- Not appropriate in channels that drain areas greater than 10 acres.
- Not appropriate in channels that are already grass-lined unless erosion is expected, as installation may damage vegetation.
- Require extensive maintenance following high velocity flows.
- Promotes sediment trapping which can be re-suspended during subsequent storms or removal of the check dam.

Implementation

General

Check dams reduce the effective slope and create small pools in swales and ditches that drain 10 acres or less. Reduced slopes reduce the velocity of stormwater flows, thus reducing erosion of the swale or ditch and promoting sedimentation. Use of check dams for sedimentation will likely result in little net removal of sediment because of the small detention time and probable scour during longer storms. Using a series of check dams will generally increase their effectiveness. A sediment trap (SE-3) may be placed immediately upstream of the check dam to increase sediment removal efficiency.

Design and Layout

Check dams work by decreasing the effective slope in ditches and swales. An important consequence of the reduced slope is a reduction in capacity of the ditch or swale. This reduction in capacity must be considered when using this BMP, as reduced capacity can result in overtopping of the ditch or swale and resultant consequences. In some cases, such as a "permanent" ditch or swale being constructed early and used as a "temporary" conveyance for construction flows, the ditch or swale may have sufficient capacity such that the temporary reduction in capacity due to check dams is acceptable. When check dams reduce capacities beyond acceptable limits, there are several options:

- Don't use check dams. Consider alternative BMPs.
- Increase the size of the ditch or swale to restore capacity.

Maximum slope and velocity reduction is achieved when the toe of the upstream dam is at the same elevation as the top of the downstream dam. The center section of the dam should be lower than the edge sections so that the check dam will direct flows to the center of the ditch or swale.

Check dams are usually constructed of rock, gravel bags, sandbags, and fiber rolls. A number of products manufactured specifically for use as check dams are also being used, and some of these products can be removed and reused. Check dams can also be constructed of logs or lumber, and have the advantage of a longer lifespan when compared to gravel bags, sandbags, and fiber rolls. Straw bales can also be used for check dams and can work if correctly installed; but in practice, straw bale check dams have a high failure rate. Check dams should not be constructed from straw bales or silt fences, since concentrated flows quickly wash out these materials.

Rock check dams are usually constructed of 8 to 12 in. rock. The rock is placed either by hand or mechanically, but never just dumped into the channel. The dam must completely span the ditch

Check Dams SE-4

or swale to prevent washout. The rock used must be large enough to stay in place given the expected design flow through the channel.

Log check dams are usually constructed of 4 to 6 in. diameter logs. The logs should be embedded into the soil at least 18 in. Logs can be bolted or wired to vertical support logs that have been driven or buried into the soil.

Gravel bag and sandbag check dams are constructed by stacking bags across the ditch or swale, shaped as shown in the drawings at the end of this fact sheet.

Manufactured products should be installed in accordance with the manufacturer's instructions.

If grass is planted to stabilize the ditch or swale, the check dam should be removed when the grass has matured (unless the slope of the swales is greater than 4%).

The following guidance should be followed for the design and layout of check dams:

- Install the first check dam approximately 16 ft from the outfall device and at regular intervals based on slope gradient and soil type.
- Check dams should be placed at a distance and height to allow small pools to form between each check dam.
- Backwater from a downstream check dam should reach the toes of the upstream check dam.
- A sediment trap provided immediately upstream of the check dam will help capture sediment. Due to the potential for this sediment to be resuspended in subsequent storms, the sediment trap must be cleaned following each storm event.
- High flows (typically a 2-year storm or larger) should safely flow over the check dam without an increase in upstream flooding or damage to the check dam.
- Where grass is used to line ditches, check dams should be removed when grass has matured sufficiently to protect the ditch or swale.
- Gravel bags may be used as check dams with the following specifications:

Materials

Gravel bags used for check dams should conform to the requirements of SE-6, Gravel Bag Berms. Sandbags used for check dams should conform to SE-8, Sandbag Barrier. Fiber rolls used for check dams should conform to SE-5, Fiber Rolls. Straw bales used for check dams should conform to SE-9, Straw Bale Barrier.

Installation

- Rock should be placed individually by hand or by mechanical methods (no dumping of rock) to achieve complete ditch or swale coverage.
- Tightly abut bags and stack according to detail shown in the figure at the end of this section.
 Gravel bags and sandbags should not be stacked any higher than 3 ft.
- Fiber rolls and straw bales must be trenched in and firmly staked in place.

Costs

Cost consists of only installation costs if materials are readily available. If material must be imported, costs may increase. For material costs, see SE-5, SE-6, SE-8 and SE-9.

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- Replace missing rock, bags, bales, etc. Replace bags or bales that have degraded or have become damaged.
- If the check dam is used as a sediment capture device, sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
- If the check dam is used as a grade control structure, sediment removal is not required as long as the system continues to control the grade.
- Remove accumulated sediment prior to permanent seeding or soil stabilization.
- Remove check dam and accumulated sediment when check dams are no longer needed.

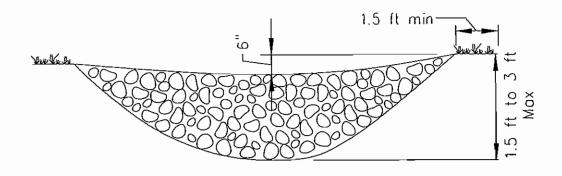
References

Draft - Sedimentation and Erosion Control, and Inventory of Current Practices, USEPA, April 1990.

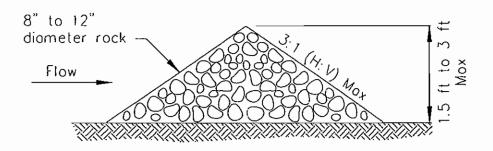
Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

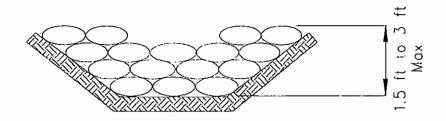


ELEVATION

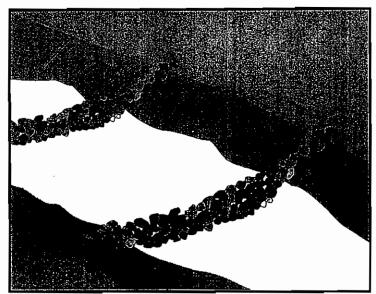


TYPICAL ROCK CHECK DAM SECTION

ROCK CHECK DAM NOT TO SCALE



GRAVEL BAG CHECK DAM ELEVATION NOT TO SCALE



Та

A check dam is a small barrier constructed of rock, gravel bags, sandbags, fiber rolls, or reusable products, placed across a constructed swale or drainage ditch. Check dams reduce the effective slope of the channel, thereby reducing the velocity of flowing water, allowing sediment to settle and reducing erosion.

Suitable Applications

Description and Purpose

Check dams may be appropriate in the following situations:

- To promote sedimentation behind the dam.
- To prevent erosion by reducing the velocity of channel flow in small intermittent channels and temporary swales.
- In small open channels that drain 10 acres or less.
- In steep channels where stormwater runoff velocities exceed 5 ft/s.
- During the establishment of grass linings in drainage ditches or channels.
- In temporary ditches where the short length of service does not warrant establishment of erosion-resistant linings.

Limitations

 Not to be used in live streams or in channels with extended base flows.

Objectives

EC Erosion Control
SE Sediment Control
TC Tracking Control

WE Wind Erosion Control

NS Non-Stormwater Management Control

WM Waste Management and Materials Pollution Control

Legend:

- ✓ Primary Objective
- ✓ Secondary Objective

Targeted Constituents

Sediment

Nutrients

Trash

Metais

Bacteria

Oil and Grease

Organics

Potential Alternatives

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier



- Not appropriate in channels that drain areas greater than 10 acres.
- Not appropriate in channels that are already grass-lined unless erosion is expected, as installation may damage vegetation.
- Require extensive maintenance following high velocity flows.
- Promotes sediment trapping which can be re-suspended during subsequent storms or removal of the check dam.

Implementation

General

Check dams reduce the effective slope and create small pools in swales and ditches that drain 10 acres or less. Reduced slopes reduce the velocity of stormwater flows, thus reducing erosion of the swale or ditch and promoting sedimentation. Use of check dams for sedimentation will likely result in little net removal of sediment because of the small detention time and probable scour during longer storms. Using a series of check dams will generally increase their effectiveness. A sediment trap (SE-3) may be placed immediately upstream of the check dam to increase sediment removal efficiency.

Design and Layout

Check dams work by decreasing the effective slope in ditches and swales. An important consequence of the reduced slope is a reduction in capacity of the ditch or swale. This reduction in capacity must be considered when using this BMP, as reduced capacity can result in overtopping of the ditch or swale and resultant consequences. In some cases, such as a "permanent" ditch or swale being constructed early and used as a "temporary" conveyance for construction flows, the ditch or swale may have sufficient capacity such that the temporary reduction in capacity due to check dams is acceptable. When check dams reduce capacities beyond acceptable limits, there are several options:

- Don't use check dams. Consider alternative BMPs.
- Increase the size of the ditch or swale to restore capacity.

Maximum slope and velocity reduction is achieved when the toe of the upstream dam is at the same elevation as the top of the downstream dam. The center section of the dam should be lower than the edge sections so that the check dam will direct flows to the center of the ditch or swale.

