	0.4	0.2
110.	0.4	0.5	0.2	0.4	0.1	0.3	0.1	0.8	1.3	0.7	0.3	0.4	0.5	0.3	0.4	0.2
120.	0.4	0.4	0.2	0.3	0.1	0.3	0.1	0.5	1.1	0.7	0.4	0.2	0.4	0.2	0.5	0.2
130.	0.4	0.4	0.2	0.3	0.2	0.3	0.2	0.4	1.0	0.9	0.5	0.4	0.2	0.2	0.5	0.2
140.	0.5	0.3	0.2	0.3	0.2	0.3	0.2	0.7	0.9	0.9	0.4	0.6	0.4	0.4	0.2	0.2
150.	0.5	0.3	0.2	0.3	0.1	0.3	0.1	0.7	0.8	0.9	0.7	0.5	0.5	0.4	0.4	0.2
160.	0.5	0.3	0.1	0.3	0.1	0.3	0.1	0.8	0.6	1.0	0.6	0.4	0.5	0.3	0.4	0.2
170.	0.5	0.1	0.1	0.1	0.1	0.1	0.0	0.8	0.8	0.8	0.5	0.4	0.5	0.3	0.2	0.2
180.	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.7	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.1
190.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.0
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.3	0.2	0.2	0.1	0.0	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.3	0.2	0.1	0.1	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.2	0.1	0.1	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
260.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0
270.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.0	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.6	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.1	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.1	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.1	0.4	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.2	0.4	0.4	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.8	0.8	0.7	0.6	0.5	0.6	0.3	1.0	1.3	1.0	0.7	0.6	0.5	0.4	0.5	0.2
DEGR.	40	20	30	30	30	50	20	50	110	160	150	140	90	140	120	40

THE HIGHEST CONCENTRATION OF 1.30 PPM OCCURRED AT RECEPTOR REC29.

JOB: UNIVERSITY & COUNTRY CLUB 2 LANE RUN: MESA LRT EXTENSION NO BUILD

DATE : 3/17/10
TIME : 16: 1: 6

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. CC NB LT Q	0.0	-69.0	0.0	-96.9	28.	180. AG	161.	100.0	0.0	20.0	0.21	1.4
2. CC NB TH APP	36.0	0.0	36.0	-985.0	985.	180. AG	1444.	5.5	0.0	53.0		
3. CC NB TH DEP	36.0	0.0	36.0	985.0	985.	360. AG	1537.	5.5	0.0	53.0		
4. CC NB TH Q	36.0	-69.0	36.0	-237.3	168.	180. AG	176.	100.0	0.0	33.0	0.30	8.6
5. CC SB LT Q	0.0	82.0	0.0	171.2	89.	360. AG	150.	100.0	0.0	18.0	0.41	4.5
6. CC SB TH APP	-35.0	0.0	-35.0	985.0	985.	360. AG	1195.	5.5	0.0	53.0		
7. CC SB TH DEP	-35.0	0.0	-35.0	-985.0	985.	180. AG	1453.	5.5	0.0	53.0		
8. CC SB TH Q	-35.0	82.0	-35.0	208.2	126.	360. AG	160.	100.0	0.0	33.0	0.21	6.4
9. U EB LT Q	-72.0	0.0	-135.8	0.0	64.	270. AG	154.	100.0	0.0	20.0	0.34	3.2
10. U EB TH APP	0.0	-33.0	-985.0	-33.0	985.	270. AG	1170.	5.8	0.0	53.0		
11. U EB TH DEP	0.0	-33.0	985.0	-33.0	985.	90. AG	1753.	5.8	0.0	53.0		
12. U EB TH Q	-72.0	-33.0	-212.7	-33.0	141.	270. AG	182.	100.0	0.0	33.0	0.26	7.2
13. U WB LT Q	70.0	2.0	126.8	2.0	57.	90. AG	161.	100.0	0.0	20.0	0.43	2.9
14. U WB TH APP	0.0	35.0	985.0	35.0	985.	90. AG	805.	5.6	0.0	53.0		
15. U WB TH DEP	0.0	35.0	-985.0	35.0	985.	270. AG	899.	5.6	0.0	53.0		
16. U WB TH Q	70.0	35.0	172.6	35.0	103.	90. AG	193.	100.0	0.0	33.0	0.21	5.2

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. CC NB LT Q	100	88	2.0	116	3433	34.20	2	3
4. CC NB TH Q	100	64	2.0	1444	4933	34.20	2	3
5. CC SB LT Q	100	82	2.0	398	3433	34.20	2	3
8. CC SB TH Q	100	58	2.0	1195	5029	34.20	2	3
9. U EB LT Q	100	84	2.0	278	3433	34.20	2	3
12. U EB TH Q	100	66	2.0	1170	5014	34.20	2	3
13. U WB LT Q	100	88	2.0	236	3433	34.20	2	3
16. U WB TH Q	100	70	2.0	805	4984	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	75.0	77.0	5.9
2. REC 2 (N 25)	75.0	159.0	5.9
3. REC 3 (N 50)	75.0	241.0	5.9
4. REC 4 (E 25)	157.0	77.0	5.9
5. REC 5 (E 50)	239.0	77.0	5.9
6. REC 6 (N 25 E 25)	157.0	159.0	5.9
7. REC 7 (N 25 E 50)	239.0	159.0	5.9
8. REC 8 (N 50 E 25)	157.0	241.0	5.9
9. REC 9 (N 50 E 50)	239.0	241.0	5.9
10. REC 10(SE CORNER)	73.0	-74.0	5.9
11. REC 11(S 25)	73.0	-156.0	5.9
12. REC 12(S 50)	73.0	-238.0	5.9
13. REC 13(E 25)	155.0	-74.0	5.9
14. REC 14(E 50)	237.0	-74.0	5.9
15. REC 15(S 25 E 25)	155.0	-156.0	5.9
16. REC 16(S 25 E 50)	237.0	-156.0	5.9
17. REC 17(S 50 E 25)	155.0	-238.0	5.9
18. REC 18(S 50 E 50)	237.0	-238.0	5.9
19. REC 19(SW CORNER)	-72.0	-77.0	5.9
20. REC 20(S 25)	-72.0	-159.0	5.9
21. REC 21(S 50)	-72.0	-241.0	5.9
22. REC 22(W 25)	-154.0	-77.0	5.9
23. REC 23(W 50)	-236.0	-77.0	5.9
24. REC 24(S 25 W 25)	-154.0	-159.0	5.9
25. REC 25(S 25 W 50)	-236.0	-159.0	5.9
26. REC 26(S 50 W 25)	-154.0	-241.0	5.9
27. REC 27(S 50 W 50)	-236.0	-241.0	5.9
28. REC 28(NW CORNER)	-70.0	77.0	5.9
29. REC 29(N 25)	-70.0	159.0	5.9
30. REC 30(N 50)	-70.0	241.0	5.9
31. REC 31(W 25)	-152.0	77.0	5.9
32. REC 32(W 50)	-234.0	77.0	5.9
33. REC 33(N 25 W 25)	-152.0	159.0	5.9
34. REC 34(N 25 W 50)	-234.0	159.0	5.9
35. REC 35(N 50 W 25)	-152.0	241.0	5.9
36. REC 36(N 50 W 50)	-234.0	241.0	6.0

JOB: UNIVERSITY & COUNTRY CLUB 2 LANE RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.7	0.7	0.4	0.3	0.1	0.3	0.1	1.0	0.7
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	0.5	0.5	0.4	0.2	0.1	0.1	0.1	1.1	0.6
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.2	0.5	0.4	0.1	0.1	0.1	0.1	0.9	0.6
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.7	0.6
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.5	0.8
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.8	0.7
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.5	0.5	0.2	0.2	0.1	0.1	0.9	0.7
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.5	0.5	0.2	0.1	0.1	0.1	0.9	0.7
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.5	0.5	0.1	0.1	0.0	0.0	0.9	0.6
90.	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.7	0.6
100.	0.4	0.2	0.0	0.3	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.7	0.5
110.	0.7	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
120.	0.8	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
130.	0.7	0.2	0.1	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
140.	0.7	0.3	0.1	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4
150.	0.7	0.4	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
160.	0.8	0.5	0.2	0.4	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
170.	1.0	0.6	0.4	0.5	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
180.	1.0	0.8	0.6	0.7	0.2	0.4	0.2	0.3	0.1	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
190.	1.1	0.8	0.5	0.9	0.3	0.8	0.3	0.5	0.2	0.7	0.5	0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1
200.	0.9	0.6	0.6	1.0	0.4	0.8	0.5	0.5	0.4	0.8	0.6	0.4	0.2	0.1	0.2	0.1	0.2	0.1	0.0	0.0
210.	0.7	0.4	0.7	1.0	0.5	0.7	0.6	0.2	0.5	0.9	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.7	0.7	0.8	1.0	0.6	0.4	0.6	0.1	0.1	0.9	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
230.	0.6	0.8	0.8	0.9	0.7	0.3	0.3	0.6	0.1	0.8	0.7	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.8	0.9	0.7	1.0	0.7	0.4	0.4	0.6	0.3	0.7	0.7	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
250.	0.8	0.9	0.4	0.7	0.8	0.6	0.3	0.4	0.3	0.8	0.7	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.0	0.0
260.	0.6	0.8	0.4	0.7	0.7	0.6	0.5	0.3	0.2	0.9	0.7	0.4	0.5	0.4	0.4	0.3	0.2	0.2	0.1	0.0
270.	0.7	0.6	0.3	0.6	0.5	0.4	0.2	0.2	0.1	1.0	0.7	0.5	0.6	0.6	0.4	0.3	0.3	0.3	0.3	0.0
280.	0.6	0.6	0.3	0.4	0.3	0.3	0.2	0.2	0.1	1.2	0.8	0.6	0.8	0.7	0.6	0.4	0.3	0.3	0.5	0.1
290.	0.7	0.4	0.3	0.4	0.2	0.2	0.1	0.2	0.1	1.1	1.0	0.8	0.7	0.6	0.7	0.6	0.5	0.4	0.6	0.1
300.	0.7	0.4	0.3	0.4	0.1	0.2	0.1	0.2	0.1	0.9	1.0	0.9	0.7	0.7	0.6	0.2	0.6	0.5	0.7	0.2
310.	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.8	1.1	0.9	0.8	0.9	0.3	0.1	0.6	0.3	0.8	0.3
320.	0.6	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.8	1.0	1.1	1.0	0.8	0.4	0.4	0.2	0.1	0.8	0.3
330.	0.6	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.9	1.0	0.9	1.0	0.7	0.6	0.4	0.5	0.4	0.8	0.3
340.	0.4	0.4	0.4	0.2	0.1	0.2	0.1	0.2	0.1	1.1	0.9	1.0	0.9	0.6	0.5	0.3	0.3	0.3	0.9	0.4
350.	0.4	0.4	0.4	0.1	0.0	0.1	0.0	0.1	0.0	1.2	0.7	0.8	0.8	0.5	0.4	0.2	0.4	0.2	0.8	0.4
MAX	1.1	0.9	0.8	1.0	0.8	0.8	0.6	0.6	0.5	1.2	1.1	1.1	1.0	0.9	0.7	0.6	0.6	0.5	1.1	0.8
DEGR.	190	240	220	200	250	190	210	230	210	280	310	320	320	310	290	290	300	300	10	40

JOB: UNIVERSITY & COUNTRY CLUB 2 LANE RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.5	0.7	0.3	0.3	0.1	0.2	0.1	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.4	1.0	0.4	0.6	0.2	0.4	0.2	0.6	0.4	0.4	0.2	0.0	0.1	0.0	0.1	0.0
20.	0.6	1.1	0.6	0.7	0.4	0.4	0.4	0.8	0.5	0.4	0.2	0.2	0.2	0.1	0.2	0.1
30.	0.7	1.2	0.7	0.5	0.6	0.2	0.4	0.9	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.2
40.	0.8	1.1	0.9	0.4	0.6	0.2	0.3	0.8	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.2
50.	0.6	0.9	1.1	0.4	0.3	0.4	0.2	0.9	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.2
60.	0.6	0.9	0.9	0.5	0.4	0.4	0.4	0.9	0.7	0.3	0.5	0.3	0.3	0.2	0.2	0.2
70.	0.6	0.8	0.8	0.4	0.3	0.4	0.4	0.8	0.8	0.3	0.5	0.3	0.3	0.2	0.2	0.2
80.	0.5	0.7	0.7	0.4	0.4	0.4	0.4	0.6	0.8	0.3	0.4	0.4	0.3	0.3	0.2	0.2
90.	0.4	0.6	0.6	0.4	0.4	0.3	0.3	0.8	0.8	0.3	0.7	0.6	0.5	0.3	0.2	0.2
100.	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.7	1.1	0.3	0.6	0.4	0.7	0.6	0.3	0.3
110.	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.9	1.2	0.4	0.6	0.4	0.8	0.5	0.4	0.4
120.	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.9	1.2	0.5	0.4	0.9	0.7	0.1	0.6	0.4
130.	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.6	1.2	0.8	0.7	0.9	0.3	0.2	0.7	0.3
140.	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.6	1.0	0.9	0.7	0.7	0.5	0.7	0.4	0.0
150.	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.8	0.9	0.8	0.9	0.6	0.4	0.5	0.4	0.3
160.	0.4	0.2	0.1	0.2	0.1	0.2	0.1	0.7	0.7	1.0	0.7	0.5	0.7	0.5	0.3	0.3
170.	0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.7	0.7	0.8	0.7	0.4	0.6	0.4	0.3	0.2
180.	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.5	0.5	0.2	0.4	0.2	0.2	0.1
190.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.4	0.4	0.2	0.3	0.2	0.1	0.0
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.1	0.4	0.2	0.3	0.2	0.0	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.1	0.3	0.2	0.2	0.2	0.1	0.1
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.3	0.2	0.2	0.0	0.0
260.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
270.	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.3	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.1	0.4	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.1	0.5	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.1	0.6	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.1	0.7	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.2	0.7	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.2	0.7	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.3	0.7	0.3	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.8	1.2	1.1	0.7	0.6	0.4	0.4	0.9	1.2	1.0	0.9	0.9	0.8	0.7	0.7	0.4
DEGR.	40	30	50	20	30	10	20	110	110	160	150	120	110	140	130	110

THE HIGHEST CONCENTRATION OF 1.20 PPM OCCURRED AT RECEPTOR REC22.