Check dams are usually constructed of rock, gravel bags, sandbags, and fiber rolls. A number of products manufactured specifically for use as check dams are also being used, and some of these products can be removed and reused. Check dams can also be constructed of logs or lumber, and have the advantage of a longer lifespan when compared to gravel bags, sandbags, and fiber rolls. Straw bales can also he used for check dams and can work if correctly installed; but in practice, straw bale check dams have a high failure rate. Check dams should not be constructed from straw bales or silt fences, since concentrated flows quickly wash out these materials.

Rock check dams are usually constructed of 8 to 12 in. rock. The rock is placed either by hand or mechanically, but never just dumped into the channel. The dam must completely span the ditch

or swale to prevent washout. The rock used must be large enough to stay in place given the expected design flow through the channel.

Log check dams are usually constructed of 4 to 6 in. diameter logs. The logs should be embedded into the soil at least 18 in. Logs can be bolted or wired to vertical support logs that have been driven or buried into the soil.

Gravel bag and sandbag check dams are constructed by stacking bags across the ditch or swale, shaped as shown in the drawings at the end of this fact sheet.

Manufactured products should be installed in accordance with the manufacturer's instructions.

If grass is planted to stabilize the ditch or swale, the check dam should be removed when the grass has matured (unless the slope of the swales is greater than 4%).

The following guidance should be followed for the design and layout of check dams:

- Install the first check dam approximately 16 ft from the outfall device and at regular intervals based on slope gradient and soil type.
- Check dams should be placed at a distance and height to allow small pools to form between each check dam.
- Backwater from a downstream check dam should reach the toes of the upstream check dam.
- A sediment trap provided immediately upstream of the check dam will help capture sediment. Due to the potential for this sediment to be resuspended in subsequent storms, the sediment trap must be cleaned following each storm event.
- High flows (typically a 2-year storm or larger) should safely flow over the check dam without an increase in upstream flooding or damage to the check dam.
- Where grass is used to line ditches, check dams should be removed when grass has matured sufficiently to protect the ditch or swale.
- Gravel bags may be used as check dams with the following specifications:

Materials

١.

Gravel bags used for check dams should conform to the requirements of SE-6, Gravel Bag Berms. Sandbags used for check dams should conform to SE-8, Sandbag Barrier. Fiber rolls used for check dams should conform to SE-5, Fiber Rolls. Straw bales used for check dams should conform to SE-9, Straw Bale Barrier.

Installation

- Rock should be placed individually by hand or by mechanical methods (no dumping of rock) to achieve complete ditch or swale coverage.
- Tightly abut bags and stack according to detail shown in the figure at the end of this section.
 Gravel bags and sandbags should not be stacked any higher than 3 ft.
- Fiber rolls and straw bales must be trenched in and firmly staked in place.

Costs

Cost consists of only installation costs if materials are readily available. If material must be imported, costs may increase. For material costs, see SE-5, SE-6, SE-8 and SE-9.

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- Replace missing rock, bags, bales, etc. Replace bags or bales that have degraded or have become damaged.
- If the check dam is used as a sediment capture device, sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
- If the check dam is used as a grade control structure, sediment removal is not required as long as the system continues to control the grade.
- Remove accumulated sediment prior to permanent seeding or soil stabilization.
- Remove check dam and accumulated sediment when check dams are no longer needed.

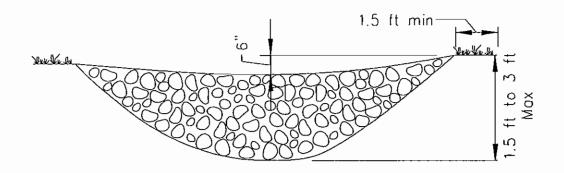
References

Draft – Sedimentation and Erosion Control, and Inventory of Current Practices, USEPA, April 1990.

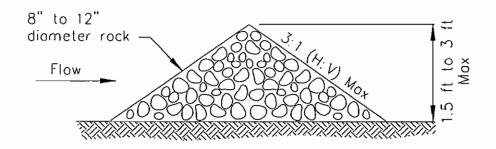
Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

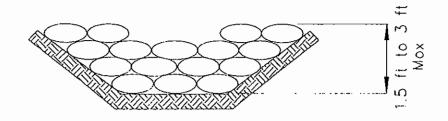


ELEVATION

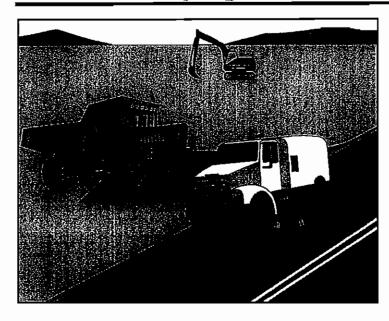


TYPICAL ROCK CHECK DAM SECTION

ROCK CHECK DAM NOT TO SCALE



GRAVEL BAG CHECK DAM ELEVATION NOT TO SCALE



Objectives

EC	Erosion Control	
SE	Sediment Control	✓
TC	Tracking Control	✓
WE	Wind Erosion Control	
NS	Non-Stormwaler Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

- **✓** Primary Objective
- ✓ Secondary Objective

Description and Purpose

Street sweeping and vacuuming includes use of self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving. Sweeping and vacuuming prevents sediment from the project site from entering storm drains or receiving waters.

Suitable Applications

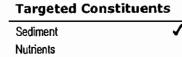
Sweeping and vacuuming are suitable anywhere sediment is tracked from the project site onto public or private paved streets and roads, typically at points of egress. Sweeping and vacuuming are also applicable during preparation of paved surfaces for final paving.

Limitations

Sweeping and vacuuming may not be effective when sediment is wet or when tracked soil is caked (caked soil may need to be scraped loose).

Implementation

- Controlling the number of points where vehicles can leave the site will allow sweeping and vacuuming efforts to be focused, and perhaps save money.
- Inspect potential sediment tracking locations daily.
- Visible sediment tracking should be swept or vacuumed on a daily basis.



Metals Bacteria

Trash

Oil and Grease

Voganics

Potential Alternatives

None



SE-7 Street Sweeping and Vacuuming

- Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.
- If not mixed with debris or trash, consider incorporating the removed sediment back into the project

Costs

Rental rates for self-propelled sweepers vary depending on hopper size and duration of rental. Expect rental rates from \$58/hour (3 yd³ hopper) to \$88/hour (9 yd³ hopper), plus operator costs. Hourly production rates vary with the amount of area to be swept and amount of sediment. Match the hopper size to the area and expect sediment load to minimize time spent dumping.

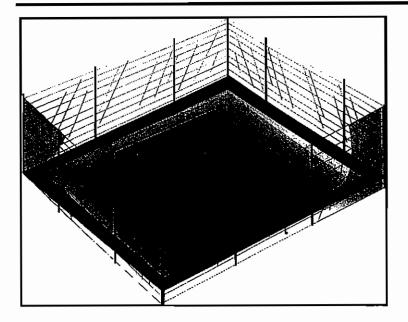
Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- When actively in use, points of ingress and egress must be inspected daily.
- When tracked or spilled sediment is observed outside the construction limits, it must be removed at least daily. More frequent removal, even continuous removal, may be required in some jurisdictions.
- Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Labor Surcharge and Equipment Rental Rates, State of California Department of Transportation (Caltrans), April 1, 2002 – March 31, 2003.



Objectives

EC Erosion Control

SE Sediment Control

TC Tracking Control

WE Wind Erosion Control

Non-Stormwater

Management Control

WMM Waste Management and

Materials Pollution Control

Legend

- ✓ Primary Objective
- Secondary Objective

Description and Purpose

Storm drain inlet protection consists of a sediment filter or an impounding area around or upstream of a storm drain, drop inlet, or curb inlet. Storm drain inlet protection measures temporarily pond runoff before it enters the storm drain, allowing sediment to settle. Some filter configurations also remove sediment by filtering, but usually the ponding action results in the greatest sediment reduction.

Suitable Applications

Every storm drain inlet receiving sediment-laden runoff should be protected.

Limitations

- Drainage area should not exceed 1 acre.
- Straw bales, while potentially effective, have not produced in practice satisfactory results, primarily due to improper installation.
- Requires an adequate area for water to pond without encroaching into portions of the roadway subject to traffic.
- Inlet protection usually requires other methods of temporary protection to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.
- Sediment removal may be difficult in high flow conditions or if runoff is heavily sediment laden. If high flow conditions are

Targeted Constituents

Sediment

Nutrients

Trash

Metals

Bacteria

Oil and Grease

Organics

Potential Alternatives

SE-1 Silt Fence

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-9 Straw Bale Barrier



SE-10 Storm Drain Inlet Protection

expected, use other onsite sediment trapping techniques in conjunction with inlet protection.

- Frequent maintenance is required.
- For drainage areas larger than 1 acre, runoff should be routed to a sediment-trapping device designed for larger flows. See BMPs SE-2, Sediment Basin, and SE-3, Sediment Traps.
- Excavated drop inlet sediment traps are appropriate where relatively heavy flows are expected, and overflow capability is needed.

Implementation

General

Large amounts of sediment may enter the storm drain system when storm drains are installed before the upslope drainage area is stabilized, or where construction is adjacent to an existing storm drain. In cases of extreme sediment loading, the storm drain itself may clog and lose a major portion of its capacity. To avoid these problems, it is necessary to prevent sediment from entering the system at the inlets.

Inlet control measures presented in this handbook should not be used for inlets draining more than one acre. Runoff from larger disturbed areas should be first routed through SE-2, Sediment Basin or SE-3, Sediment Trap. Different types of inlet protection are appropriate for different applications depending on site conditions and the type of inlet. Inlet protection methods not presented in this handbook should be approved by the local stormwater management agency.

Design and Layout

Identify existing and planned storm drain inlets that have the potential to receive sedimentladen surface runoff. Determine if storm drain inlet protection is needed and which method to use.

- Limit upstream drainage area to 1 acre maximum. For larger drainage areas, use SE-2,
 Sediment Basin, or SE-3, Sediment Trap, upstream of the inlet protection device.
- The key to successful and safe use of storm drain inlet protection devices is to know where runoff will pond or be diverted.
 - Determine the acceptable location and extent of ponding in the vicinity of the drain inlet.
 The acceptable location and extent of ponding will influence the type and design of the storm drain inlet protection device.
 - Determine the extent of potential runoff diversion caused by the storm drain inlet protection device. Runoff ponded by inlet protection devices may flow around the device and towards the next downstream inlet. In some cases, this is acceptable; in other cases, serious erosion or downstream property damage can be caused by these diversions. The possibility of runoff diversions will influence whether or not storm drain inlet protection is suitable; and, if suitable, the type and design of the device.
- The location and extent of ponding, and the extent of diversion, can usually be controlled through appropriate placement of the inlet protection device. In some cases, moving the

inlet protection device a short distance upstream of the actual inlet can provide more efficient sediment control, limit ponding to desired areas, and prevent or control diversions.

- Four types of inlet protection are presented below. However, it is recognized that other
 effective methods and proprietary devices exist and may be selected.
 - Filter Fabric Fence: Appropriate for drainage basins with less than a 5% slope, sheet flows, and flows under 0.5 cfs.
 - Excavated Drop Inlet Sediment Trap: An excavated area around the inlet to trap sediment (SE-3).
 - Gravel bag barrier: Used to create a small sediment trap upstream of inlets on sloped, paved streets. Appropriate for sheet flow or when concentrated flow may exceed 0.5 cfs, and where overtopping is required to prevent flooding.
 - Block and Gravel Filter: Appropriate for flows greater than 0.5 cfs.
- Select the appropriate type of inlet protection and design as referred to or as described in this fact sheet.
- Provide area around the inlet for water to pond without flooding structures and property.
- Grates and spaces around all inlets should be sealed to prevent seepage of sediment-laden water.
- Excavate sediment sumps (where needed) 1 to 2 ft with 2:1 side slopes around the inlet.

Installation

- DI Protection Type 1 Filter Fabric Fence The filter fabric fence (Type 1) protection
 is shown in the attached figure. Similar to constructing a silt fence; see BMP SE-1, Silt
 Fence. Do not place filter fabric underneath the inlet grate since the collected sediment may
 fall into the drain inlet when the fabric is removed or replaced.
 - Excavate a trench approximately 6 in. wide and 6 in. deep along the line of the silt fence inlet protection device.
 - 2. Place 2 in. by 2 in. wooden stakes around the perimeter of the inlet a maximum of 3 ft apart and drive them at least 18 in. into the ground or 12 in. below the bottom of the trench. The stakes must be at least 48 in.
 - 3. Lay fabric along bottom of trench, up side of trench, and then up stakes. See SE-1, Silt Fence, for details. The maximum silt fence height around the inlet is 24 in.
 - 4. Staple the filter fabric (for materials and specifications, see SE-1, Silt Fence) to wooden stakes. Use heavy-duty wire staples at least 1 in. in length.
 - 5. Backfill the trench with gravel or compacted earth all the way around.
- DI Protection Type 2 Excavated Drop Inlet Sediment Trap The excavated drop
 inlet sediment trap (Type 2) is shown in the attached figures. Install filter fabric fence in

accordance with DI Protection Type 1. Size excavated trap to provide a minimum storage capacity calculated at the rate 67 yd3/acre of drainage area.

- DI Protection Tupe 3 Gravel bag The gravel bag barrier (Type 3) is shown in the figures. Flow from a severe storm should not overtop the curb. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Construct gravel bags in accordance with SE-6, Gravel Bag Berm. Gravel bags should be used due to their high permeability.
 - 1. Use sand bag made of geotextile fabric (not burlap) and fill with 0.75 in. rock or 0.25 in. pea gravel.
 - 2. Construct on gently sloping street.
 - 3. Leave room upstream of barrier for water to pond and sediment to settle.
 - 4. Place several layers of sand bags overlapping the bags and packing them tightly together.
 - 5. Leave gap of one bag on the top row to serve as a spillway. Flow from a severe storm (e.g., 10 year storm) should not overtop the curb.
- DI Protection Type 4 Block and Gravel Filter The block and gravel filter (Type 4) is shown in the figures. Block and gravel filters are suitable for curb inlets commonly used in residential, commercial, and industrial construction.
 - Place hardware cloth or comparable wire mesh with 0.5 in. openings over the drop inlet so that the wire extends a minimum of 1 ft beyond each side of the inlet structure. If more than one strip is necessary, overlap the strips. Place filter fabric over the wire mesh.
 - Place concrete blocks lengthwise on their sides in a single row around the perimeter of the inlet, so that the open ends face outward, not upward. The ends of adjacent blocks should abut. The height of the barrier can be varied, depending on design needs, by stacking combinations of blocks that are 4 in., 8 in., and 12 in. wide. The row of blocks should be at least 12 in. but no greater than 24 in. high.
 - 3. Place wire mesh over the outside vertical face (open end) of the concrete blocks to prevent stone from being washed through the blocks. Use hardware cloth or comparable wire mesh with 0.5 in. opening.
 - 4. Pile washed stone against the wire mesh to the top of the blocks. Use 0.75 to 3 in.

Costs

Average annual cost for installation and maintenance (one year useful life) is \$200 per inlet.

Inspection and Maintenance

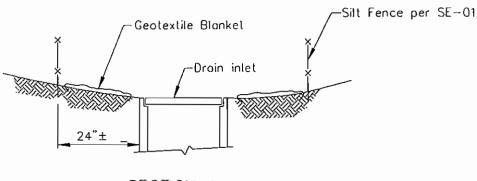
Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.

- Filter Fabric Fences. If the fabric becomes clogged, torn, or degrades, it should be replaced. Make sure the stakes are securely driven in the ground and are in good shape (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes.
- Gravel Filters. If the gravel becomes clogged with sediment, it must be carefully removed from the inlet and either cleaned or replaced. Since cleaning gravel at a construction site may be difficult, consider using the sediment-laden stone as fill material and put fresh stone around the inlet. Inspect bags for holes, gashes, and snags, and replace bags as needed. Check gravel bags for proper arrangement and displacement.
- Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site ore disposed at an appropriate location.
- Remove storm drain inlet protection once the drainage area is stabilized.
 - Clean and regrade area around the inlet and clean the inside of the storm drain inlet as it
 must be free of sediment and debris at the time of final inspection.

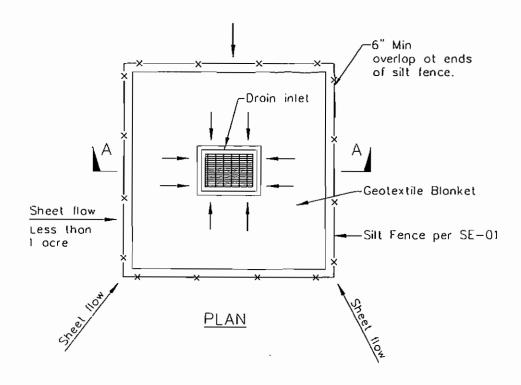
References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management Manual for The Puget Sound Basin, Washington State Department of Ecology, Public Review Draft, 1991.



SECTION A-A



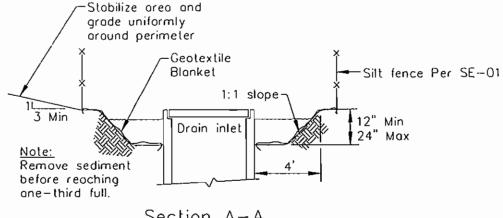
DI PROTECTION TYPE 1
NOT TO SCALE

NOTES:

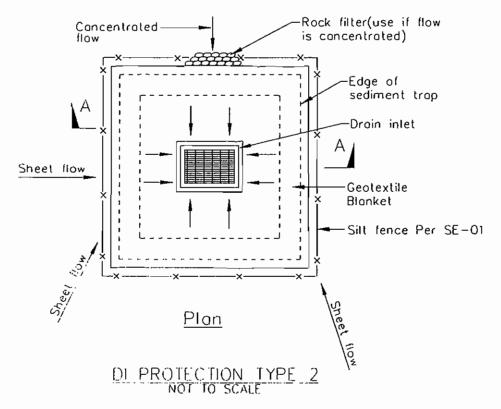
- 1 for use in creas where grading has been completed and final sail stabilization and seeding are pending
- 2. Not applicable in paved areas.
- 3 Not applicable with concentrated flows.