JOB: MAIN & COUNTRY CLUB 2 LANE RUN: MESA LRT EXTENSION NO BUILD

DATE : 3/18/10
TIME : 9:34:28

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. CC NB LT Q	0.0	-88.0	0.0	-162.2	74.	180.	AG	162.	100.0	0.0	25.0	0.45	3.8
2. CC NB TH APP	32.0	0.0	32.0	-985.0	985.	180.	AG	1480.	5.5	0.0	60.0		
3. CC NB TH DEP	32.0	0.0	32.0	985.0	985.	360.	AG	1897.	5.5	0.0	60.0		
4. CC NB TH Q	32.0	-88.0	32.0	-276.7	189.	180.	AG	161.	100.0	0.0	40.0	0.27	9.6
5. CC SB LT Q	-4.0	102.0	-4.0	138.0	36.	360.	AG	165.	100.0	0.0	25.0	0.52	1.8
6. CC SB TH APP	-38.0	0.0	-38.0	985.0	985.	360.	AG	1715.	5.5	0.0	60.0		
7. CC SB TH DEP	-38.0	0.0	-38.0	-985.0	985.	180.	AG	1776.	5.5	0.0	60.0		
8. CC SB TH Q	-38.0	102.0	-38.0	326.8	225.	360.	AG	165.	100.0	0.0	40.0	0.32	11.4
9. M EB LT Q	-104.0	-20.0	-1449.8	-20.0	1346.	270.	AG	67.	100.0	0.0	14.0	1.25	68.4
10. M EB TH APP	0.0	-34.0	-985.0	-34.0	985.	270.	AG	274.	5.8	0.0	34.0		
11. M EB TH DEP	0.0	-34.0	985.0	-34.0	985.	90.	AG	563.	5.8	0.0	34.0		
12. M EB TH Q	-104.0	-34.0	-240.3	-34.0	136.	270.	AG	70.	100.0	0.0	14.0	0.74	6.9
13. M EB R APP	0.0	-55.0	-985.0	-55.0	985.	270.	AG	250.	5.8	0.0	35.0		
14. M EB R Q	-104.0	-55.0	-228.4	-55.0	124.	270.	AG	70.	100.0	0.0	15.0	0.79	6.3
15. M WB LT Q	96.0	38.0	177.1	38.0	81.	90.	AG	70.	100.0	0.0	12.0	0.46	4.1
16. M WB TH APP	0.0	51.0	985.0	51.0	985.	90.	AG	261.	5.6	0.0	44.0		
17. M WB TH DEP	0.0	51.0	-985.0	51.0	985.	270.	AG	802.	5.6	0.0	44.0		
18. M WB TH Q	88.0	51.0	155.5	51.0	68.	90.	AG	145.	100.0	0.0	24.0	0.25	3.4

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. CC NB LT Q	120	106	2.0	257	3433	34.20	2	3
4. CC NB TH Q	120	70	2.0	1480	4749	34.20	2	3
5. CC SB LT Q	120	108	2.0	122	1770	34.20	2	3
8. CC SB TH Q	120	72	2.0	1715	4847	34.20	2	3
9. M EB LT Q	120	87	2.0	516	1711	34.20	2	3
12. M EB TH Q	120	91	2.0	274	1786	34.20	2	3
14. M EB R Q	120	91	2.0	250	1531	34.20	2	3
15. M WB LT Q	120	91	2.0	163	1711	34.20	2	3
18. M WB TH Q	120	95	2.0	261	2980	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	86.0	89.0	5.9
2. REC 2 (N 25)	86.0	171.0	5.9
3. REC 3 (N 50)	86.0	253.0	5.9
4. REC 4 (E 25)	168.0	89.0	5.9
5. REC 5 (E 50)	250.0	89.0	5.9
6. REC 6 (N 25 E 25)	168.0	171.0	5.9
7. REC 7 (N 25 E 50)	250.0	171.0	5.9
8. REC 8 (N 50 E 25)	168.0	253.0	5.9
9. REC 9 (N 50 E 50)	250.0	253.0	5.9
10. REC 10(SE CORNER)	84.0	-72.0	5.9
11. REC 11(S 25)	84.0	-154.0	5.9
12. REC 12(S 50)	84.0	-236.0	5.9
13. REC 13(E 25)	166.0	-72.0	5.9
14. REC 14(E 50)	248.0	-72.0	5.9
15. REC 15(S 25 E 25)	166.0	-154.0	5.9
16. REC 16(S 25 E 50)	248.0	-154.0	5.9
17. REC 17(S 50 E 25)	166.0	-236.0	5.9
18. REC 18(S 50 E 50)	248.0	-236.0	5.9
19. REC 19(SW CORNER)	-82.0	-80.0	5.9
20. REC 20(S 25)	-82.0	-162.0	5.9
21. REC 21(S 50)	-82.0	-244.0	5.9
22. REC 22(W 25)	-164.0	-80.0	5.9
23. REC 23(W 50)	-246.0	-80.0	5.9
24. REC 24(S 25 W 25)	-164.0	-162.0	5.9
25. REC 25(S 25 W 50)	-246.0	-162.0	5.9
26. REC 26(S 50 W 25)	-164.0	-244.0	5.9
27. REC 27(S 50 W 50)	-246.0	-244.0	5.9
28. REC 28(NW CORNER)	-84.0	86.0	5.9
29. REC 29(N 25)	-84.0	168.0	5.9
30. REC 30(N 50)	-84.0	250.0	5.9
31. REC 31(W 25)	-166.0	86.0	5.9
32. REC 32(W 50)	-248.0	86.0	5.9
33. REC 33(N 25 W 25)	-166.0	168.0	5.9
34. REC 34(N 25 W 50)	-248.0	168.0	5.9
35. REC 35(N 50 W 25)	-166.0	250.0	5.9
36. REC 36(N 50 W 50)	-248.0	250.0	5.9

JOB: MAIN & COUNTRY CLUB 2 LANE RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.4	0.3	0.1	0.1	0.0	0.1	0.0	0.5	0.5
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.7	0.6
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.7	0.7
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.5
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.6
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.6
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.7
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.7
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.7
90.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.7	0.7
100.	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6
110.	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5
120.	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6
130.	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5
140.	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5
150.	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
160.	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
170.	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
180.	0.5	0.5	0.4	0.1	0.0	0.1	0.0	0.0	0.0	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
190.	0.5	0.4	0.5	0.4	0.0	0.4	0.1	0.4	0.1	0.5	0.4	0.3	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.1
200.	0.7	0.5	0.6	0.6	0.2	0.4	0.2	0.3	0.2	0.8	0.7	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0
210.	0.6	0.5	0.6	0.6	0.3	0.4	0.3	0.3	0.3	0.8	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.4	0.5	0.5	0.7	0.3	0.4	0.4	0.2	0.2	0.8	0.6	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.0	0.0
230.	0.4	0.6	0.6	0.6	0.3	0.1	0.2	0.3	0.1	0.8	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.4	0.6	0.5	0.4	0.4	0.2	0.1	0.3	0.2	0.8	0.6	0.5	0.5	0.3	0.4	0.3	0.2	0.2	0.0	0.0
250.	0.5	0.7	0.5	0.4	0.3	0.5	0.2	0.3	0.3	0.6	0.6	0.6	0.4	0.3	0.4	0.3	0.3	0.2	0.0	0.0
260.	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.5	0.7	0.6	0.4	0.3	0.4	0.3	0.3	0.3	0.0	0.0
270.	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.7	0.6	0.4	0.3	0.5	0.3	0.4	0.3	0.3	0.0
280.	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.9	0.6	0.5	0.4	0.6	0.4	0.4	0.3	0.4	0.1
290.	0.6	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.5	0.9	0.7	0.3	0.1	0.5	0.3	0.4	0.3	0.6	0.1
300.	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.6	0.8	0.6	0.3	0.4	0.3	0.1	0.5	0.3	0.6	0.1
310.	0.6	0.6	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.6	0.7	0.7	0.4	0.5	0.2	0.2	0.4	0.1	0.5	0.1
320.	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.7	0.8	0.4	0.5	0.4	0.3	0.3	0.2	0.4	0.2
330.	0.5	0.5	0.4	0.3	0.2	0.3	0.2	0.3	0.2	0.6	0.6	0.8	0.6	0.3	0.3	0.3	0.4	0.3	0.3	0.2
340.	0.5	0.4	0.4	0.2	0.2	0.2	0.1	0.2	0.1	0.8	0.6	0.9	0.5	0.3	0.3	0.2	0.3	0.2	0.1	0.0
350.	0.4	0.4	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.6	0.5	0.5	0.4	0.2	0.3	0.1	0.2	0.1	0.3	0.1
MAX	0.7	0.7	0.6	0.7	0.4	0.5	0.4	0.4	0.3	0.8	0.9	0.9	0.6	0.5	0.6	0.4	0.5	0.3	0.8	0.7
DEGR.	200	250	200	220	240	250	220	190	210	220	280	340	330	310	280	280	300	260	120	20

JOB: MAIN & COUNTRY CLUB 2 LANE RUN: MESA LRT EXTENSION NO BUILD

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.4	0.6	0.2	0.3	0.1	0.1	0.0	0.5	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0
10.	0.5	0.8	0.4	0.4	0.2	0.3	0.1	0.7	0.6	0.5	0.2	0.0	0.2	0.0	0.1	0.0
20.	0.7	0.8	0.4	0.3	0.6	0.4	0.3	0.9	0.8	0.6	0.3	0.2	0.2	0.2	0.2	0.1
30.	0.7	0.8	0.7	0.3	0.5	0.3	0.3	0.9	0.9	0.7	0.3	0.2	0.3	0.2	0.2	0.2
40.	0.6	0.7	0.7	0.3	0.4	0.2	0.2	0.9	0.9	0.8	0.4	0.3	0.3	0.2	0.2	0.2
50.	0.7	0.6	0.7	0.2	0.1	0.4	0.1	0.9	0.9	0.9	0.4	0.3	0.4	0.3	0.3	0.2
60.	0.6	0.5	0.7	0.2	0.1	0.4	0.3	0.7	0.7	0.7	0.4	0.3	0.4	0.3	0.3	0.2
70.	0.5	0.3	0.4	0.4	0.1	0.3	0.3	0.6	0.7	0.7	0.3	0.3	0.4	0.3	0.4	0.3
80.	0.5	0.4	0.3	0.4	0.4	0.3	0.3	0.5	0.7	0.7	0.3	0.3	0.4	0.3	0.4	0.3
90.	0.6	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.7	0.7	0.4	0.4	0.4	0.3	0.4	0.3
100.	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.5	0.8	0.7	0.3	0.3	0.4	0.3	0.4	0.3
110.	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.4	0.8	0.7	0.3	0.3	0.3	0.3	0.4	0.3
120.	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.4	0.8	0.7	0.4	0.4	0.3	0.1	0.4	0.3
130.	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.8	0.8	0.4	0.4	0.2	0.1	0.4	0.2
140.	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.8	0.8	0.4	0.6	0.5	0.4	0.3	0.1
150.	0.4	0.3	0.2	0.3	0.2	0.3	0.2	0.7	0.8	0.9	0.4	0.5	0.4	0.3	0.4	0.2
160.	0.5	0.3	0.1	0.2	0.1	0.2	0.1	0.7	0.6	1.0	0.4	0.5	0.4	0.3	0.3	0.2
170.	0.5	0.1	0.1	0.1	0.0	0.1	0.0	0.7	0.7	0.7	0.5	0.3	0.3	0.2	0.2	0.1
180.	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.4	0.5	0.2	0.2	0.1	0.1	0.0
190.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.3	0.2	0.1	0.1	0.0	0.0
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.3	0.2	0.2	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.3	0.2	0.2	0.0	0.0
260.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.0	0.0	0.0
270.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.0	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.6	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.0	0.5	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.4	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.2	0.5	0.2	0.3	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.7	0.8	0.7	0.4	0.6	0.4	0.3	0.9	0.9	1.0	0.5	0.6	0.5	0.4	0.4	0.3
DEGR.	20	10	30	10	20	20	20	50	30	160	170	140	140	140	70	70

THE HIGHEST CONCENTRATION OF 1.00 PPM OCCURRED AT RECEPTOR REC30.