ł :

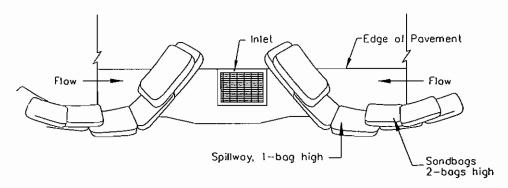
t :



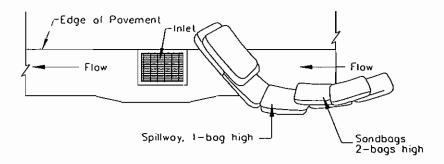




- 1 For use in cleared and grubbed and in graded areas.
- 2 Shape basin so that longest inflow area faces longest length of trop.
- 3 For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow



TYPICAL PROTECTION FOR INLET ON SUMP

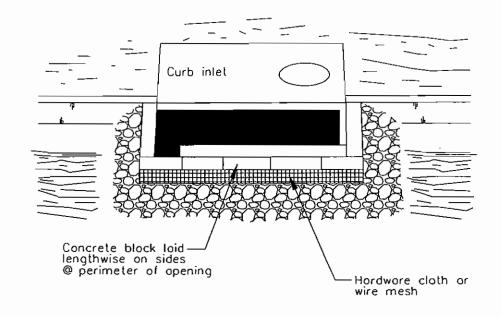


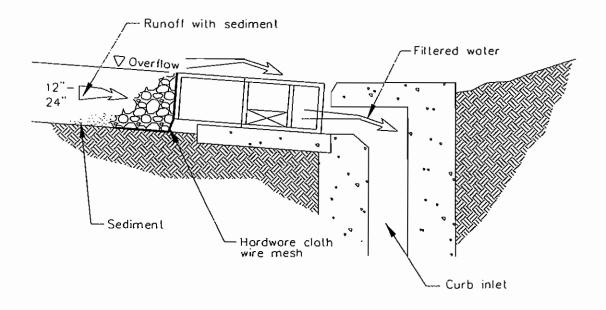
TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:

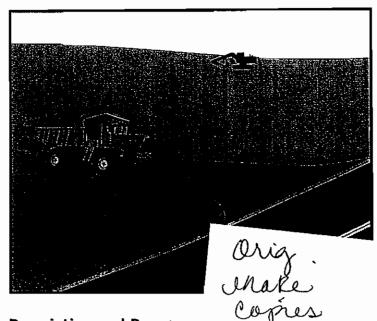
- I Intended for short-term use.
- Use to inhibit non-starm water flow
- 3 Allow for proper mointenance and cleanup.
- 4 Bogs must be removed after adjacent operation is completed
- 5 Not applicable in areas with high silts and clays without filter tobric.

DI PROTECTION TYPE 3





DI PROTECTION - 1YPE 4
NOT 10 SCALE



Description and Purpose

A stabilized construction access i entrance/exit to a construction s the tracking of mud and dirt onto public roads by Louise. vehicles.

Suitable Applications

Use at construction sites:

- Where dirt or mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where poor soils are encountered.
- Where dust is a problem during dry weather conditions.

Limitations

- Entrances and exits require periodic top dressing with additional stones.
- This BMP should be used in conjunction with street sweeping on adjacent public right of way.
- Entrances and exits should be constructed on level ground only.
- Stabilized construction entrances are rather expensive to construct and when a wash rack is included, a sediment trap of some kind must also be provided to collect wash water runoff.

Objectives		
EC	Erosion Control	1
SE	Sediment Control	✓
TC	Tracking Control	✓
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	
Legend:		

- Primary Objective
- Secondary Objective

Targeted Constituents

Sediment

Nutrients

Trash

Metals

Bacteria

Oil and Grease

Organics

Potential Alternatives

None



Implementation

General

A stabilized construction entrance is a pad of aggregate underlain with filter cloth located at any point where traffic will be entering or leaving a construction site to or from a public right of way, street, alley, sidewalk, or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights of way or streets. Reducing tracking of sediments and other pollutants onto paved roads helps prevent deposition of sediments into local storm drains and production of airborne dust.

Where traffic will be entering or leaving the construction site, a stabilized construction entrance should be used. NPDES permits require that appropriate measures be implemented to prevent tracking of sediments onto paved roadways, where a significant source of sediments is derived from mud and dirt carried out from unpaved roads and construction sites.

Stabilized construction entrances are moderately effective in removing sediment from equipment leaving a construction site. The entrance should be built on level ground. Advantages of the Stabilized Construction Entrance/Exit is that it does remove some sediment from equipment and serves to channel construction traffic in and out of the site at specified locations. Efficiency is greatly increased when a washing rack is included as part of a stabilized construction entrance/exit.

Design and Layout

- Construct on level ground where possible.
- Select 3 to 6 in. diameter stones.
- Use minimum depth of stones of 12 in. or as recommended by soils engineer.
- Construct length of 50 ft minimum, and 30 ft minimum width.
- Rumble racks constructed of steel panels with ridges and installed in the stabilized entrance/exit will help remove additional sediment and to keep adjacent streets clean.
- Provide ample turning radii as part of the entrance.
- Limit the points of entrance/exit to the construction site.
- Limit speed of vehicles to control dust.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment trapping device before discharge.
- Design stabilized entrance/exit to support heaviest vehicles and equipment that will use it.
- Select construction access stabilization (aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions. Do not use asphalt concrete (AC) grindings for stabilized construction access/roadway.

- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 12 in. depth, or place aggregate to a depth recommended by a geotechnical engineer. A crushed aggregate greater than 3 in. but smaller than 6 in. should be used.
- Designate combination or single purpose entrances and exits to the construction site.
- Require that all employees, subcontractors, and suppliers utilize the stabilized construction access.
- Implement SE-7, Street Sweeping and Vacuuming, as needed.
- All exit locations intended to be used for more than a two-week period should have stabilized construction entrance/exit BMPs.

Inspection and Maintenance

- Inspect and verify that activity—based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMPs are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect local roads adjacent to the site daily. Sweep or vacuum to remove visible accumulated sediment.
- Remove aggregate, separate and dispose of sediment if construction entrance/exit is clogged with sediment.
- Keep all temporary roadway ditches clear.
- Check for damage and repair as needed.
- Replace gravel material when surface voids are visible.
- Remove all sediment deposited on paved roadways within 24 hours.
- Remove gravel and filter fabric at completion of construction

Costs

Average annual cost for installation and maintenance may vary from \$1,200 to \$4,800 each, averaging \$2,400 per entrance. Costs will increase with addition of washing rack, and sediment trap. With wash rack, costs range from \$1,200 - \$6,000 each, averaging \$3,600 per entrance.

References

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas, USEPA Agency, 2002.

Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Work Group Working Paper, USEPA, April 1992.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

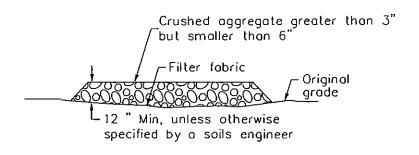
Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

Virginia Erosion and Sedimentation Control Handbook, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation, 1991.

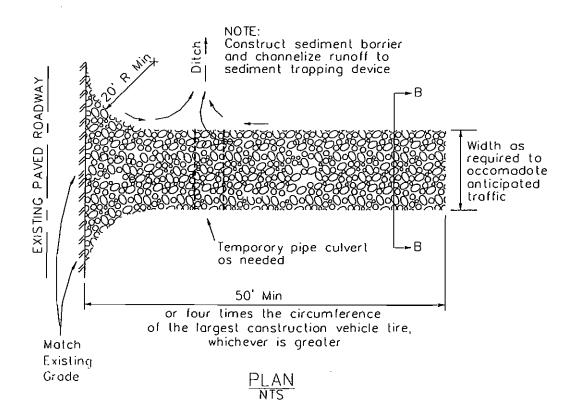
Guidance Specifying Management Measures for Nonpoint Pollution in Coastal Waters, EPA 840-B-9-002, USEPA, Office of Water, Washington, DC, 1993.

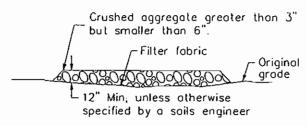
Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

www.cabmphandbooks.com

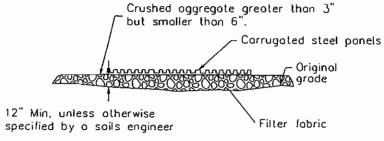


SECTION B-B

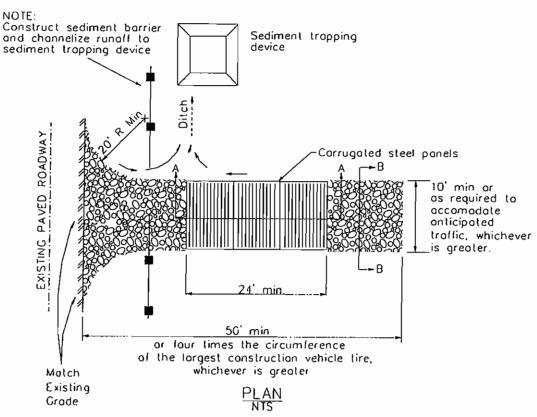


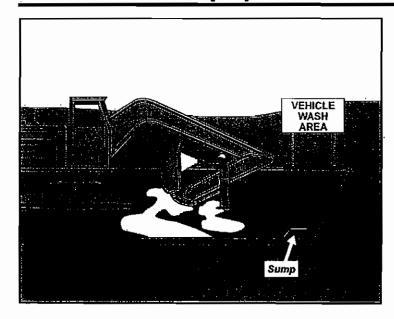


SECTION B-B NTS



SECTION A-A





•	Second

Description and Purpose

Vehicle and equipment cleaning procedures and practices eliminate or reduce the discharge of pollutants to stormwater from vehicle and equipment cleaning operations. Procedures and practices include but are not limited to: using offsite facilities; washing in designated, contained areas only; eliminating discharges to the storm drain by infiltrating the wash water; and training employees and subcontractors in proper cleaning procedures.

Suitable Applications

These procedures are suitable on all construction sites where vehicle and equipment cleaning is performed.

Limitations

Even phosphate-free, biodegradable soaps have been shown to be toxic to fish before the soap degrades. Sending vehicles/equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/Exit.

Implementation

Other options to washing equipment onsite include contracting with either an offsite or mobile commercial washing business. These businesses may be better equipped to handle and dispose of the wash waters properly. Performing this work offsite can also be economical by eliminating the need for a separate washing operation onsite.

If washing operations are to take place onsite, then:

Cobjectives EC Erosion Control SE Sediment Control TC Tracking Control WE Wind Erosion Control NS Non-Stormwater Management Control WMM Waste Management and Materials Pollution Control

Legend:

- **✓** Primary Objective
- ✓ Secondary Objective

Targeted Constituents Sediment

Sediment	
Nutrients	✓
Trash	
Metals	
Bacteria	
Oil and Grease	✓
Organics	✓

Potential Alternatives

None



NS-8 Vehicle and Equipment Cleaning

- Use phosphate-free, biodegradable soaps.
- Educate employees and subcontractors on pollution prevention measures.
- Do not permit steam cleaning onsite. Steam cleaning can generate significant pollutant concentrates.
- Cleaning of vehicles and equipment with soap, solvents or steam should not occur on the project site unless resulting wastes are fully contained and disposed of. Resulting wastes should not be discharged or buried, and must be captured and recycled or disposed according to the requirements of WM-10, Liquid Waste Management or WM-6, Hazardous Waste Management, depending on the waste characteristics. Minimize use of solvents. Use of diesel for vehicle and equipment cleaning is prohibited.
- All vehicles and equipment that regularly enter and leave the construction site must be cleaned offsite.
- When vehicle and equipment washing and cleaning must occur onsite, and the operation cannot be located within a structure or building equipped with appropriate disposal facilities, the outside cleaning area should have the following characteristics:
 - Located away from storm drain inlets, drainage facilities, or watercourses
 - Paved with concrete or asphalt and bermed to contain wash waters and to prevent runon and runoff
 - Configured with a sump to allow collection and disposal of wash water
 - No discharge of wash waters to storm drains or watercourses
 - Used only when necessary
- When cleaning vehicles and equipment with water:
 - Use as little water as possible. High-pressure sprayers may use less water than a hose and should be considered
 - Use positive shutoff valve to minimize water usage
 - Facility wash racks should discharge to a sanitary sewer, recycle system or other approved discharge system and must not discharge to the storm drainage system, watercourses, or to groundwater

Costs

Cleaning vehicles and equipment at an offsite facility may reduce overall costs for vehicle and equipment cleaning by eliminating the need to provide similar services onsite. When onsite cleaning is needed, the cost to establish appropriate facilities is relatively low on larger, long-duration projects, and moderate to high on small, short-duration projects.

Vehicle and Equipment Cleaning NS-8

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and at two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
- Inspection and maintenance is minimal, although some berm repair may be necessary.
- Monitor employees and subcontractors throughout the duration of the construction project to ensure appropriate practices are being implemented.
- Inspect sump regularly and remove liquids and sediment as needed.
- Prohibit employees and subcontractors from washing personal vehicles and equipment on the construction site.

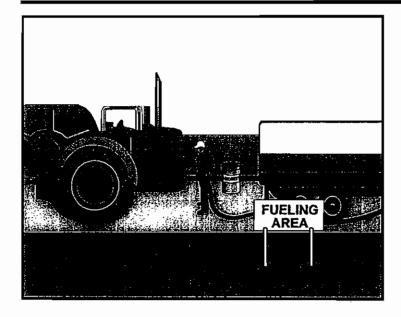
References

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Swisher, R.D. Surfactant Biodegradation, Marcel Decker Corporation, 1987.

ľ.

۴.



Objectives

EC Erosion Control

SE Sediment Control

TC Tracking Control

WE Wind Erosion Control

NS Non-Stormwater
Management Control

WM Waste Management and Materials Pollution Control

Legend:

✓ Primary Objective

✓ Secondary Objective

Description and Purpose

Vehicle equipment fueling procedures and practices are designed to prevent fuel spills and leaks, and reduce or eliminate contamination of stormwater. This can be accomplished by using offsite facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors in proper fueling procedures.

Suitable Applications

These procedures are suitable on all construction sites where vehicle and equipment fueling takes place.

Limitations

Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling. Sending vehicles and equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/ Exit.

Implementation

- Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site.
- Discourage "topping-off" of fuel tanks.

Targeted Constituents

Sediment

Nutrients

Trash

Metals

Bacteria

Oil and Grease

Organics

Potential Alternatives

None



NS-9 Vehicle and Equipment Fueling

- Absorbent spill cleanup materials and spill kits should be available in fueling areas and on fueling trucks, and should be disposed of properly after use.
- Drip pans or absorbent pads should be used during vehicle and equipment fueling, unless the fueling is performed over an impermeable surface in a dedicated fueling area.
- Use absorbent materials on small spills. Do not hose down or bury the spill. Remove the adsorbent materials promptly and dispose of properly.
- Avoid mobile fueling of mobile construction equipment around the site; rather, transport the equipment to designated fueling areas. With the exception of tracked equipment such as bulldozers and large excavators, most vehicles should be able to travel to a designated area with little lost time.
- Train employees and subcontractors in proper fueling and cleanup procedures.
- When fueling must take place onsite, designate an area away from drainage courses to be used. Fueling areas should be identified in the SWPPP.
- Dedicated fueling areas should be protected from stormwater runon and runoff, and should be located at least 50 ft away from downstream drainage facilities and watercourses. Fueling must be performed on level-grade areas.
- Protect fueling areas with berms and dikes to prevent runon, runoff, and to contain spills.
- Nozzles used in vehicle and equipment fueling should be equipped with an automatic shutoff to control drips. Fueling operations should not be left unattended.
- Use vapor recovery nozzles to help control drips as well as air pollution where required by Air Quality Management Districts (AQMD).
- Federal, state, and local requirements should be observed for any stationary above ground storage tanks.

Costs

 All of the above measures are low cost except for the capital costs of above ground tanks that meet all local environmental, zoning, and fire codes.

Inspection and Maintenance

- Vehicles and equipment should be inspected each day of use for leaks. Leaks should be repaired immediately or problem vehicles or equipment should be removed from the project site.
- Keep ample supplies of spill cleanup materials onsite.
- Immediately clean up spills and properly dispose of contaminated soil and cleanup materials.

Vehicle and Equipment Fueling NS-9

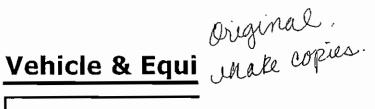
References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

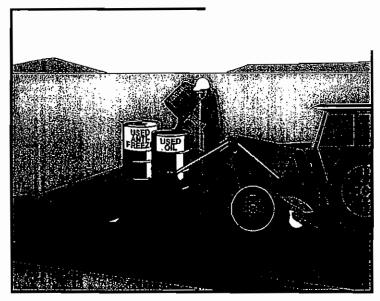
Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance, Working Group Working Paper; USEPA, April 1992.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.



NS-10 nance



Description and Purpose

Prevent or reduce the contamination of stormwater resulting from vehicle and equipment maintenance by running a "dry and clean site". The best option would be to perform maintenance activities at an offsite facility. If this option is not available then work should be performed in designated areas only, while providing cover for materials stored outside. checking for leaks and spills, and containing and cleaning up spills immediately. Employees and subcontractors must be trained in proper procedures.

Suitable Applications

These procedures are suitable on all construction projects where an onsite yard area is necessary for storage and maintenance of heavy equipment and vehicles.

Limitations

Onsite vehicle and equipment maintenance should only be used where it is impractical to send vehicles and equipment offsite for maintenance and repair. Sending vehicles/equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/Exit.

Outdoor vehicle or equipment maintenance is a potentially significant source of stormwater pollution. Activities that can contaminate stormwater include engine repair and service, changing or replacement of fluids, and outdoor equipment storage and parking (engine fluid leaks). For further information on vehicle or equipment servicing, see NS-8, Vehicle and Equipment Cleaning, and NS-9, Vehicle and Equipment Fueling.