JOB: MAIN & MESA 2 LANE RUN: MESA LRT EXTENSION 2 LANE

DATE : 3/18/10
TIME : 9:52:38

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. M NB LT Q	0.0	-94.0	0.0	-142.0	48.	180.	AG	77.	100.0	0.0	12.0	0.39	2.4
2. M NB TH APP	20.0	0.0	20.0	-985.0	985.	180.	AG	1075.	5.5	0.0	48.0		
3. M NB TH DEP	20.0	0.0	20.0	985.0	985.	360.	AG	1169.	5.5	0.0	48.0		
4. M NB TH Q	20.0	-94.0	20.0	-305.4	211.	180.	AG	110.	100.0	0.0	28.0	0.45	10.7
5. M SB LT Q	0.0	85.0	0.0	349.8	265.	360.	AG	76.	100.0	0.0	10.0	1.03	13.5
6. M SB TH APP	-20.0	0.0	-20.0	985.0	985.	360.	AG	1307.	5.5	0.0	46.0		
7. M SB TH DEP	-20.0	0.0	-20.0	-985.0	985.	180.	AG	1458.	5.5	0.0	46.0		
8. M SB TH Q	-20.0	85.0	-20.0	334.9	250.	360.	AG	107.	100.0	0.0	26.0	0.50	12.7
9. M EB LT Q	-9.0	-32.0	-46.7	-32.0	38.	270.	AG	81.	100.0	0.0	12.0	0.46	1.9
10. M EB TH APP	0.0	-45.0	-985.0	-45.0	985.	270.	AG	460.	5.8	0.0	32.0		
11. M EB TH DEP	0.0	-45.0	985.0	-45.0	985.	90.	AG	859.	5.8	0.0	32.0		
12. M EB TH Q	-9.0	-45.0	-258.7	-45.0	250.	270.	AG	63.	100.0	0.0	12.0	0.95	12.7
13. M EB R APP	0.0	-60.0	-985.0	-60.0	985.	270.	AG	79.	5.8	0.0	36.0		
14. M EB R Q	-67.0	-60.0	-102.9	-60.0	36.	270.	AG	63.	100.0	0.0	16.0	0.19	1.8
15. M WB LT Q	77.0	23.0	342.0	23.0	265.	90.	AG	81.	100.0	0.0	14.0	1.09	13.5
16. M WB TH APP	0.0	36.0	985.0	36.0	985.	90.	AG	231.	5.6	0.0	34.0		
17. M WB TH DEP	0.0	36.0	-985.0	36.0	985.	270.	AG	401.	5.6	0.0	34.0		
18. M WB TH Q	77.0	36.0	181.8	36.0	105.	90.	AG	63.	100.0	0.0	14.0	0.48	5.3
19. M WB R APP	0.0	50.0	985.0	50.0	985.	90.	AG	171.	5.6	0.0	32.0		
20. M WB R Q	77.0	50.0	154.6	50.0	78.	90.	AG	63.	100.0	0.0	12.0	0.41	3.9

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. M NB LT Q	120	101	2.0	87	1770	34.20	2	3
4. M NB TH Q	120	72	2.0	1075	3267	34.20	2	3
5. M SB LT Q	120	99	2.0	257	1770	34.20	2	3
8. M SB TH Q	120	70	2.0	1307	3442	34.20	2	3
9. M EB LT Q	120	106	2.0	65	1711	34.20	2	3
12. M EB TH Q	120	83	2.0	460	1757	34.20	2	3
14. M EB R Q	120	83	2.0	79	1531	34.20	2	3
15. M WB LT Q	120	106	2.0	155	1711	34.20	2	3
18. M WB TH Q	120	83	2.0	231	1757	34.20	2	3
20. M WB R Q	120	83	2.0	171	1531	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	67.0	75.0	5.9
2. REC 2 (N 25)	67.0	157.0	5.9
3. REC 3 (N 50)	67.0	239.0	5.9
4. REC 4 (E 25)	149.0	75.0	5.9
5. REC 5 (E 50)	231.0	75.0	5.9
6. REC 6 (N 25 E 25)	149.0	157.0	5.9
7. REC 7 (N 25 E 50)	231.0	157.0	5.9
8. REC 8 (N 50 E 25)	149.0	239.0	5.9
9. REC 9 (N 50 E 50)	231.0	239.0	5.9
10. REC 10(SE CORNER)	67.0	-82.0	5.9
11. REC 11(S 25)	67.0	-164.0	5.9
12. REC 12(S 50)	67.0	-246.0	5.9
13. REC 13(E 25)	149.0	-82.0	5.9
14. REC 14(E 50)	231.0	-82.0	5.9
15. REC 15(S 25 E 25)	149.0	-164.0	5.9
16. REC 16(S 25 E 50)	231.0	-164.0	5.9
17. REC 17(S 50 E 25)	149.0	-246.0	5.9
18. REC 18(S 50 E 50)	231.0	-246.0	5.9
19. REC 19(SW CORNER)	-56.0	-85.0	5.9
20. REC 20(S 25)	-56.0	-167.0	5.9
21. REC 21(S 50)	-56.0	-249.0	5.9
22. REC 22(W 25)	-138.0	-85.0	5.9
23. REC 23(W 50)	-220.0	-85.0	5.9
24. REC 24(S 25 W 25)	-138.0	-167.0	5.9
25. REC 25(S 25 W 50)	-220.0	-167.0	5.9
26. REC 26(S 50 W 25)	-138.0	-249.0	5.9
27. REC 27(S 50 W 50)	-220.0	-249.0	5.9
28. REC 28(NW CORNER)	-60.0	71.0	5.9
29. REC 29(N 25)	-60.0	153.0	5.9
30. REC 30(N 50)	-60.0	235.0	5.9
31. REC 31(W 25)	-142.0	71.0	5.9
32. REC 32(W 50)	-224.0	71.0	5.9
33. REC 33(N 25 W 25)	-142.0	153.0	5.9
34. REC 34(N 25 W 50)	-224.0	153.0	5.9
35. REC 35(N 50 W 25)	-142.0	235.0	5.9
36. REC 36(N 50 W 50)	-224.0	235.0	5.9

JOB: MAIN & MESA 2 LANE RUN: MESA LRT EXTENSION 2 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.0	0.0	0.6	0.4
10.	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.2	0.1	0.0	0.0	0.9	0.5
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.2	0.1	0.0	0.0	0.8	0.5
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.7	0.4
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.7	0.6
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.5	0.6
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.5	0.6
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.5	0.6
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.4	0.6
90.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.5
100.	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5
110.	0.4	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
120.	0.4	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
130.	0.4	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
140.	0.4	0.1	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
150.	0.4	0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
160.	0.4	0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
170.	0.3	0.0	0.0	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
180.	0.4	0.3	0.3	0.4	0.2	0.1	0.1	0.0	0.0	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
190.	0.5	0.4	0.3	0.6	0.2	0.3	0.1	0.2	0.0	0.5	0.4	0.3	0.2	0.0	0.2	0.0	0.1	0.0	0.1	0.1
200.	0.5	0.3	0.4	0.7	0.4	0.3	0.3	0.2	0.2	0.6	0.6	0.4	0.2	0.2	0.2	0.0	0.2	0.0	0.0	0.0
210.	0.3	0.4	0.5	0.7	0.4	0.2	0.3	0.2	0.1	0.6	0.6	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.3	0.3	0.5	0.6	0.5	0.1	0.2	0.2	0.0	0.5	0.5	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.0	0.0
230.	0.4	0.5	0.5	0.5	0.4	0.1	0.0	0.3	0.0	0.6	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.4	0.5	0.5	0.4	0.3	0.2	0.0	0.3	0.1	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.0	0.0
250.	0.3	0.4	0.5	0.2	0.2	0.3	0.1	0.3	0.3	0.4	0.4	0.4	0.3	0.2	0.3	0.2	0.3	0.1	0.0	0.0
260.	0.3	0.4	0.4	0.3	0.2	0.3	0.2	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.0	0.0
270.	0.3	0.5	0.5	0.2	0.1	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.2	0.2	0.3	0.3	0.3	0.3	0.1	0.0
280.	0.3	0.4	0.4	0.3	0.2	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.1	0.3	0.2	0.3	0.2	0.2	0.0
290.	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.2	0.5	0.4	0.4	0.3	0.1	0.3	0.1	0.3	0.2	0.3	0.0
300.	0.5	0.5	0.5	0.4	0.3	0.4	0.2	0.2	0.2	0.4	0.6	0.4	0.1	0.1	0.3	0.0	0.3	0.3	0.3	0.0
310.	0.5	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.4	0.6	0.4	0.3	0.4	0.2	0.1	0.3	0.0	0.3	0.0
320.	0.6	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.4	0.5	0.1	0.3	0.3	0.0	0.3	0.1
330.	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.1
340.	0.5	0.5	0.3	0.2	0.1	0.2	0.1	0.2	0.0	0.5	0.5	0.6	0.4	0.4	0.4	0.3	0.2	0.2	0.3	0.1
350.	0.5	0.3	0.3	0.2	0.0	0.1	0.0	0.1	0.0	0.6	0.5	0.4	0.4	0.2	0.3	0.2	0.2	0.0	0.3	0.2
MAX	0.6	0.5	0.5	0.7	0.5	0.4	0.3	0.4	0.3	0.6	0.6	0.6	0.4	0.5	0.4	0.3	0.3	0.3	0.9	0.6
DEGR.	320	230	210	200	220	280	200	260	250	200	200	340	280	320	330	240	250	270	10	40

JOB: MAIN & MESA 2 LANE RUN: MESA LRT EXTENSION 2 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.4	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.4	0.4	0.2	0.3	0.0	0.2	0.1	0.7	0.5	0.4	0.2	0.0	0.1	0.0	0.1	0.0
20.	0.6	0.5	0.4	0.4	0.3	0.2	0.2	0.8	0.7	0.5	0.3	0.1	0.2	0.1	0.2	0.1
30.	0.5	0.5	0.5	0.2	0.4	0.1	0.2	0.7	0.7	0.6	0.3	0.2	0.3	0.2	0.2	0.2
40.	0.6	0.4	0.5	0.1	0.2	0.2	0.0	0.6	0.7	0.6	0.4	0.3	0.3	0.2	0.2	0.2
50.	0.5	0.5	0.4	0.1	0.0	0.3	0.1	0.6	0.6	0.6	0.4	0.3	0.3	0.2	0.3	0.2
60.	0.5	0.4	0.2	0.3	0.1	0.3	0.1	0.6	0.6	0.6	0.4	0.3	0.4	0.3	0.3	0.2
70.	0.5	0.5	0.2	0.4	0.2	0.3	0.2	0.5	0.6	0.6	0.3	0.2	0.4	0.2	0.3	0.2
80.	0.5	0.3	0.3	0.4	0.3	0.3	0.2	0.4	0.6	0.6	0.3	0.2	0.4	0.2	0.4	0.2
90.	0.5	0.3	0.2	0.3	0.2	0.3	0.2	0.4	0.6	0.6	0.2	0.1	0.4	0.2	0.4	0.3
100.	0.5	0.3	0.2	0.3	0.2	0.3	0.1	0.5	0.6	0.6	0.4	0.2	0.3	0.2	0.4	0.2
110.	0.4	0.3	0.2	0.3	0.2	0.2	0.1	0.5	0.6	0.6	0.3	0.2	0.3	0.1	0.4	0.2
120.	0.4	0.3	0.2	0.3	0.1	0.2	0.1	0.4	0.7	0.6	0.3	0.2	0.3	0.0	0.3	0.2
130.	0.4	0.3	0.1	0.3	0.1	0.2	0.1	0.5	0.6	0.6	0.3	0.2	0.1	0.0	0.3	0.1
140.	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.7	0.4	0.5	0.2	0.1	0.3	0.0
150.	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.5	0.5	0.6	0.5	0.4	0.3	0.2	0.2	0.1
160.	0.4	0.2	0.1	0.2	0.1	0.2	0.1	0.6	0.6	0.8	0.4	0.3	0.2	0.1	0.2	0.1
170.	0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.5	0.5	0.5	0.4	0.2	0.2	0.1	0.2	0.1
180.	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.4	0.2	0.1	0.1	0.0	0.1	0.0
190.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
260.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
270.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
290.	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX DEGR.	0.6 20	0.5 20	0.5 30	0.4 20	0.4 30	0.3 50	0.2 20	0.8 20	0.7 30	0.8 160	0.5 150	0.5 140	0.4 60	0.3 60	0.4 80	0.3 90

THE HIGHEST CONCENTRATION OF 0.90 PPM OCCURRED AT RECEPTOR REC19.

JOB: BROADWAY & ALMA SCHOOL 4 LANE RUN: MESA LRT EXTENSION 4 LANE

DATE : 3/18/10
TIME : 15:27: 6

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. AS NB LT Q	-2.0	-107.0	-2.0	-150.5	44.	180.	AG	167.	100.0	0.0	24.0	0.37	2.2
2. AS NB TH APP	25.0	0.0	25.0	-985.0	985.	180.	AG	972.	5.5	0.0	61.0		
3. AS NB TH DEP	25.0	0.0	25.0	985.0	985.	360.	AG	1576.	5.5	0.0	61.0		
4. AS NB TH Q	25.0	-110.0	25.0	-264.1	154.	180.	AG	200.	100.0	0.0	41.0	0.26	7.8
5. AS NB R APP	65.0	0.0	65.0	-985.0	985.	180.	AG	216.	5.5	0.0	32.0		
6. AS NB R Q	65.0	-110.0	65.0	-212.8	103.	180.	AG	67.	100.0	0.0	12.0	0.57	5.2
7. AS SB LT Q	0.0	92.0	0.0	209.7	118.	360.	AG	148.	100.0	0.0	26.0	0.41	6.0
8. AS SB TH APP	-35.0	0.0	-35.0	985.0	985.	360.	AG	1666.	5.5	0.0	65.0		
9. AS SB TH DEP	-35.0	0.0	-35.0	985.0	985.	360.	AG	2101.	5.5	0.0	65.0		
10. AS SB TH Q	-35.0	90.0	-35.0	317.6	228.	360.	AG	172.	100.0	0.0	45.0	0.33	11.6
11. B EB LT Q	-94.0	0.0	-193.2	0.0	99.	270.	AG	145.	100.0	0.0	24.0	0.32	5.0
12. B EB TH APP	0.0	-35.0	-985.0	-35.0	985.	270.	AG	1629.	5.8	0.0	62.0		
13. B EB TH DEP	0.0	-35.0	-985.0	-35.0	985.	270.	AG	2290.	5.8	0.0	62.0		
14. B EB TH Q	-93.0	-35.0	-315.7	-35.0	223.	270.	AG	172.	100.0	0.0	42.0	0.31	11.3
15. B EB R APP	0.0	-67.0	-985.0	-67.0	985.	270.	AG	291.	5.5	0.0	32.0		
16. B EB R Q	-93.0	-67.0	-212.3	-67.0	119.	270.	AG	57.	100.0	0.0	12.0	0.54	6.1
17. B WB LT Q	95.0	0.0	197.7	0.0	103.	90.	AG	154.	100.0	0.0	24.0	0.43	5.2
18. B WB TH APP	0.0	33.0	985.0	33.0	985.	90.	AG	992.	5.5	0.0	62.0		
19. B WB TH DEP	0.0	33.0	-985.0	33.0	985.	270.	AG	1146.	5.5	0.0	62.0		
20. B WB TH Q	92.0	33.0	238.2	33.0	146.	90.	AG	186.	100.0	0.0	42.0	0.23	7.4