Objectives		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	✓
WM	Waste Management and Materials Pollution Control	
Legend:		

- **Primary Objective**
- Secondary Objective

Targeted Constituents		
Sediment		
Nutrients	✓	
Trash	✓	
Metals		
Bacteria		
Oil and Grease	✓	
Organics	✓	

Potential Alternatives

Nоле



NS-10 Vehicle & Equipment Maintenance

Implementation

- Use offsite repair shops as much as possible. These businesses are better equipped to handle vehicle fluids and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate maintenance area.
- If maintenance must occur onsite, use designated areas, located away from drainage courses. Dedicated maintenance areas should be protected from stormwater runon and runoff, and should be located at least 50 ft from downstream drainage facilities and watercourses.
- Drip pans or absorbent pads should be used during vehicle and equipment maintenance work that involves fluids, unless the maintenance work is performed over an impermeable surface in a dedicated maintenance area.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- All fueling trucks and fueling areas are required to have spill kits and/or use other spill protection devices.
- Use adsorbent materials on small spills. Remove the absorbent materials promptly and dispose of properly.
- Inspect onsite vehicles and equipment daily at startup for leaks, and repair immediately.
- Keep vehicles and equipment clean; do not allow excessive build-up of oil and grease.
- Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic and transmission fluids. Provide secondary containment and covers for these materials if stored onsite.
- Train employees and subcontractors in proper maintenance and spill cleanup procedures.
- Drip pans or plastic sheeting should be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than 1 hour.
- For long-term projects, consider using portable tents or covers over maintenance areas if maintenance cannot be performed offsite.
- Consider use of new, alternative greases and lubricants, such as adhesive greases, for chassis lubrication and fifth-wheel lubrication.
- Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.
- Do not place used oil in a dumpster or pour into a storm drain or watercourse.
- Properly dispose of or recycle used batteries.
- Do not bury used tires.
- Repair leaks of fluids and oil immediately.

Vehicle & Equipment Maintenance NS-10

Listed below is further information if you must perform vehicle or equipment maintenance onsite.

Safer Alternative Products

- Consider products that are less toxic or hazardous than regular products. These products are often sold under an "environmentally friendly" label.
- Consider use of grease substitutes for lubrication of truck fifth-wheels. Follow manufacturers label for details on specific uses.
- Consider use of plastic friction plates on truck fifth-wheels in lieu of grease. Follow manufacturers label for details on specific uses.

Waste Reduction

Parts are often cleaned using solvents such as trichloroethylene, trichloroethane, or methylene chloride. Many of these cleaners are listed in California Toxic Rule as priority pollutants. These materials are harmful and must not contaminate stormwater. They must be disposed of as a hazardous waste. Reducing the number of solvents makes recycling easier and reduces hazardous waste management costs. Often, one solvent can perform a job as well as two different solvents. Also, if possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials. For example, replace chlorinated organic solvents with non-chlorinated solvents. Non-chlorinated solvents like kerosene or mineral spirits are less toxic and less expensive to dispose of properly. Check the list of active ingredients to see whether it contains chlorinated solvents. The "chlor" term indicates that the solvent is chlorinated. Also, try substituting a wire brush for solvents to clean parts.

Recycling and Disposal

Separating wastes allows for easier recycling and may reduce disposal costs. Keep hazardous wastes separate, do not mix used oil solvents, and keep chlorinated solvents (like,-trichloroethane) separate from non-chlorinated solvents (like kerosene and mineral spirits). Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around. Provide cover and secondary containment until these materials can be removed from the site.

Oil filters can be recycled. Ask your oil supplier or recycler about recycling oil filters.

Do not dispose of extra paints and coatings by dumping liquid onto the ground or throwing it into dumpsters. Allow coatings to dry or harden before disposal into covered dumpsters.

Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries, even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Costs

All of the above are low cost measures. Higher costs are incurred to setup and maintain onsite maintenance areas.

NS-10 Vehicle & Equipment Maintenance

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and at two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharges daily while non-stormwater discharges occur.
- Keep ample supplies of spill cleanup materials onsite.
- Maintain waste fluid containers in leak proof condition.
- Vehicles and equipment should be inspected on each day of use. Leaks should be repaired immediately or the problem vehicle(s) or equipment should be removed from the project site.
- Inspect equipment for damaged hoses and leaky gaskets routinely. Repair or replace as needed.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Coastal Nonpoint Pollution Control Program; Program Development and Approval Guidance, Working Group, Working Paper; USEPA, April 1992.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Appendix 6 Transportation

6A

Traffic Impact Study Sunbelt Enterprises Medical Office Development Agoura Hills Project No. 05-CUP-006. Interwest Consulting Group. January 3, 2007.

TRAFFIC IMPACT STUDY

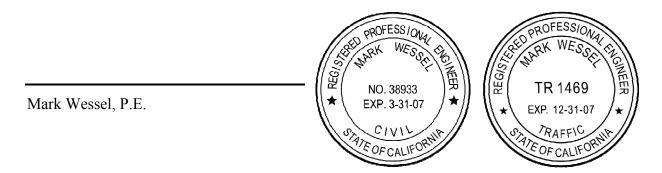
SUNBELT ENTERPRISES MEDICAL OFFICE DEVELOPMENT AGOURA HILLS PROJECT NO. 05-CUP-006

January 3, 2007

Prepared By:



9519 Chamberlain Street Ventura, CA 93004



TRAFFIC IMPACT STUDY Agoura Hills Project No. 05-CUP-006

EXECUTIVE SUMMARY

A traffic impact study was conducted to identify potential offsite traffic impacts and associated mitigation measures relating to development of the proposed project. The project proposes to develop 25,200 square feet of medical office use on a 3.1 acre site at 29541 and 29555 Canwood Street in the City of Agoura Hills. The project is expected to generate approximately 62 morning peak hour trips, 94 afternoon peak hour trips, and 910 daily trips.

Six intersections at the U.S. 101 Freeway interchanges with Reyes Adobe Road and Kanan Road were analyzed for both the morning and afternoon peak periods. Intersection operation was analyzed using the Intersection Capacity Utilization (ICU) method.

It was determined that five of the six intersections studied currently operate at good levels of service during the morning peak hour, but three of the intersections operate at LOS D or E during the afternoon peak hour. The proposed project will cause significant impacts to the intersections of Reyes Adobe Road – Canwood Street and Reyes Adobe Road – 101 Freeway Northbound Offramp. These impacts can be mitigated through implementation of the following improvements:

Reyes Adobe Road – Canwood Street: Add an eastbound right turn overlap phase.

Reyes Adobe Road – 101 Freeway Northbound Offramp: Delete the westbound through movement (from the offramp to the onramp) and overlap the southbound right turn with the westbound phase.

Considerable traffic will be added to all of the studied intersections by cumulative developments, with the result that some intersections will operate at unacceptable levels of service in the morning and most will operate unacceptably in the afternoon. The planned upgrade to the Kanan Road interchange will dramatically improve operation, but cumulative impacts will eventually lead to undesirable levels of service. The proposed project will contribute to these impacts, with its impacts being deemed significant at the intersection of Reyes Adobe Road – Canwood Street.

For the Reyes Adobe Road – Canwood Street intersection, the project-specific mitigation of providing an eastbound right turn overlap phase will also mitigate the project's cumulative impacts. Otherwise, cumulative impacts will be mitigated through payment of traffic impact fees.

Site access and onsite circulation as proposed is generally adequate, although several specific improvements are recommended.

TRAFFIC IMPACT STUDY Agoura Hills Project No. 05-CUP-006

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
TABLE OF CONTENTS	i
INTRODUCTION	1
Purpose and Scope	1
Intersections Evaluated in the Study	
PROJECT DESCRIPTION	1
INTERSECTION LOS ANALYSES	2
Methodology	2
Impact Significance Criteria	2
Existing Conditions	
Existing + Project Conditions	
Project Mitigation Improvements	
Future Pre-Project Conditions.	
Future Post-Project Conditions	
Cumulative Mitigation Improvements	
SITE ACCESS AND INTERNAL CIRCULATION	7
CONCLUSION	8
FIGURE 1: Study Area	9
FIGURE 2: Project Site Plan	
FIGURE 3: Project Peak Traffic Volumes	11
FIGURE 4: Existing Peak Traffic Volumes	
FIGURE 5: Existing Lane Configurations	
FIGURE 6: Cumulative Developments Location Map	
FIGURE 7: Existing + Cumulative Developments Peak Traffic Volumes	
FIGURE 8: Future Lane Configurations	16
APPENDIX A: Intersection Level Of Service Thresholds	
APPENDIX B: Traffic Count Data	
APPENDIX C: LOS Calculations For Morning Peak Hour	
APPENDIX D: LOS Calculations For Afternoon Peak Hour	

TRAFFIC IMPACT STUDY

Agoura Hills Project No. 05-CUP-006

INTRODUCTION

Purpose and Scope

In compliance with the California Environmental Quality Act and City of Agoura Hills requirements, this traffic study was conducted to identify potential offsite traffic impacts associated with the proposed project and any necessary mitigation measures. The project proposal is to develop medical office uses on a currently vacant site on Canwood Street between Reyes Adobe Road and Kanan Road in the City of Agoura Hills. The study evaluated intersection level of service (LOS) for the weekday morning and afternoon peak hours for the Existing, Existing + Project, Existing + Cumulative Developments, and Existing + Cumulative Developments + Project scenarios for the Reyes Adobe Road and Kanan Road interchanges with the U.S. 101 Freeway as shown in Figure 1.

Intersections Evaluated in the Study

Existing intersections evaluated in the study are shown in Figure 1 and are listed as follows:

- Reyes Adobe Road Canwood Street
- Reyes Adobe Road U.S. 101 Freeway Northbound Ramps
- Reyes Adobe Road U.S. 101 Freeway Southbound Ramps
- Kanan Road Canwood Street
- Kanan Road U.S. 101 Freeway Northbound Ramps
- Kanan Road U.S. 101 Freeway Southbound Ramps

All of the study intersections are currently signalized.