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. AS NB LT Q	120	109	2.0	147	3433	34.20	2	3
4. AS NB TH Q	120	87	2.0	972	5085	34.20	2	3
6. AS NB R Q	120	87	2.0	216	1583	34.20	2	3
7. AS SB LT Q	120	97	2.0	445	3433	34.20	2	3
10. AS SB TH Q	120	75	2.0	1666	4979	34.20	2	3
11. B EB LT Q	120	95	2.0	382	3433	34.20	2	3
14. B EB TH Q	120	75	2.0	1629	5085	34.20	2	3
16. B EB R Q	120	75	2.0	291	1583	34.20	2	3
17. B WB LT Q	120	101	2.0	373	3433	34.20	2	3
20. B WB TH Q	120	81	2.0	992	4912	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	75.0	77.0	5.9
2. REC 2 (N 25)	75.0	159.0	5.9
3. REC 3 (N 50)	75.0	241.0	5.9
4. REC 4 (E 25)	157.0	77.0	5.9
5. REC 5 (E 50)	239.0	77.0	5.9
6. REC 6 (N 25 E 25)	157.0	159.0	5.9
7. REC 7 (N 25 E 50)	239.0	159.0	5.9
8. REC 8 (N 50 E 25)	157.0	241.0	5.9
9. REC 9 (N 50 E 50)	239.0	241.0	5.9
10. REC 10(SE CORNER)	85.0	-75.0	5.9
11. REC 11(S 25)	85.0	-157.0	5.9
12. REC 12(S 50)	85.0	-239.0	5.9
13. REC 13(E 25)	167.0	-75.0	5.9
14. REC 14(E 50)	249.0	-75.0	5.9
15. REC 15(S 25 E 25)	167.0	-157.0	5.9
16. REC 16(S 25 E 50)	249.0	-157.0	5.9
17. REC 17(S 50 E 25)	167.0	-239.0	5.9
18. REC 18(S 50 E 50)	249.0	-239.0	5.9
19. REC 19(SW CORNER)	-75.0	-94.0	5.9
20. REC 20(S 25)	-75.0	-176.0	5.9
21. REC 21(S 50)	-75.0	-258.0	5.9
22. REC 22(W 25)	-157.0	-94.0	5.9
23. REC 23(W 50)	-239.0	-94.0	5.9
24. REC 24(S 25 W 25)	-157.0	-176.0	5.9
25. REC 25(S 25 W 50)	-239.0	-176.0	5.9
26. REC 26(S 50 W 25)	-157.0	-258.0	5.9
27. REC 27(S 50 W 50)	-239.0	-258.0	5.9
28. REC 28(NW CORNER)	-74.0	75.0	5.9
29. REC 29(N 25)	-74.0	157.0	5.9
30. REC 30(N 50)	-74.0	239.0	5.9
31. REC 31(W 25)	-156.0	75.0	5.9
32. REC 32(W 50)	-238.0	75.0	5.9
33. REC 33(N 25 W 25)	-156.0	157.0	5.9
34. REC 34(N 25 W 50)	-238.0	157.0	5.9
35. REC 35(N 50 W 25)	-156.0	239.0	5.9
36. REC 36(N 50 W 50)	-238.0	239.0	6.0

JOB: BROADWAY & ALMA SCHOOL 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.5	0.5	0.2	0.3	0.2	0.2	0.1	1.3	1.1
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.2	0.5	0.1	0.3	0.1	0.1	0.0	1.5	0.8
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.2	0.4	0.1	0.2	0.1	0.0	0.0	1.4	0.6
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.1	0.4	0.1	0.1	0.1	0.0	0.0	0.8	0.4
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.8	0.3
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.8	0.6
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.6	0.6
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.6	0.5
80.	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.5
90.	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4
100.	0.5	0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4
110.	0.7	0.1	0.1	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
120.	0.8	0.2	0.1	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3
130.	0.8	0.2	0.1	0.6	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3
140.	0.8	0.4	0.2	0.6	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2
150.	0.6	0.4	0.2	0.6	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1
160.	0.4	0.4	0.2	0.6	0.1	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
170.	0.3	0.3	0.3	0.7	0.2	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
180.	0.3	0.5	0.4	0.7	0.3	0.4	0.2	0.3	0.2	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
190.	0.3	0.4	0.4	0.9	0.4	0.6	0.3	0.4	0.2	0.5	0.4	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
200.	0.4	0.6	0.6	0.9	0.7	0.6	0.5	0.3	0.3	0.7	0.6	0.3	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0
210.	0.6	0.6	1.1	0.9	0.8	0.4	0.6	0.2	0.2	0.7	0.6	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
220.	0.5	0.9	1.3	0.9	1.1	0.3	0.5	0.5	0.1	0.6	0.6	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
230.	1.0	1.2	1.3	1.0	1.0	0.5	0.3	0.9	0.4	0.5	0.7	0.2	0.4	0.1	0.2	0.0	0.1	0.0	0.0	0.0
240.	1.2	1.3	1.1	0.9	1.0	0.7	0.6	0.9	0.9	0.4	0.7	0.2	0.3	0.1	0.3	0.1	0.1	0.0	0.0	0.0
250.	1.2	1.3	1.1	1.0	1.0	0.9	0.7	0.8	0.8	0.3	0.7	0.3	0.3	0.1	0.3	0.1	0.2	0.0	0.0	0.0
260.	1.3	1.2	0.7	1.0	1.0	0.8	0.8	0.7	0.6	0.5	0.7	0.4	0.4	0.3	0.4	0.1	0.2	0.1	0.2	0.0
270.	0.9	0.9	0.7	0.8	0.9	0.5	0.5	0.4	0.4	0.8	1.0	0.5	0.7	0.5	0.6	0.3	0.3	0.1	0.5	0.1
280.	0.8	0.9	0.7	0.6	0.5	0.6	0.5	0.4	0.4	1.2	1.2	0.7	0.7	0.5	0.8	0.6	0.5	0.3	1.2	0.2
290.	0.8	0.9	0.7	0.5	0.5	0.5	0.4	0.4	0.3	0.9	1.3	0.8	0.4	0.5	0.7	0.4	0.6	0.4	1.3	0.5
300.	0.9	0.8	0.7	0.6	0.4	0.4	0.4	0.3	0.3	0.7	1.2	0.9	0.5	0.8	0.5	0.3	0.7	0.5	1.5	0.5
310.	0.9	0.8	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.6	1.1	1.0	0.6	0.9	0.5	0.3	0.7	0.1	1.3	0.6
320.	1.0	0.8	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.7	0.9	1.0	0.8	0.8	0.4	0.7	0.4	0.4	1.2	0.6
330.	1.0	0.8	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.9	0.8	1.1	1.0	0.7	0.4	0.7	0.4	0.6	1.2	0.7
340.	0.9	0.7	0.7	0.3	0.3	0.3	0.3	0.3	0.2	0.9	0.9	0.9	0.9	0.6	0.7	0.6	0.4	0.5	0.9	0.6
350.	0.6	0.6	0.5	0.3	0.0	0.3	0.0	0.2	0.0	0.8	0.7	0.8	0.8	0.2	0.6	0.3	0.5	0.2	1.1	0.8
MAX	1.3	1.3	1.3	1.0	1.1	0.9	0.8	0.9	0.9	1.2	1.3	1.1	1.0	0.9	0.8	0.7	0.7	0.6	1.5	1.1
DEGR.	260	240	220	250	220	250	260	230	240	280	290	330	330	310	280	320	300	330	10	0

JOB: BROADWAY & ALMA SCHOOL 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.8	1.4	0.9	0.9	0.6	0.6	0.3	1.0	1.0	0.9	0.2	0.0	0.2	0.0	0.1	0.0
10.	0.6	1.7	1.1	1.2	0.8	0.7	0.5	1.4	1.3	1.1	0.3	0.2	0.3	0.1	0.2	0.1
20.	0.7	1.6	1.4	1.1	1.1	0.7	0.8	1.7	1.6	1.4	0.5	0.3	0.4	0.3	0.4	0.2
30.	0.4	1.7	1.4	0.8	1.1	0.5	0.7	1.5	1.4	1.3	0.7	0.3	0.5	0.3	0.4	0.3
40.	0.5	1.6	1.5	0.4	0.9	0.0	0.4	1.5	1.4	1.3	0.6	0.4	0.5	0.3	0.4	0.3
50.	0.5	1.3	1.7	0.3	0.4	0.3	0.1	1.4	1.4	1.3	0.7	0.4	0.6	0.4	0.5	0.3
60.	0.4	1.1	1.5	0.2	0.3	0.2	0.1	1.2	1.3	1.2	0.7	0.4	0.6	0.4	0.5	0.3
70.	0.4	0.8	1.1	0.4	0.1	0.3	0.1	0.9	1.2	1.0	0.7	0.5	0.7	0.4	0.6	0.4
80.	0.3	0.4	0.8	0.3	0.1	0.2	0.1	0.9	1.2	1.0	0.6	0.5	0.7	0.5	0.6	0.4
90.	0.3	0.2	0.3	0.3	0.1	0.2	0.1	0.9	1.3	1.1	0.8	0.7	0.7	0.5	0.6	0.4
100.	0.2	0.3	0.1	0.3	0.1	0.2	0.0	1.1	1.4	1.0	0.6	0.6	0.9	0.7	0.7	0.5
110.	0.1	0.3	0.1	0.2	0.1	0.1	0.0	1.0	1.4	1.2	0.7	0.6	0.9	0.6	0.8	0.6
120.	0.1	0.3	0.1	0.2	0.0	0.1	0.0	1.0	1.6	1.6	0.6	0.7	0.7	0.3	0.9	0.6
130.	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.9	1.6	1.7	0.8	1.0	0.5	0.4	0.8	0.3
140.	0.1	0.2	0.0	0.1	0.0	0.1	0.0	1.1	1.4	1.7	0.9	0.9	0.5	0.6	0.5	0.3
150.	0.1	0.1	0.0	0.1	0.0	0.1	0.0	1.1	1.3	1.5	1.0	0.8	0.6	0.6	0.5	0.5
160.	0.1	0.1	0.0	0.1	0.0	0.1	0.0	1.1	1.4	1.5	1.1	0.7	0.7	0.5	0.7	0.5
170.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1	1.3	0.9	0.7	0.5	0.4	0.5	0.4
180.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.8	0.9	0.7	0.5	0.4	0.5	0.4
190.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.9	0.7	0.5	0.4	0.4	0.4
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	0.5	0.8	0.7	0.4	0.4	0.4	0.3
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.4	0.8	0.6	0.4	0.3	0.4	0.3
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.4	0.7	0.6	0.4	0.3	0.3	0.3
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.3	0.8	0.6	0.3	0.3	0.3	0.3
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	0.3	0.7	0.6	0.3	0.3	0.3	0.3
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.3	0.3	0.7	0.6	0.3	0.3	0.3	0.2
260.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.6	0.3	0.0	0.6	0.5	0.3	0.2	0.0	0.0
270.	0.0	0.4	0.4	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0
280.	0.1	1.0	0.7	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.2	1.2	1.0	0.4	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.2	1.3	1.0	0.4	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.4	1.2	0.9	0.5	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.3	1.1	0.9	0.6	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.3	1.0	0.9	0.6	0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.3	1.1	0.9	0.6	0.5	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.5	1.1	0.9	0.7	0.6	0.3	0.3	0.4	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.8	1.7	1.7	1.2	1.1	0.7	0.8	1.7	1.6	1.7	1.1	1.0	0.9	0.7	0.9	0.6
DEGR.	0	10	50	10	20	10	20	20	120	130	160	130	100	100	120	110

THE HIGHEST CONCENTRATION OF 1.70 PPM OCCURRED AT RECEPTOR REC22.

JOB: MAIN & ALMA SCHOOL 4 LANE RUN: MESA LRT EXTENSION 4 LANE

DATE : 3/18/10
TIME : 15:36:17

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. AS NB LT Q	0.0	-90.0	0.0	-143.1	53.	180.	AG	165.	100.0	0.0	24.0	0.39	2.7
2. AS NB TH APP	32.0	0.0	32.0	-985.0	985.	180.	AG	1136.	5.5	0.0	61.0		
3. AS NB TH DEP	32.0	0.0	32.0	985.0	985.	360.	AG	1153.	5.5	0.0	61.0		
4. AS NB TH Q	32.0	-87.0	32.0	-248.2	161.	180.	AG	179.	100.0	0.0	41.0	0.24	8.2
5. AS SB LT Q	0.0	101.0	0.0	175.7	75.	360.	AG	156.	100.0	0.0	24.0	0.34	3.8
6. AS SB TH APP	-32.0	0.0	-32.0	985.0	985.	360.	AG	1762.	5.5	0.0	61.0		
7. AS SB TH DEP	-32.0	0.0	-32.0	-985.0	985.	180.	AG	2134.	5.5	0.0	61.0		
8. AS SB TH Q	-32.0	101.0	-32.0	332.1	231.	360.	AG	165.	100.0	0.0	41.0	0.32	11.7
9. M EB LT Q	-84.0	-24.0	-135.1	-24.0	51.	270.	AG	80.	100.0	0.0	12.0	0.57	2.6
10. M EB TH APP	0.0	-44.0	-985.0	-44.0	985.	270.	AG	872.	5.6	0.0	48.0		
11. M EB TH DEP	0.0	-44.0	985.0	-44.0	985.	90.	AG	1145.	5.6	0.0	48.0		
12. M EB TH Q	-85.0	-44.0	-282.9	-44.0	198.	270.	AG	127.	100.0	0.0	28.0	0.49	10.1
13. M WB LT Q	84.0	36.0	411.5	36.1	327.	90.	AG	74.	100.0	0.0	12.0	1.04	16.6
14. M WB TH APP	0.0	56.0	985.0	56.0	985.	90.	AG	592.	5.5	0.0	48.0		
15. M WB TH DEP	0.0	56.0	-985.0	56.0	985.	270.	AG	750.	5.5	0.0	48.0		
16. M WB TH Q	84.0	56.0	205.4	56.0	121.	90.	AG	115.	100.0	0.0	28.0	0.26	6.2

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. AS NB LT Q	120	108	2.0	181	3433	34.20	2	3
4. AS NB TH Q	120	78	2.0	1136	4888	34.20	2	3
5. AS SB LT Q	120	102	2.0	268	3433	34.20	2	3
8. AS SB TH Q	120	72	2.0	1762	4946	34.20	2	3
9. M EB LT Q	120	105	2.0	89	1711	34.20	2	3
12. M EB TH Q	120	83	2.0	872	3257	34.20	2	3
13. M WB LT Q	120	97	2.0	282	1711	34.20	2	3
16. M WB TH Q	120	75	2.0	592	3283	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	75.0	92.0	5.9
2. REC 2 (N 25)	75.0	174.0	5.9
3. REC 3 (N 50)	75.0	256.0	5.9
4. REC 4 (E 25)	157.0	92.0	5.9
5. REC 5 (E 50)	239.0	92.0	5.9
6. REC 6 (N 25 E 25)	157.0	174.0	5.9
7. REC 7 (N 25 E 50)	239.0	174.0	5.9
8. REC 8 (N 50 E 25)	157.0	256.0	5.9
9. REC 9 (N 50 E 50)	239.0	256.0	5.9
10. REC 10(SE CORNER)	75.0	-77.0	5.9
11. REC 11(S 25)	75.0	-159.0	5.9
12. REC 12(S 50)	75.0	-241.0	5.9
13. REC 13(E 25)	157.0	-77.0	5.9
14. REC 14(E 50)	239.0	-77.0	5.9
15. REC 15(S 25 E 25)	157.0	-159.0	5.9
16. REC 16(S 25 E 50)	239.0	-159.0	5.9
17. REC 17(S 50 E 25)	157.0	-241.0	5.9
18. REC 18(S 50 E 50)	239.0	-241.0	5.9
19. REC 19(SW CORNER)	-80.0	-85.0	5.9
20. REC 20(S 25)	-80.0	-167.0	5.9
21. REC 21(S 50)	-80.0	-249.0	5.9
22. REC 22(W 25)	-162.0	-85.0	5.9
23. REC 23(W 50)	-244.0	-85.0	5.9
24. REC 24(S 25 W 25)	-162.0	-167.0	5.9
25. REC 25(S 25 W 50)	-244.0	-167.0	5.9
26. REC 26(S 50 W 25)	-162.0	-249.0	5.9
27. REC 27(S 50 W 50)	-244.0	-249.0	5.9
28. REC 28(NW CORNER)	-77.0	90.0	5.9
29. REC 29(N 25)	-77.0	172.0	5.9
30. REC 30(N 50)	-77.0	254.0	5.9
31. REC 31(W 25)	-159.0	90.0	5.9
32. REC 32(W 50)	-241.0	90.0	5.9
33. REC 33(N 25 W 25)	-159.0	172.0	5.9
34. REC 34(N 25 W 50)	-241.0	172.0	5.9
35. REC 35(N 50 W 25)	-159.0	254.0	5.9
36. REC 36(N 50 W 50)	-241.0	254.0	6.0

JOB: MAIN & ALMA SCHOOL 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.5	0.4	0.3	0.2	0.1	0.1	0.1	0.5	0.7
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.4	0.3	0.1	0.1	0.1	0.1	0.8	0.7
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.3	0.1	0.1	0.1	0.1	0.8	0.7
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.6	0.4
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.6	0.6
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.5	0.7
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.1	0.7	0.8
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.7	0.8
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0	0.7	0.8
90.	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.7	0.6
100.	0.5	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.8	0.6
110.	0.5	0.2	0.0	0.4	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6
120.	0.6	0.3	0.0	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
130.	0.6	0.3	0.0	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5
140.	0.5	0.3	0.0	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4
150.	0.5	0.3	0.1	0.6	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
160.	0.5	0.2	0.1	0.6	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
170.	0.4	0.3	0.1	0.6	0.3	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
180.	0.6	0.5	0.4	0.6	0.3	0.3	0.2	0.1	0.0	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
190.	0.8	0.5	0.5	0.9	0.3	0.5	0.3	0.4	0.1	0.7	0.5	0.4	0.2	0.0	0.2	0.0	0.2	0.0	0.1	0.1
200.	0.7	0.6	0.5	0.9	0.5	0.4	0.5	0.3	0.3	0.8	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0
210.	0.6	0.4	0.6	0.9	0.7	0.4	0.6	0.2	0.4	0.9	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.4	0.6	0.7	0.9	0.7	0.2	0.3	0.3	0.1	1.0	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
230.	0.7	0.7	0.6	0.7	0.8	0.2	0.2	0.4	0.1	0.9	0.8	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.7	0.7	0.5	0.7	0.5	0.3	0.0	0.4	0.3	0.9	0.8	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
250.	0.7	0.8	0.5	0.6	0.5	0.5	0.2	0.3	0.3	0.9	0.8	0.5	0.5	0.3	0.4	0.3	0.2	0.2	0.0	0.0
260.	0.5	0.8	0.5	0.6	0.7	0.5	0.3	0.3	0.3	0.8	0.8	0.6	0.4	0.4	0.4	0.3	0.3	0.2	0.1	0.0
270.	0.6	0.6	0.5	0.5	0.6	0.4	0.3	0.3	0.3	0.8	0.9	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.0
280.	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.7	1.0	0.8	0.6	0.4	0.7	0.4	0.4	0.3	0.4	0.1
290.	0.7	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.8	1.1	0.8	0.6	0.2	0.7	0.4	0.4	0.3	0.6	0.1
300.	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.7	1.2	1.0	0.3	0.3	0.4	0.1	0.5	0.3	0.6	0.2
310.	0.7	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.7	1.1	0.9	0.5	0.6	0.4	0.2	0.5	0.2	0.5	0.2
320.	0.7	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.9	1.1	0.5	0.7	0.4	0.4	0.3	0.2	0.6	0.2
330.	0.7	0.5	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.9	1.0	0.6	0.7	0.4	0.5	0.4	0.4	0.4	0.2
340.	0.5	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.8	0.8	1.0	0.7	0.6	0.4	0.4	0.4	0.3	0.4	0.2
350.	0.3	0.3	0.3	0.2	0.0	0.2	0.0	0.1	0.0	0.7	0.6	0.7	0.6	0.3	0.4	0.1	0.3	0.1	0.5	0.3
MAX DEGR.	0.8 190	0.8 250	0.7 220	0.9 190	0.8 230	0.5 190	0.6 210	0.4 190	0.4 210	1.0 220	1.2 300	1.1 320	0.7 340	0.7 320	0.7 280	0.5 330	0.5 300	0.4 330	0.8 20	0.8 60

JOB: MAIN & ALMA SCHOOL 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.3	0.5	0.4	0.3	0.2	0.2	0.1	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0
10.	0.6	0.6	0.5	0.4	0.3	0.4	0.2	0.8	0.6	0.5	0.1	0.1	0.1	0.0	0.1	0.0
20.	0.6	0.7	0.5	0.5	0.4	0.4	0.3	0.9	0.8	0.7	0.3	0.1	0.2	0.1	0.2	0.1
30.	0.7	0.8	0.7	0.6	0.5	0.3	0.4	0.9	0.8	0.7	0.4	0.2	0.4	0.1	0.2	0.1
40.	0.8	0.8	0.7	0.4	0.5	0.1	0.2	0.9	0.8	0.7	0.4	0.3	0.3	0.2	0.2	0.2
50.	0.7	0.7	0.6	0.1	0.3	0.5	0.1	1.0	0.8	0.8	0.4	0.3	0.4	0.3	0.3	0.2
60.	0.7	0.5	0.6	0.3	0.1	0.4	0.3	0.9	0.8	0.8	0.5	0.2	0.4	0.2	0.3	0.1
70.	0.7	0.4	0.5	0.6	0.2	0.4	0.3	0.7	0.7	0.7	0.5	0.2	0.4	0.2	0.4	0.2
80.	0.6	0.5	0.5	0.6	0.3	0.4	0.2	0.6	0.8	0.7	0.4	0.2	0.4	0.2	0.4	0.2
90.	0.5	0.6	0.5	0.4	0.2	0.4	0.2	0.7	0.8	0.7	0.5	0.3	0.5	0.2	0.4	0.2
100.	0.5	0.6	0.2	0.4	0.2	0.3	0.1	0.8	0.9	0.7	0.5	0.3	0.5	0.2	0.4	0.2
110.	0.4	0.4	0.2	0.3	0.1	0.2	0.1	0.8	1.2	0.7	0.3	0.4	0.5	0.3	0.4	0.2
120.	0.4	0.4	0.2	0.3	0.1	0.3	0.1	0.5	1.2	0.8	0.4	0.2	0.4	0.2	0.5	0.2
130.	0.4	0.4	0.1	0.3	0.1	0.3	0.1	0.6	1.0	0.9	0.5	0.5	0.2	0.2	0.5	0.2
140.	0.4	0.3	0.2	0.3	0.2	0.3	0.2	0.8	0.9	0.9	0.4	0.6	0.3	0.3	0.2	0.2
150.	0.5	0.3	0.2	0.3	0.1	0.3	0.1	0.7	0.9	0.9	0.7	0.5	0.5	0.4	0.4	0.2
160.	0.5	0.3	0.1	0.3	0.1	0.3	0.1	0.7	0.7	1.1	0.6	0.4	0.5	0.3	0.4	0.2
170.	0.5	0.1	0.1	0.1	0.1	0.1	0.0	0.8	0.8	0.8	0.5	0.4	0.3	0.3	0.2	0.2
180.	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.7	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.1
190.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.3	0.3	0.3	0.2	0.1	0.1	0.0
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.3	0.3	0.2	0.1	0.0	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.2	0.1	0.1	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.2	0.1	0.1	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
260.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0
270.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.0	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.0	0.6	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.0	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.1	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.1	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.1	0.4	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.2	0.4	0.4	0.2	0.2	0.1	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.8	0.8	0.7	0.6	0.5	0.5	0.4	1.0	1.2	1.1	0.7	0.6	0.5	0.4	0.5	0.2
DEGR.	40	30	30	30	30	50	30	50	110	160	150	140	90	150	120	40

THE HIGHEST CONCENTRATION OF 1.20 PPM OCCURRED AT RECEPTOR REC29.

JOB: UNIVERSITY & COUNTRY CLUB 4 LANE RUN: MESA LRT EXTENSION 4 LANE

DATE : 3/18/10
TIME : 15:44:18

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. CC NB LT Q	0.0	-69.0	0.0	-113.2	44.	180.	AG	160.	100.0	0.0	20.0	0.30	2.2
2. CC NB TH APP	36.0	0.0	36.0	-985.0	985.	180.	AG	1324.	5.5	0.0	53.0		
3. CC NB TH DEP	36.0	0.0	36.0	985.0	985.	360.	AG	1559.	5.5	0.0	53.0		
4. CC NB TH Q	36.0	-69.0	36.0	-220.9	152.	180.	AG	173.	100.0	0.0	33.0	0.27	7.7
5. CC SB LT Q	0.0	82.0	0.0	165.4	83.	360.	AG	150.	100.0	0.0	18.0	0.39	4.2
6. CC SB TH APP	-35.0	0.0	-35.0	985.0	985.	360.	AG	1318.	5.5	0.0	53.0		
7. CC SB TH DEP	-35.0	0.0	-35.0	-985.0	985.	180.	AG	1542.	5.5	0.0	53.0		
8. CC SB TH Q	-35.0	82.0	-35.0	221.2	139.	360.	AG	160.	100.0	0.0	33.0	0.23	7.1
9. U EB LT Q	-72.0	0.0	-135.1	0.0	63.	270.	AG	152.	100.0	0.0	20.0	0.31	3.2
10. U EB TH APP	0.0	-33.0	-985.0	-33.0	985.	270.	AG	1227.	6.3	0.0	53.0		
11. U EB TH DEP	0.0	-33.0	985.0	-33.0	985.	90.	AG	1632.	6.3	0.0	53.0		
12. U EB TH Q	-72.0	-33.0	-221.8	-33.0	150.	270.	AG	184.	100.0	0.0	33.0	0.28	7.6
13. U WB LT Q	70.0	2.0	110.9	2.0	41.	90.	AG	161.	100.0	0.0	20.0	0.31	2.1
14. U WB TH APP	0.0	35.0	985.0	35.0	985.	90.	AG	802.	5.6	0.0	53.0		
15. U WB TH DEP	0.0	35.0	-985.0	35.0	985.	270.	AG	946.	5.6	0.0	53.0		
16. U WB TH Q	70.0	35.0	175.1	35.0	105.	90.	AG	198.	100.0	0.0	33.0	0.23	5.3

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. CC NB LT Q	100	87	2.0	187	3433	34.20	2	3
4. CC NB TH Q	100	63	2.0	1324	4963	34.20	2	3
5. CC SB LT Q	100	82	2.0	372	3433	34.20	2	3
8. CC SB TH Q	100	58	2.0	1318	5014	34.20	2	3
9. U EB LT Q	100	83	2.0	279	3433	34.20	2	3
12. U EB TH Q	100	67	2.0	1227	4973	34.20	2	3
13. U WB LT Q	100	88	2.0	170	3433	34.20	2	3
16. U WB TH Q	100	72	2.0	802	4928	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	75.0	77.0	5.9
2. REC 2 (N 25)	75.0	159.0	5.9
3. REC 3 (N 50)	75.0	241.0	5.9
4. REC 4 (E 25)	157.0	77.0	5.9
5. REC 5 (E 50)	239.0	77.0	5.9
6. REC 6 (N 25 E 25)	157.0	159.0	5.9
7. REC 7 (N 25 E 50)	239.0	159.0	5.9
8. REC 8 (N 50 E 25)	157.0	241.0	5.9
9. REC 9 (N 50 E 50)	239.0	241.0	5.9
10. REC 10(SE CORNER)	73.0	-74.0	5.9
11. REC 11(S 25)	73.0	-156.0	5.9
12. REC 12(S 50)	73.0	-238.0	5.9
13. REC 13(E 25)	155.0	-74.0	5.9
14. REC 14(E 50)	237.0	-74.0	5.9
15. REC 15(S 25 E 25)	155.0	-156.0	5.9
16. REC 16(S 25 E 50)	237.0	-156.0	5.9
17. REC 17(S 50 E 25)	155.0	-238.0	5.9
18. REC 18(S 50 E 50)	237.0	-238.0	5.9
19. REC 19(SW CORNER)	-72.0	-77.0	5.9
20. REC 20(S 25)	-72.0	-159.0	5.9
21. REC 21(S 50)	-72.0	-241.0	5.9
22. REC 22(W 25)	-154.0	-77.0	5.9
23. REC 23(W 50)	-236.0	-77.0	5.9
24. REC 24(S 25 W 25)	-154.0	-159.0	5.9
25. REC 25(S 25 W 50)	-236.0	-159.0	5.9
26. REC 26(S 50 W 25)	-154.0	-241.0	5.9
27. REC 27(S 50 W 50)	-236.0	-241.0	5.9
28. REC 28(NW CORNER)	-70.0	77.0	5.9
29. REC 29(N 25)	-70.0	159.0	5.9
30. REC 30(N 50)	-70.0	241.0	5.9
31. REC 31(W 25)	-152.0	77.0	5.9
32. REC 32(W 50)	-234.0	77.0	5.9
33. REC 33(N 25 W 25)	-152.0	159.0	5.9
34. REC 34(N 25 W 50)	-234.0	159.0	5.9
35. REC 35(N 50 W 25)	-152.0	241.0	5.9
36. REC 36(N 50 W 50)	-234.0	241.0	6.0