PROJECT DESCRIPTION

The project proposal is to develop a currently vacant 3.1 acre site with two buildings comprising a total of 25,200 square feet of medical office uses as shown in Figure 2. The site is located on the north side of Canwood Street at address nos. 29541 and 29555. Project traffic volumes were estimated based on data contained in the Institute of Transportation Engineers (ITE) publication entitled *Trip Generation*, 7th Edition and the results are contained in Table 1.

Table 1. Trip Generation

r 111	d. *		AM			PM		ADT
Land Use	Size*	In	Out	Total	In	Out	Total	ADT
Medical Office	25.200	49	13	62	25	69	94	910

^{*} Thousand Square Feet

Project traffic was distributed to the surrounding areas based on knowledge of the local area and regional traffic distribution guidelines provided in Appendix B of the 2004 Congestion Management Program for Los Angeles County. The traffic was then assigned to specific routes and the resulting AM/PM peak hour turning movement volumes are shown in Figure 3.

INTERSECTION LOS ANALYSES

Methodology

Levels of service for signalized intersections were evaluated using the Intersection Capacity Utilization (ICU) method. With this method, an ICU value is calculated that represents the proportion of an hour required to accommodate traffic if all approaches operate at capacity. The ICU value is then correlated to a level of service. Although operation may be more congested during short periods within the peak hour, an ICU analysis of the entire peak hour is the generally accepted method of quantifying intersection operation. A description of operating conditions and definition of the ICU range for each level of service is provided in the appendix.

Impact Significance Criteria

The City of Agoura Hills defines an impact as significant if it increases the ICU value by 0.02 or more and the resulting ICU value is 0.81 or higher.

Existing Conditions

New AM and PM peak turning movement counts were conducted for the six study intersections. In addition, counts were conducted at the intersection of Kanan Road – Roadside Drive. The future U.S. 101 Southbound offramp will intersect Kanan Road at Roadside Drive and the counts at this intersection were conducted for the sole purpose of estimating how existing traffic will reassign itself to reflect the new configuration. Existing volumes are shown in Figure 4 and the data sheets are contained in the appendix. Existing intersection lane configurations for the six study intersections are shown in Figure 5.

Intersection LOS calculations were performed for the Existing scenario; the calculations are contained in the appendix and the results are summarized in Table 2.

Table 2. Intersection AM/PM Peak LOS Results

	Scenario		Reyes Adobe - Canwood	Reyes Adobe – U.S. 101 SB Offramp	Reyes Adobe – U.S. NB Offramp	Kanan - Canwood	Kanan – U.S. 101 SB Offramp	Kanan – U.S. 101 NB Offramp
	Existing	ICU	0.61	0.93	0.68	0.56	0.70	0.71
	Eviation	LOS	B	E	B	A	B	C 0.71
	Existing +	ICU	0.63	0.93 E	0.68	0.56	0.70	0.71
A N 1	Project	LOS	В		В	A	В	C
AM	Existing +	ICU	0.64	1.18	0.80	-	0.65	0.83
	Cumulative	LOS	В	F	С	-	В	D
	Existing + Cumulative	ICU	0.66	1.18	0.80	-	0.65	0.85
	+ Project	LOS	В	F	C	-	В	D
	Existing	ICU	0.80	0.67	0.82	0.88	0.73	0.93
	Existing	LOS	C	В	D	D	C	Е
	Existing +	ICU	0.83	0.68	0.84	0.89	0.74	0.93
	Project	LOS	D	В	D	D	С	Е
PM	Existing +	ICU	0.87	0.98	1.01	-	0.84	0.96
	Cumulative	LOS	D	Е	F	ı	D	Е
	Existing + Cumulative	ICU	0.89	0.99	1.02	-	0.84	0.97
	+ Project	LOS	D	Е	F	-	D	Е

The results provided in Table 2 indicate that all intersections studied currently operate at a good level of service in the morning except for the 101 Freeway southbound offramp at Reyes Adobe, which operates at LOS E. In the afternoon, however, the intersections of the 101 Freeway northbound offramp at Reyes Adobe, Kanan at Canwood, and the 101 Freeway northbound offramp at Kanan all operate at either LOS D or E.

Existing + Project Conditions

The project traffic volumes shown in Figure 3 were added to the existing traffic volumes shown in Figure 4 and LOS calculations were again performed. The calculations for this Existing + Project scenario are contained in the appendix and the results are summarized in Table 2. These results indicate that the project will cause measurable impacts to most of the intersections studied and the impacts will be significant at the intersections of Reyes Adobe – Canwood and Reyes Adobe – 101 Freeway Northbound Offramp during the afternoon peak period.

Project Mitigation Improvements

The two intersections that will experience significant project impacts were reviewed in an effort to identify feasible mitigation measures to improve the levels of service to acceptable or at least offset the project impacts. The following improvements were identified:

Reyes Adobe Road - Canwood Street

The traffic signal should be modified to provide an eastbound right turn overlap phase. This will theoretically improve the afternoon post-project ICU value from 0.83 LOS D to 0.76 LOS C. In reality, the improvement will be somewhat less because protected-permissive northbound left turn phasing will provide less opportunity for overlapping right turns than would full protected phasing. Nevertheless, the improvement is expected to significantly exceed the 0.03 incremental project impact and restore LOS C operation.

Reyes Adobe Road – 101 Freeway Northbound Offramp

The southbound right turn can be overlapped with the westbound phase if the westbound through movement (from the offramp to the onramp) is eliminated. This will improve the post-project ICU value from 0.84 LOS D to 0.79 LOS C.

Future Pre-Project Conditions

From the City's December, 2005 Commercial and Residential Development Summary, 22 developments were selected to be included in the analysis of future conditions. These developments, referred to as "cumulative developments," were selected because they may contribute meaningful amounts of traffic to one or more of the study intersections. The locations of these developments are shown in Figure 6. Peak hour traffic volumes were estimated for each of these developments based on the ITE Trip Generation, 7th Edition publication and the results are contained in Table 3.

The traffic associated with each pending development was distributed to the surrounding areas in the same manner as was done for the proposed project. The resulting peak traffic volumes are shown in Figure 7. This figure also reflects the planned improvements to the Kanan Road – U.S. 101 Freeway interchange. On the north side, the northbound offramp will be realigned to intersect Kanan Road at the Canwood Street intersection and a northbound loop onramp will be provided. On the south side, the southbound offramp will be realigned to intersect Kanan Road at the Roadside Drive intersection and a southbound loop onramp will be provided. The lane configurations associated with the planned interchange upgrade are shown in Figure 8. The improvements to this interchange were considered when performing traffic assignment to the local street system.

Intersection LOS calculations were performed for the Existing + Cumulative Developments scenario; the calculations are contained in the appendix and the results are summarized in Table 2. The results indicate that the Reyes Adobe interchange will operate at very poor levels of service and the rest of the intersections studied will generally operate at marginal or unacceptable levels of service during the peak hours, especially the afternoon peak hour.

Table 3. Cumulative Developments Trip Generation

Map	Name	Address	Size*	Unit	Use		AM			PM		ADT
No.	Name	Address	Size	Oiiit	USC	In	Out	Total	In	Out	Total	ADI
3	Burgundy Creek Bistro	w/o 28818 Agoura Road	11	TSF	Restaurant	7	2	9	55	27	82	989
			43.15	TSF	Retail	27	17	44	78	84	162	1,853
5	E.F. Moore & Company	SEC Agoura & Kanan	43.15	TSF	Office	59	8	67	11	54	65	475
			119	DU	Condo	20	60	80	54	39	93	697
6	Heathcote for Buckley	s/o Agoura Rd, near west City limit	14.075	TSF	Medical Office	28	7	35	14	38	52	509
			25.592	TSF	Retail	16	10	26	46	50	96	1,099
7	Cornerstone	SEC Agoura & Cornell	17.847	TSF	Office	24	3	28	4	22	26	196
			37	DU	Condo	6	19	25	17	12	29	217
8	Agoura Business Center	5301 Derry, NWC Derry & Canwood	19.81	TSF	Industrial Park	14	3	17	4	13	17	138
10	Center Ct. Plaza	29501 Canwood	49.35	TSF	Office	67	9	76	12	61	73	543
12	HQ Development for Agoura Hills Acquisition	29621 Agoura Road	95.215	TSF	Office	130	18	148	24	118	142	1,048
18	Carlos Khantzis	30800 Agoura Road	46	DU	Senior Condos	2	2	4	3	2	5	160
22	Doss for Rick Principe	30101 Agoura Court	30	TSF	Office	41	6	47	8	37	45	330
1P	Ball Properties (Centerpointe)	30005 & 30009 Ladyface Cir.	61.04	TSF	Office	83	12	95	15	76	91	672
4P	Silagi Canwood Plaza Bldg. C	NWC Kanan & Canwood	22.896	TSF	Office	31	4	35	6	28	34	252
5P	Semler (Alan Hartley)	NEC Canwood & Derry	125	TSF	Office	171	23	194	31	155	186	1,376
9P	Development Partners	30101 Agoura Ct.	31.16	TSF	Office	42	6	48	8	39	47	343
10P	Realty Bancorp Equities	29901 Agoura Road	76.75	TSF	Office	105	14	119	19	95	114	845