JOB: UNIVERSITY & COUNTRY CLUB 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.7	0.7	0.4	0.3	0.1	0.3	0.1	1.1	0.7
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.4	0.5	0.5	0.4	0.2	0.1	0.1	0.1	1.0	0.6
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.2	0.5	0.4	0.1	0.1	0.1	0.1	1.0	0.6
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.6	0.8
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.5	0.8
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.4	0.4	0.1	0.1	0.1	0.1	0.8	0.8
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.5	0.5	0.2	0.2	0.1	0.1	0.8	0.8
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.5	0.5	0.2	0.1	0.1	0.1	0.8	0.7
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.5	0.5	0.1	0.1	0.0	0.0	0.9	0.6
90.	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.2	0.1	0.0	0.0	0.0	0.7	0.6
100.	0.4	0.2	0.0	0.3	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.8	0.5
110.	0.7	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
120.	0.8	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4
130.	0.8	0.3	0.1	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
140.	0.7	0.3	0.1	0.4	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
150.	0.7	0.4	0.2	0.4	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
160.	0.7	0.4	0.2	0.5	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
170.	0.9	0.6	0.4	0.5	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
180.	1.0	0.7	0.6	0.6	0.2	0.5	0.2	0.3	0.1	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2
190.	1.1	0.8	0.5	0.8	0.2	0.7	0.3	0.5	0.2	0.7	0.5	0.4	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.1
200.	0.9	0.7	0.6	0.9	0.4	0.7	0.5	0.5	0.4	0.8	0.6	0.4	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.0
210.	0.7	0.5	0.8	1.1	0.5	0.6	0.6	0.2	0.5	0.9	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.7	0.8	0.8	1.0	0.6	0.4	0.7	0.2	0.2	0.8	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
230.	0.6	0.9	1.0	0.9	0.7	0.3	0.4	0.6	0.1	0.8	0.7	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.0	0.0
240.	0.8	0.9	0.7	1.0	0.6	0.5	0.4	0.6	0.3	0.8	0.7	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
250.	0.8	0.9	0.6	0.7	0.7	0.6	0.3	0.5	0.5	0.8	0.7	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.0	0.0
260.	0.7	0.9	0.4	0.7	0.7	0.6	0.5	0.3	0.3	0.9	0.7	0.3	0.6	0.5	0.4	0.3	0.2	0.2	0.1	0.0
270.	0.7	0.6	0.3	0.6	0.5	0.4	0.3	0.2	0.2	1.0	0.7	0.3	0.7	0.6	0.5	0.4	0.3	0.2	0.3	0.0
280.	0.6	0.6	0.3	0.4	0.3	0.3	0.3	0.2	0.2	1.2	0.8	0.4	0.8	0.7	0.6	0.5	0.4	0.4	0.6	0.1
290.	0.6	0.4	0.3	0.4	0.3	0.3	0.2	0.2	0.2	1.1	1.0	0.6	0.7	0.6	0.8	0.6	0.4	0.4	0.7	0.2
300.	0.7	0.4	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.9	1.1	0.8	0.7	0.6	0.6	0.2	0.6	0.5	0.8	0.3
310.	0.8	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.8	1.1	0.8	0.8	0.9	0.4	0.1	0.6	0.3	0.8	0.3
320.	0.6	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.9	1.0	0.9	0.9	0.8	0.4	0.4	0.3	0.1	0.8	0.4
330.	0.6	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.9	1.1	1.0	1.0	0.7	0.5	0.4	0.5	0.4	0.8	0.4
340.	0.4	0.4	0.4	0.2	0.1	0.2	0.1	0.2	0.1	1.0	0.9	1.0	0.8	0.7	0.4	0.4	0.4	0.4	0.9	0.4
350.	0.4	0.4	0.4	0.1	0.0	0.1	0.0	0.1	0.0	1.2	0.8	0.8	0.8	0.5	0.4	0.2	0.4	0.2	0.8	0.5
MAX	1.1	0.9	1.0	1.1	0.7	0.7	0.7	0.6	0.5	1.2	1.1	1.0	1.0	0.9	0.8	0.6	0.6	0.5	1.1	0.8
DEGR.	190	230	230	210	250	190	220	230	210	280	300	330	330	310	290	290	300	300	0	30

JOB: UNIVERSITY & COUNTRY CLUB 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.6	0.7	0.4	0.4	0.2	0.3	0.2	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.7	1.0	0.4	0.6	0.3	0.4	0.3	0.7	0.5	0.4	0.2	0.0	0.1	0.0	0.1	0.0
20.	0.6	1.1	0.7	0.7	0.5	0.4	0.4	0.8	0.6	0.4	0.2	0.2	0.2	0.1	0.2	0.1
30.	0.8	1.1	0.9	0.5	0.6	0.3	0.4	0.9	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2
40.	0.8	1.1	1.0	0.4	0.6	0.2	0.3	0.8	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.2
50.	0.7	1.0	1.1	0.4	0.3	0.4	0.2	0.9	0.7	0.3	0.4	0.3	0.2	0.2	0.2	0.2
60.	0.6	0.9	1.0	0.5	0.4	0.4	0.3	0.9	0.7	0.3	0.5	0.3	0.3	0.2	0.2	0.2
70.	0.5	0.8	0.9	0.4	0.3	0.4	0.4	0.8	0.7	0.3	0.5	0.3	0.3	0.3	0.2	0.2
80.	0.5	0.7	0.7	0.4	0.4	0.4	0.4	0.6	0.8	0.3	0.4	0.3	0.4	0.3	0.2	0.2
90.	0.3	0.7	0.5	0.4	0.4	0.2	0.2	0.8	0.8	0.3	0.7	0.7	0.5	0.3	0.2	0.2
100.	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.7	1.1	0.4	0.6	0.5	0.7	0.5	0.3	0.3
110.	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.8	1.2	0.5	0.6	0.5	0.8	0.5	0.4	0.4
120.	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.8	1.2	0.6	0.5	0.8	0.7	0.2	0.7	0.4
130.	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.6	1.2	0.9	0.8	0.9	0.3	0.2	0.7	0.3
140.	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.7	1.0	1.0	0.7	0.7	0.6	0.7	0.4	0.0
150.	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.8	0.9	1.1	0.9	0.6	0.5	0.5	0.5	0.3
160.	0.4	0.2	0.1	0.2	0.1	0.2	0.1	0.8	0.8	1.3	0.7	0.6	0.6	0.5	0.2	0.4
170.	0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.8	0.9	0.8	0.7	0.4	0.6	0.4	0.4	0.3
180.	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.6	0.5	0.3	0.4	0.3	0.3	0.1
190.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.5	0.4	0.2	0.3	0.2	0.2	0.1
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.2	0.4	0.2	0.3	0.2	0.1	0.1
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.1
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.3	0.2	0.2	0.0	0.0
260.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.1	0.0	0.0
270.	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.4	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.1	0.5	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.1	0.6	0.4	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.1	0.6	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.2	0.7	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.2	0.7	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.2	0.7	0.3	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.4	0.7	0.3	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.8	1.1	1.1	0.7	0.6	0.4	0.4	0.9	1.2	1.3	0.9	0.9	0.8	0.7	0.7	0.4
DEGR.	30	20	50	20	30	10	20	30	110	160	150	130	110	140	120	110

THE HIGHEST CONCENTRATION OF 1.30 PPM OCCURRED AT RECEPTOR REC30.

JOB: MAIN & COUNTRY CLUB 4 LANE RUN: MESA LRT EXTENSION 4 LANE

DATE : 3/19/10
TIME : 12:20: 0

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. CC NB LT Q	0.0	-88.0	0.0	-133.9	46.	180.	AG	167.	100.0	0.0	25.0	0.38	2.3
2. CC NB TH APP	32.0	0.0	32.0	-985.0	985.	180.	AG	1579.	5.5	0.0	60.0		
3. CC NB TH DEP	32.0	0.0	32.0	985.0	985.	360.	AG	1619.	5.5	0.0	60.0		
4. CC NB TH Q	32.0	-88.0	32.0	-280.7	193.	180.	AG	154.	100.0	0.0	40.0	0.27	9.8
5. CC SB LT Q	-4.0	102.0	-4.0	143.7	42.	360.	AG	167.	100.0	0.0	25.0	0.35	2.1
6. CC SB TH APP	-38.0	0.0	-38.0	985.0	985.	360.	AG	1597.	5.5	0.0	60.0		
7. CC SB TH DEP	-38.0	0.0	-38.0	-985.0	985.	180.	AG	1735.	5.5	0.0	60.0		
8. CC SB TH Q	-38.0	102.0	-38.0	296.9	195.	360.	AG	154.	100.0	0.0	40.0	0.27	9.9
9. M EB LT Q	-104.0	-20.0	-209.2	-20.0	105.	270.	AG	76.	100.0	0.0	14.0	0.81	5.3
10. M EB TH APP	0.0	-34.0	-985.0	-34.0	985.	270.	AG	922.	6.3	0.0	49.0		
11. M EB TH DEP	0.0	-34.0	985.0	-34.0	985.	90.	AG	1167.	6.3	0.0	41.0		
12. M EB TH Q	-104.0	-34.0	-315.7	-34.0	212.	270.	AG	128.	100.0	0.0	29.0	0.53	10.8
13. M WB LT Q	96.0	38.0	241.1	38.0	145.	90.	AG	76.	100.0	0.0	12.0	0.93	7.4
14. M WB TH APP	0.0	51.0	985.0	51.0	985.	90.	AG	546.	5.5	0.0	44.0		
15. M WB TH DEP	0.0	51.0	-985.0	51.0	985.	270.	AG	815.	5.5	0.0	44.0		
16. M WB TH Q	88.0	51.0	213.4	51.0	125.	90.	AG	128.	100.0	0.0	24.0	0.34	6.4

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. CC NB LT Q	120	109	2.0	154	3433	34.20	2	3
4. CC NB TH Q	120	67	2.0	1579	4725	34.20	2	3
5. CC SB LT Q	120	109	2.0	141	3433	34.20	2	3
8. CC SB TH Q	120	67	2.0	1597	4902	34.20	2	3
9. M EB LT Q	120	100	2.0	184	1711	34.20	2	3
12. M EB TH Q	120	84	2.0	922	3289	34.20	2	3
13. M WB LT Q	120	100	2.0	213	1711	34.20	2	3
16. M WB TH Q	120	84	2.0	546	3011	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	86.0	89.0	5.9
2. REC 2 (N 25)	86.0	171.0	5.9
3. REC 3 (N 50)	86.0	253.0	5.9
4. REC 4 (E 25)	168.0	89.0	5.9
5. REC 5 (E 50)	250.0	89.0	5.9
6. REC 6 (N 25 E 25)	168.0	171.0	5.9
7. REC 7 (N 25 E 50)	250.0	171.0	5.9
8. REC 8 (N 50 E 25)	168.0	253.0	5.9
9. REC 9 (N 50 E 50)	250.0	253.0	5.9
10. REC 10(SE CORNER)	84.0	-72.0	5.9
11. REC 11(S 25)	84.0	-154.0	5.9
12. REC 12(S 50)	84.0	-236.0	5.9
13. REC 13(E 25)	166.0	-72.0	5.9
14. REC 14(E 50)	248.0	-72.0	5.9
15. REC 15(S 25 E 25)	166.0	-154.0	5.9
16. REC 16(S 25 E 50)	248.0	-154.0	5.9
17. REC 17(S 50 E 25)	166.0	-236.0	5.9
18. REC 18(S 50 E 50)	248.0	-236.0	5.9
19. REC 19(SW CORNER)	-82.0	-80.0	5.9
20. REC 20(S 25)	-82.0	-162.0	5.9
21. REC 21(S 50)	-82.0	-244.0	5.9
22. REC 22(W 25)	-164.0	-80.0	5.9
23. REC 23(W 50)	-246.0	-80.0	5.9
24. REC 24(S 25 W 25)	-164.0	-162.0	5.9
25. REC 25(S 25 W 50)	-246.0	-162.0	5.9
26. REC 26(S 50 W 25)	-164.0	-244.0	5.9
27. REC 27(S 50 W 50)	-246.0	-244.0	5.9
28. REC 28(NW CORNER)	-84.0	86.0	5.9
29. REC 29(N 25)	-84.0	168.0	5.9
30. REC 30(N 50)	-84.0	250.0	5.9
31. REC 31(W 25)	-166.0	86.0	5.9
32. REC 32(W 50)	-248.0	86.0	5.9
33. REC 33(N 25 W 25)	-166.0	168.0	5.9
34. REC 34(N 25 W 50)	-248.0	168.0	5.9
35. REC 35(N 50 W 25)	-166.0	250.0	5.9
36. REC 36(N 50 W 50)	-248.0	250.0	5.9

JOB: MAIN & COUNTRY CLUB 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.5	0.5	0.2	0.3	0.1	0.2	0.1	0.6	0.6
10.	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.2	0.4	0.2	0.2	0.1	0.1	0.1	0.6	0.7
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.2	0.1	0.1	0.1	0.1	0.8	0.7
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.5
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.6
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.7
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.6	0.7
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.3	0.3	0.1	0.1	0.1	0.1	0.6	0.7
80.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.5	0.7
90.	0.2	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.6	0.5
100.	0.3	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.6	0.5
110.	0.5	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
120.	0.6	0.1	0.1	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
130.	0.6	0.2	0.1	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5
140.	0.6	0.2	0.1	0.5	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
150.	0.6	0.3	0.2	0.6	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4
160.	0.5	0.2	0.2	0.6	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
170.	0.5	0.3	0.1	0.6	0.2	0.3	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
180.	0.7	0.5	0.4	0.6	0.2	0.4	0.1	0.2	0.0	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
190.	0.7	0.6	0.5	0.8	0.4	0.6	0.2	0.3	0.1	0.6	0.5	0.4	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.1
200.	0.8	0.5	0.5	0.9	0.5	0.5	0.5	0.4	0.3	0.8	0.6	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0
210.	0.6	0.4	0.6	0.9	0.7	0.4	0.6	0.3	0.3	0.8	0.8	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0
220.	0.5	0.4	0.5	0.9	0.7	0.3	0.5	0.1	0.1	0.6	0.6	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.0	0.0
230.	0.5	0.7	0.5	0.8	0.8	0.1	0.2	0.3	0.1	0.7	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.7	0.8	0.5	0.6	0.7	0.4	0.2	0.3	0.2	0.6	0.6	0.6	0.4	0.3	0.3	0.3	0.2	0.2	0.0	0.0
250.	0.7	0.7	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.6	0.6	0.6	0.4	0.3	0.4	0.3	0.3	0.2	0.0	0.0
260.	0.6	0.7	0.5	0.6	0.6	0.4	0.4	0.3	0.3	0.6	0.6	0.6	0.4	0.3	0.4	0.3	0.3	0.3	0.1	0.0
270.	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.6	0.6	0.6	0.6	0.4	0.4	0.3	0.4	0.3	0.2	0.0
280.	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.8	0.9	0.6	0.6	0.5	0.7	0.4	0.4	0.3	0.4	0.1
290.	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.7	0.9	0.7	0.5	0.2	0.6	0.4	0.5	0.4	0.6	0.1
300.	0.6	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.8	0.9	0.8	0.5	0.4	0.4	0.2	0.6	0.3	0.7	0.2
310.	0.6	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.8	0.8	0.5	0.6	0.2	0.3	0.3	0.1	0.7	0.2
320.	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.7	0.7	0.7	0.5	0.7	0.5	0.4	0.2	0.3	0.6	0.2
330.	0.5	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.7	0.8	0.6	0.6	0.4	0.4	0.4	0.3	0.5	0.2
340.	0.5	0.4	0.4	0.2	0.2	0.2	0.1	0.2	0.1	0.7	0.7	0.8	0.6	0.6	0.3	0.4	0.4	0.3	0.2	0.2
350.	0.4	0.4	0.3	0.1	0.0	0.1	0.0	0.1	0.0	0.6	0.6	0.7	0.6	0.3	0.4	0.2	0.3	0.2	0.3	0.3
MAX	0.8	0.8	0.6	0.9	0.8	0.6	0.6	0.4	0.3	0.8	0.9	0.8	0.6	0.7	0.7	0.4	0.6	0.4	0.8	0.7
DEGR.	200	240	210	200	230	190	210	200	200	280	280	300	270	320	280	280	300	290	20	10

JOB: MAIN & COUNTRY CLUB 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.4	0.7	0.5	0.3	0.2	0.3	0.2	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.5	0.9	0.6	0.5	0.3	0.4	0.2	0.6	0.5	0.4	0.2	0.0	0.1	0.0	0.1	0.0
20.	0.6	0.9	0.6	0.5	0.4	0.3	0.3	0.8	0.7	0.4	0.2	0.2	0.2	0.1	0.2	0.1
30.	0.7	0.9	0.8	0.5	0.5	0.3	0.3	0.8	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.2
40.	0.7	0.7	1.0	0.4	0.5	0.2	0.1	0.8	0.8	0.6	0.4	0.3	0.3	0.2	0.2	0.2
50.	0.7	0.6	0.9	0.1	0.3	0.4	0.1	0.7	0.7	0.6	0.4	0.3	0.3	0.2	0.2	0.2
60.	0.7	0.6	0.8	0.3	0.2	0.4	0.4	0.6	0.7	0.6	0.4	0.3	0.4	0.3	0.2	0.2
70.	0.6	0.4	0.5	0.5	0.3	0.4	0.4	0.6	0.6	0.6	0.3	0.3	0.4	0.3	0.3	0.2
80.	0.5	0.4	0.4	0.5	0.4	0.3	0.3	0.5	0.6	0.6	0.4	0.3	0.4	0.3	0.3	0.3
90.	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.6	0.6	0.6	0.5	0.3	0.4	0.3	0.4	0.3
100.	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.7	0.7	0.6	0.5	0.3	0.5	0.4	0.4	0.3
110.	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.7	0.9	0.6	0.4	0.3	0.5	0.4	0.4	0.4
120.	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.5	0.9	0.8	0.4	0.5	0.4	0.2	0.5	0.4
130.	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.6	0.8	0.8	0.5	0.6	0.2	0.2	0.4	0.1
140.	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.7	0.9	1.0	0.5	0.7	0.5	0.4	0.3	0.1
150.	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.8	0.9	0.6	0.6	0.4	0.5	0.3	0.2
160.	0.5	0.2	0.2	0.2	0.1	0.2	0.1	0.7	0.6	1.0	0.6	0.5	0.4	0.4	0.3	0.3
170.	0.4	0.2	0.1	0.1	0.0	0.1	0.0	0.8	0.7	0.7	0.6	0.4	0.5	0.4	0.2	0.2
180.	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.4	0.5	0.3	0.4	0.3	0.2	0.1
190.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.4	0.3	0.3	0.3	0.1	0.0
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.3	0.3	0.2	0.1	0.1	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.3	0.3	0.3	0.2	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.3	0.2	0.2	0.2	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.3	0.2	0.2	0.2	0.0	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.3	0.3	0.2	0.2	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.3	0.3	0.2	0.1	0.0	0.0
260.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.1	0.0	0.0	0.0
270.	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
280.	0.0	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.1	0.5	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.1	0.6	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.1	0.6	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.2	0.6	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.2	0.6	0.5	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.1	0.5	0.4	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.3	0.6	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.7	0.9	1.0	0.5	0.5	0.4	0.4	0.8	0.9	1.0	0.6	0.7	0.5	0.5	0.5	0.4
DEGR.	30	10	40	10	30	10	60	170	110	140	150	140	100	150	120	110

THE HIGHEST CONCENTRATION OF 1.00 PPM OCCURRED AT RECEPTOR REC23.

JOB: MAIN & MESA 4 LANE RUN: MESA LRT EXTENSION 4 LANE

DATE : 3/19/10
TIME : 13: 7:33

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = 0.0 CM/S VD = 0.0 CM/S Z0 = 175. CM
U = 1.0 M/S CLAS = 4 (D) ATIM = 60. MINUTES MIXH = 1000. M AMB = 0.0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. M NB LT Q	0.0	-94.0	0.0	-344.1	250.	180.	AG	83.	100.0	0.0	12.0	1.14	12.7
2. M NB TH APP	20.0	0.0	20.0	-985.0	985.	180.	AG	953.	5.5	0.0	48.0		
3. M NB TH DEP	20.0	0.0	20.0	985.0	985.	360.	AG	969.	5.5	0.0	48.0		
4. M NB TH Q	20.0	-94.0	20.0	-302.2	208.	180.	AG	122.	100.0	0.0	28.0	0.48	10.6
5. M SB LT Q	0.0	85.0	0.0	1414.7	1330.	360.	AG	79.	100.0	0.0	10.0	1.58	67.5
6. M SB TH APP	-20.0	0.0	-20.0	985.0	985.	360.	AG	1085.	5.5	0.0	46.0		
7. M SB TH DEP	-20.0	0.0	-20.0	-985.0	985.	180.	AG	1405.	5.5	0.0	46.0		
8. M SB TH Q	-20.0	85.0	-20.0	304.3	219.	360.	AG	113.	100.0	0.0	26.0	0.45	11.1
9. M EB LT Q	-9.0	-32.0	-45.4	-32.0	36.	270.	AG	83.	100.0	0.0	12.0	0.62	1.8
10. M EB TH APP	0.0	-52.0	-985.0	-52.0	985.	270.	AG	1138.	5.8	0.0	48.0		
11. M EB TH DEP	0.0	-52.0	985.0	-52.0	985.	90.	AG	1438.	5.8	0.0	48.0		
12. M EB TH Q	-9.0	-52.0	-236.1	-52.0	227.	270.	AG	112.	100.0	0.0	28.0	0.51	11.5
13. M WB LT Q	77.0	23.0	520.3	23.1	443.	90.	AG	80.	100.0	0.0	14.0	1.16	22.5
14. M WB TH APP	0.0	43.0	985.0	43.0	985.	90.	AG	641.	5.6	0.0	46.0		
15. M WB TH DEP	0.0	43.0	-985.0	43.0	985.	270.	AG	683.	5.6	0.0	50.0		
16. M WB TH Q	77.0	43.0	196.0	43.0	119.	90.	AG	104.	100.0	0.0	26.0	0.25	6.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
1. M NB LT Q	120	109	2.0	117	1770	34.20	2	3
4. M NB TH Q	120	80	2.0	953	3275	34.20	2	3
5. M SB LT Q	120	103	2.0	301	1770	34.20	2	3
8. M SB TH Q	120	74	2.0	1085	3455	34.20	2	3
9. M EB LT Q	120	109	2.0	61	1711	34.20	2	3
12. M EB TH Q	120	73	2.0	1138	3088	34.20	2	3
13. M WB LT Q	120	104	2.0	199	1711	34.20	2	3
16. M WB TH Q	120	68	2.0	641	3260	34.20	2	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. REC 1 (NE CORNER)	67.0	75.0	5.9
2. REC 2 (N 25)	67.0	157.0	5.9
3. REC 3 (N 50)	67.0	239.0	5.9
4. REC 4 (E 25)	149.0	75.0	5.9
5. REC 5 (E 50)	231.0	75.0	5.9
6. REC 6 (N 25 E 25)	149.0	157.0	5.9
7. REC 7 (N 25 E 50)	231.0	157.0	5.9
8. REC 8 (N 50 E 25)	149.0	239.0	5.9
9. REC 9 (N 50 E 50)	231.0	239.0	5.9
10. REC 10(SE CORNER)	67.0	-82.0	5.9
11. REC 11(S 25)	67.0	-164.0	5.9
12. REC 12(S 50)	67.0	-246.0	5.9
13. REC 13(E 25)	149.0	-82.0	5.9
14. REC 14(E 50)	231.0	-82.0	5.9
15. REC 15(S 25 E 25)	149.0	-164.0	5.9
16. REC 16(S 25 E 50)	231.0	-164.0	5.9
17. REC 17(S 50 E 25)	149.0	-246.0	5.9
18. REC 18(S 50 E 50)	231.0	-246.0	5.9
19. REC 19(SW CORNER)	-56.0	-85.0	5.9
20. REC 20(S 25)	-56.0	-167.0	5.9
21. REC 21(S 50)	-56.0	-249.0	5.9
22. REC 22(W 25)	-138.0	-85.0	5.9
23. REC 23(W 50)	-220.0	-85.0	5.9
24. REC 24(S 25 W 25)	-138.0	-167.0	5.9
25. REC 25(S 25 W 50)	-220.0	-167.0	5.9
26. REC 26(S 50 W 25)	-138.0	-249.0	5.9
27. REC 27(S 50 W 50)	-220.0	-249.0	5.9
28. REC 28(NW CORNER)	-60.0	71.0	5.9
29. REC 29(N 25)	-60.0	153.0	5.9
30. REC 30(N 50)	-60.0	235.0	5.9
31. REC 31(W 25)	-142.0	71.0	5.9
32. REC 32(W 50)	-224.0	71.0	5.9
33. REC 33(N 25 W 25)	-142.0	153.0	5.9
34. REC 34(N 25 W 50)	-224.0	153.0	5.9
35. REC 35(N 50 W 25)	-142.0	235.0	5.9
36. REC 36(N 50 W 50)	-224.0	235.0	5.9

JOB: MAIN & MESA 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4	REC5	REC6	REC7	REC8	REC9	REC10	REC11	REC12	REC13	REC14	REC15	REC16	REC17	REC18	REC19	REC20
0.	0.3	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.5	0.5	0.4	0.2	0.2	0.1	0.1	0.9	0.7
10.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1	0.4	0.3	0.2	0.2	0.1	0.1	1.1	0.8
20.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.3	0.2	0.2	0.1	0.1	1.2	0.6
30.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.1	1.0	0.5
40.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.1	0.4	0.4	0.2	0.2	0.1	0.1	0.8	0.6
50.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.1	0.4	0.4	0.2	0.1	0.1	0.1	0.9	0.7
60.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.1	0.5	0.5	0.1	0.1	0.1	0.1	0.9	0.8
70.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.1	0.6	0.5	0.1	0.1	0.1	0.1	0.9	0.7
80.	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.4	0.4	0.1	0.1	0.0	0.0	0.8	0.7
90.	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.6	0.7
100.	0.6	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.6	0.6
110.	0.6	0.3	0.0	0.5	0.4	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.6
120.	0.6	0.3	0.1	0.4	0.3	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
130.	0.6	0.4	0.1	0.5	0.3	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
140.	0.5	0.3	0.1	0.5	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7
150.	0.5	0.3	0.1	0.5	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6
160.	0.4	0.3	0.2	0.5	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6
170.	0.4	0.2	0.2	0.5	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4
180.	0.5	0.4	0.3	0.5	0.3	0.3	0.2	0.2	0.1	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3
190.	0.6	0.5	0.3	0.7	0.3	0.5	0.2	0.4	0.1	0.6	0.4	0.3	0.2	0.0	0.2	0.0	0.0	0.0	0.1	0.1
200.	0.6	0.3	0.3	0.9	0.4	0.5	0.5	0.2	0.3	0.7	0.6	0.3	0.2	0.1	0.2	0.0	0.2	0.0	0.0	0.0
210.	0.5	0.4	0.5	0.9	0.6	0.4	0.6	0.1	0.2	0.7	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.0
220.	0.5	0.4	0.4	0.9	0.7	0.1	0.4	0.1	0.0	0.6	0.6	0.4	0.4	0.2	0.3	0.2	0.2	0.2	0.0	0.0
230.	0.6	0.7	0.5	0.7	0.6	0.3	0.1	0.3	0.0	0.5	0.5	0.5	0.4	0.2	0.4	0.1	0.2	0.1	0.0	0.0
240.	0.6	0.6	0.5	0.6	0.6	0.4	0.2	0.4	0.1	0.5	0.5	0.5	0.4	0.2	0.4	0.2	0.2	0.1	0.0	0.0
250.	0.6	0.6	0.4	0.5	0.6	0.5	0.1	0.4	0.1	0.4	0.5	0.5	0.3	0.2	0.4	0.2	0.4	0.1	0.0	0.0
260.	0.5	0.5	0.4	0.6	0.5	0.4	0.0	0.4	0.1	0.5	0.5	0.5	0.6	0.4	0.4	0.2	0.4	0.2	0.1	0.0
270.	0.3	0.4	0.4	0.4	0.3	0.4	0.1	0.4	0.1	0.7	0.5	0.5	0.6	0.5	0.4	0.2	0.4	0.2	0.3	0.0
280.	0.4	0.4	0.4	0.3	0.1	0.4	0.1	0.4	0.0	0.8	0.6	0.5	0.7	0.5	0.6	0.4	0.4	0.2	0.5	0.1
290.	0.4	0.4	0.4	0.3	0.1	0.4	0.1	0.4	0.0	0.9	0.7	0.6	0.8	0.3	0.5	0.3	0.5	0.3	0.7	0.1
300.	0.4	0.4	0.4	0.4	0.1	0.4	0.0	0.3	0.0	0.7	0.7	0.6	0.3	0.3	0.5	0.1	0.6	0.4	0.7	0.2
310.	0.5	0.4	0.4	0.4	0.0	0.4	0.0	0.3	0.0	0.5	0.7	0.8	0.4	0.5	0.4	0.1	0.5	0.0	0.6	0.2
320.	0.5	0.4	0.3	0.4	0.2	0.3	0.2	0.3	0.1	0.5	0.6	0.8	0.6	0.8	0.1	0.1	0.3	0.1	0.6	0.2
330.	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.6	0.4	0.6	0.8	0.8	0.4	0.4	0.1	0.1	0.5	0.2
340.	0.5	0.4	0.4	0.3	0.1	0.3	0.0	0.3	0.0	0.7	0.6	0.6	0.7	0.5	0.4	0.4	0.3	0.1	0.5	0.2
350.	0.4	0.4	0.4	0.2	0.0	0.2	0.0	0.2	0.0	0.6	0.6	0.6	0.6	0.3	0.5	0.2	0.4	0.1	0.6	0.3
MAX	0.6	0.7	0.5	0.9	0.7	0.5	0.6	0.4	0.3	0.9	0.7	0.8	0.8	0.8	0.6	0.4	0.6	0.4	1.2	0.8
DEGR.	100	230	210	200	220	190	210	190	200	290	290	310	290	320	280	280	300	300	20	10

JOB: MAIN & MESA 4 LANE RUN: MESA LRT EXTENSION 4 LANE

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-350.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC21	REC22	REC23	REC24	REC25	REC26	REC27	REC28	REC29	REC30	REC31	REC32	REC33	REC34	REC35	REC36
0.	0.6	0.5	0.5	0.2	0.2	0.2	0.2	0.4	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
10.	0.6	0.7	0.5	0.5	0.2	0.5	0.2	0.6	0.5	0.4	0.2	0.0	0.2	0.0	0.2	0.0
20.	0.6	0.9	0.7	0.6	0.4	0.4	0.3	0.7	0.6	0.5	0.3	0.2	0.3	0.2	0.3	0.0
30.	0.7	0.9	0.8	0.4	0.4	0.2	0.2	0.7	0.7	0.6	0.4	0.2	0.3	0.2	0.3	0.2
40.	0.7	0.7	0.7	0.3	0.2	0.1	0.1	0.7	0.7	0.6	0.4	0.1	0.4	0.1	0.3	0.1
50.	0.7	0.5	0.5	0.4	0.2	0.4	0.1	0.6	0.7	0.6	0.4	0.2	0.4	0.1	0.3	0.1
60.	0.7	0.6	0.5	0.3	0.4	0.5	0.3	0.6	0.6	0.6	0.4	0.2	0.4	0.2	0.4	0.1
70.	0.7	0.9	0.6	0.4	0.2	0.5	0.3	0.5	0.6	0.6	0.3	0.2	0.4	0.2	0.4	0.1
80.	0.7	0.9	0.6	0.5	0.3	0.5	0.3	0.4	0.5	0.5	0.3	0.3	0.4	0.2	0.4	0.2
90.	0.6	0.6	0.4	0.5	0.3	0.4	0.2	0.8	0.6	0.6	0.6	0.3	0.4	0.2	0.4	0.2
100.	0.6	0.4	0.5	0.4	0.2	0.4	0.1	0.7	0.6	0.5	0.5	0.3	0.4	0.3	0.4	0.2
110.	0.6	0.4	0.2	0.4	0.2	0.4	0.1	0.7	0.8	0.7	0.3	0.3	0.6	0.1	0.5	0.2
120.	0.5	0.4	0.2	0.4	0.1	0.2	0.1	0.6	1.0	0.7	0.2	0.6	0.3	0.1	0.4	0.3
130.	0.5	0.4	0.2	0.4	0.1	0.2	0.1	0.5	0.7	0.8	0.4	0.5	0.2	0.1	0.4	0.1
140.	0.5	0.4	0.1	0.2	0.1	0.2	0.1	0.5	0.6	0.8	0.6	0.5	0.0	0.3	0.3	0.0
150.	0.5	0.2	0.1	0.2	0.1	0.2	0.1	0.6	0.6	0.8	0.6	0.4	0.4	0.4	0.1	0.1
160.	0.4	0.2	0.1	0.2	0.1	0.2	0.1	0.9	0.6	0.7	0.6	0.4	0.6	0.4	0.2	0.2
170.	0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.8	0.5	0.5	0.4	0.3	0.4	0.4	0.2	0.2
180.	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.5	0.3	0.3	0.4	0.3	0.2	0.0
190.	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.2	0.3	0.2	0.3	0.2	0.0	0.0
200.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.1	0.3	0.2	0.3	0.2	0.0	0.0
210.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.3	0.2	0.2	0.2	0.0	0.0
220.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.2	0.2	0.2	0.0	0.0
230.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.0
240.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.3	0.3	0.2	0.2	0.0	0.0
250.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.3	0.3	0.2	0.2	0.0	0.0
260.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3	0.3	0.0	0.0	0.0	0.0
270.	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
280.	0.0	0.4	0.3	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
290.	0.1	0.6	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.	0.1	0.7	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
310.	0.1	0.6	0.3	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
320.	0.2	0.6	0.4	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.	0.2	0.5	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
340.	0.2	0.5	0.4	0.2	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
350.	0.3	0.5	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MAX	0.7	0.9	0.8	0.6	0.4	0.5	0.3	0.9	1.0	0.8	0.6	0.6	0.6	0.4	0.5	0.3
DEGR.	30	70	30	20	20	10	20	160	120	130	90	120	110	150	110	120

THE HIGHEST CONCENTRATION OF 1.20 PPM OCCURRED AT RECEPTOR REC19.

Appendix E. Comment and Response Form

From: Forrest, Robert
Sent: Friday, April 23, 2010 8:07 AM
To: 'dgiles@mag.maricopa.gov'
Subject: Request for Initial MAG Review of Draft Central Mesa LRT Extension Air Quality Analysis Report

Dean,

METRO, as the project sponsor for the Central Mesa LRT Extension, has completed the attached Draft Air Quality Technical Report, which includes a project-level conformity analysis for this project. It is requested that MAG complete an initial review of the attached Draft Air Quality Analysis Report and provide any comments by Monday, May 21, 2010.

If you have questions or wish to discuss this request further, please contact me at the number listed below or by email. I will follow up with a phone call to you next week to check on the status of this request.

Please let me know if you are able to receive and unzip the document.

Thank you for your assistance.

Robert Forrest

Environmental Planner III

Valley Metro Rail (METRO)

101 N. First Avenue, Suite 1300

Phoenix, AZ 85003

Phone: (602) 322-4514

Fax: (602) 252-7453

email: rforrest@metrolightrail.org

From: Dean Giles [mailto:dgiles@mag.maricopa.gov]
Sent: Friday, May 21, 2010 4:57 PM
To: Forrest, Robert
Cc: Taejoo Shin
Subject: RE: Request for Initial MAG Review of Draft Central Mesa LRT Extension Air Quality Analysis Report

Robert:

We have reviewed the April 2010 Air Quality Technical Report for the Central Mesa LRT Extension project. A few comments are provided in the attached file.

If you have any questions, please call me at (602) 254-6300.

Dean Giles

Maricopa Association of Government

MAG - REVIEW COMMENTS DATED MAY 21, 2010

Project:	Central Mesa LRT Extension Air Quality Draft Technical Report, April 2010	Project Manager:	Marc Soronson	Consultant Disposition Codes: A – Will Comply B – Consultant To Evaluate C – Client To Evaluate D – No Further Action
Comments Due to Project Manager By:				
Reviewed By:	Cari Anderson, Cari Anderson Consulting Jerri Horst, HDR Robert Forrest, METRO	Department/Division:		

Comment No.	Page No./ Reference	Comment	Reviewer Initials	Code	METRO Response to Comment
1	4/Table 2	"METRO (2008)" in Footnote 1 is not listed in the Section 7.0 Bibliography.	JH	D	The footnote to the table does not reference any particular document. Rather, it is derived from common knowledge of the current locations of the METRO Link BRT stations.
2	6/1.2.1	The section title "1.2.1 Build Alternative, 2-Lane Option" should be underlined for consistency.	JH	A	Report has been revised to include an underline of the subheading for consistency.

Comment No.	Page No./ Reference	Comment	Reviewer Initials	Code	METRO Response to Comment
3	12/Table 3	The 1-hour standard of 100 ppb for nitrogen dioxide should be added to the table, and the "Sulfur Oxides" in the table should be corrected as "Sulfur Dioxide (SO_2)".	CA	A	Entire table has been updated per EPA June 3, 2010 update
4	13/footnote 4	"PM2.5" should be corrected as "PM-2.5" for consistency.	CA	A	Report has been revised
5	14/paragraph 3	"an 8-hour ozone standard" should be corrected as "the 8-hour ozone standard".	CA	A	Report has been revised
6	15/paragraph 5 & p. 16, figure 6	The "MCAQD 2008 Air Monitoring Network Review" referred for monitoring stations in Page 15 is not the same source indicated in Figure 6, "Source: MCAQD 2006 Air Monitoring Network Review".	CA	D	The air quality data was derived from the most recent source available at the time of preparation of this report (2008). Figure 6, showing locations of the air quality monitoring stations, was created from an earlier 2006 report. However, the monitoring station locations are the same regardless of which source the locations came from. For accuracy, we cited the correct source and dates for each.
7	17/Tables 4 & 5	"Number 8-hr CO exceedances" in Tables 4 and 5 and "Number 24-hr PM-10 exceedances" in Table 5 may be corrected as "Number of 8-hr CO exceedances" and "Number of 24-hr PM-10 exceedances". Also, "Three year Avg. of 4 th High" in Table 5 should be corrected as "Three-year Avg. of 4th High".	CA	A	Report has been revised

Comment No.	Page No./ Reference	Comment	Reviewer Initials	Code	METRO Response to Comment
8	22/paragraph1	clarify the sentence to read "In July 2007, the MAG Regional Council approved the Finding of Conformity for the FY 2008-2012 MAG Transportation Improvement Program (TIP) and the MAG Regional Transportation Plan - 2007 Update."	CA	A	Text edited accordingly
9	25/paragraph 1	"… this data reflects the estimated impact of …" should be corrected as "… the data reflect the estimated impact of …".	CA	A	Report has been revised
10	26/paragraph 1	More recently, the FHWA issued a final clarification to the Transportation Conformity Guidance for Qualitative Hot-spot Analysis in PM-2.5 and PM-10 Nonattainment and Maintenance Areas on June 12, 2009.	CA	D	Statement is correct; however, document is provided for clarification and specifically states that it does not supersede March 2006 guidance.
11	26/paragraph 4	Clarify the date of the email from Dale Hardy, City of Phoenix Public Transit Department.	CA	A	Text edited accordingly
12	29/2	The "absences" should be corrected as "absence".	CA	A	Text edited accordingly
13	35/paragraph 5	Maricopa County Environmental Services Department (MCESD)" should be corrected as "Maricopa County Air Quality Department (MCAQD)".	CA	A	Text edited accordingly

Comment No.	Page No./ Reference	Comment	Reviewer Initials	Code	METRO Response to Comment
14	37/paragraph 2	**"**both a regional and project-level hot-spot analysis" should be corrected as "both regional and project-level hot-spot analyses"..	CA	A	Report has been revised
15	37/paragraph 5	"Both the regional and hot-spot analysis complies" should be corrected as "Both the regional and hot-spot analyses comply".	CA	A	Text edited accordingly
16	37/paragraph 6	"PM10" should be hyphenated "PM-10" for consistency.	CA	A	Text edited accordingly
17	38	revise paragraph to reflect MAG staff technical review of the draft Air Quality Technical Report.	CA	A	Text edited accordingly; note that highlight and footnote indicates will be updated accordingly.
18	39/Bibliography	A space may be required between the 5th and 6th references.	CA	A	Text edited accordingly
19	39/Bibliography	In March 2010, the Environmental Protection Agency published a complete set of transportation conformity regulations that reflect all transportation conformity rulemakings, including the PM amendments final rulemaking (75 FR 14260).	CA	D	Statement is correct; however, document is for informational purposes only and specifically states that it is not to be used for citation and does not supersede rulemakings.
20	Appendix A	The unpaired parenthesis at the end of the 3rd bullet item should be removed.	CA	A	Text edited accordingly