Table 3 (cont.) Cumulative Developments Trip Generation

Map	Name	Address	Size*	Unit	Use		AM			PM		ADT
No.	Ivaille	Address	Size	Oilit	USC	In	Out	Total	In	Out	Total	ADI
12P	Stockton for Levy	28211 Canwood	10.7	TSF	Furniture Store	1	1	2	2	3	5	54
121	Stockton for Ecvy	20211 Canwood	6	TSF	Office	8	1	9	2	7	9	66
13P	BBA Properties for Michael Browers	28371 Agoura Road	9	TSF	Office	12	2	14	2	11	13	99
14P	HBF Holdings	n/o Canwood, w/o Clareton	125	room	Suites Hotel	40	20	60	29	40	69	780
17P	Scheu (Corp. Point)	s/s Agoura Rd. @ Reyes Adobe	81	TSF	Office	110	15	125	20	100	120	892
18P	Zaghi	29348 Roadside	11.636	TSF	Manufacturing	7	2	9	3	5	8	44
22P	Agoura Detailing Center	100 Reyes Adobe	10.333	TSF	Auto Care Center	20	11	31	17	17	34	0
23P	Adler Realty	Canwood between Lewis & Derry	120.23	TSF	Home Furnishings	132	108	240	216	266	482	5,748
			41.2	TSF	Retail	26	16	42	74	80	154	1,769
888	Symphony	SWC Vanan & Agaira	68	TSF	Office	92	13	105	17	84	101	749
000	Symphony	SWC Kanan & Agoura	9	TSF	Restaurant	6	1	7	45	22	67	810
			89	DU	Condo	15	45	60	40	29	69	522

<u>Notes</u>

- * Thousand Square Feet
- Most appropriate trip generation category appears to be Senior Adult Housing Attached.
- Manufacturing selected for trip generation because it is more conservative than warehouse.
- Most appropriate trip generation category for auto detailing appears to be auto care center. ADT not available or necessary.
- No AM trip gen. available. AM assumed to be 50% of PM with 55/45 in/out ratio, based on Home Improvement Superstore data.
- 888 used because the Symphony project does not have a formal City map number.

Future Post-Project Conditions

The project traffic volumes shown in Figure 3 were added to the Existing + Cumulative Developments traffic volumes shown in Figure 7 and LOS calculations were again performed. The calculations for this Existing + Cumulative Developments + Project scenario are contained in the appendix and the results are summarized in Table 2. These results indicate that the project will cause significant cumulative impacts to the Reyes Adobe – Canwood intersection during the afternoon peak hour. Although Table 2 appears to suggest that project impacts will be significant at 101 Freeway Northbound Offramp – Kanan during the morning peak hour, rounding the ICU values to two decimal places only makes the impact *appear* to be 0.02; the incremental impact is actually 0.015, which is less than the 0.02 significance threshold.

Cumulative Mitigation Improvements

In general, cumulative impacts will be mitigated through payment of traffic impact fees. As noted above, however, one intersection will experience significant cumulative project impacts. Mitigation for this intersection is discussed as follows:

Reyes Adobe Road - Canwood Street

The project-specific mitigation of modifying the traffic signal to provide an eastbound right turn overlap phase will also mitigate the project's cumulative impacts. Although the overlap may not actually improve the operation from 0.89 LOS D fully to the theoretical level of 0.81 LOS D due to the previously discussed protected-permissive left turn phasing, the improvement will significantly exceed the 0.02 incremental project impact.

SITE ACCESS AND INTERNAL CIRCULATION

Access to the site will be served by a 26-foot wide driveway located approximately 47 feet west of the property's east boundary. This location was developed in coordination with City staff to maximize the offset from the driveway to the adjacent property to the east. As proposed, there will be 77 feet of clearance between the two driveways, which should provide adequate intervisibility and reaction time for motorists exiting the driveways. Although the driveway should provide adequate access for the size and intensity of the proposed development, consideration should be given to widening the driveway apron and/or increasing the easterly curb radius at the apron to facilitate simultaneous ingress/egress.

The drive aisle to the lower parking lot is approximately 70 feet from the Canwood Street curb. In the event of a temporary blockage at this drive aisle, this will provide ample room for at least three vehicles to queue without blocking traffic on Canwood.

Because the project is located on a hillside, the main drive aisle grade ranges from 10% at the street to 5% to 13%. The westerly drive aisle ranges from 5% to 15%. To avoid circulation problems, it is recommended that transitions at least 12 feet long be located at each grade change point. The grade of each transition should be an average of the approach and exit grades and the vertical profile should be blended (smoothed) at each end of the transition.

The 26' width of the drive aisle and parking aisles is adequate and the radius curb returns will facilitate internal circulation.

The upper two parking fields have a flow-through design, with drive aisles on both the west and east sides. However, the lower two parking fields have a dead-end design on the west side. Although egress from the most westerly parking stalls is facilitated by the extension of the drive aisles slightly west of the parking stalls, it is recommended that one stall at the end of each aisle be striped to prohibit parking. Motorists reaching the end of the aisle without finding an open stall will be able to use this area to get turned around.

CONCLUSION

Five of the six intersections studied currently operate at good levels of service during the morning peak hour, but three of the intersections operate at LOS D or E during the afternoon peak hour. The proposed project will cause significant impacts to the intersections of Reyes Adobe Road – Canwood Street and Reyes Adobe Road – 101 Freeway Northbound Offramp. These impacts can be mitigated through implementation of the following improvements:

Reyes Adobe Road – Canwood Street: Add an eastbound right turn overlap phase.

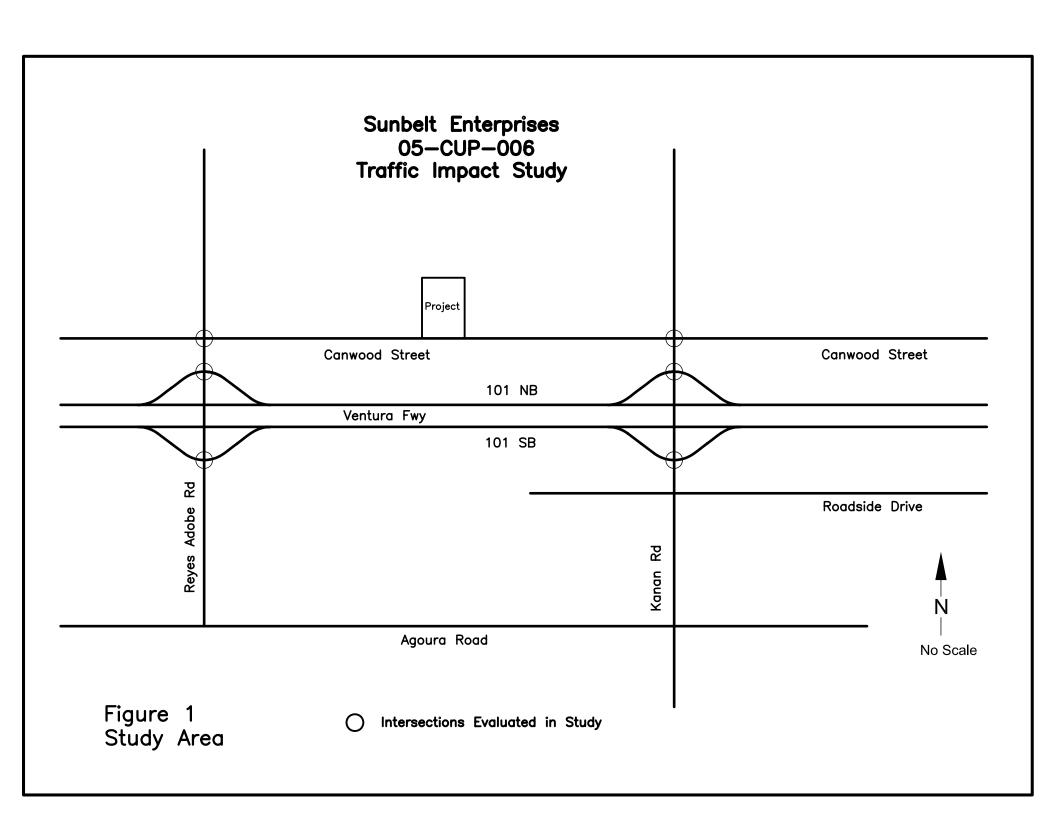
Reyes Adobe Road – 101 Freeway Northbound Offramp: Delete the westbound through movement (from the offramp to the onramp) and overlap the southbound right turn with the westbound phase.

Considerable traffic will be added to all of the studied intersections by cumulative developments, with the result that some intersections will operate at unacceptable levels of service in the morning and most will operate unacceptably in the afternoon. The planned upgrade to the Kanan Road interchange will dramatically improve operation, but cumulative impacts will eventually lead to undesirable levels of service. The proposed project will contribute to these impacts, with its impacts being deemed significant at the intersection of Reyes Adobe Road – Canwood Street.

For the Reyes Adobe Road – Canwood Street intersection, the project-specific mitigation of providing an eastbound right turn overlap phase will also mitigate the project's cumulative impacts. Otherwise, cumulative impacts will be mitigated through payment of traffic impact fees.

Site access and onsite circulation as proposed is generally adequate, although several specific improvements are recommended.

070103 Sunbelt Agoura traffic study.doc



PREPARED FOR:

Project Site Plan

SUNBELT PROPERTIES 1801 SOLAR DRIVE, SUITE 250 OXNARD, CA 93031-9031

Sunbelt Enterprises 05-CUP-006 Traffic Impact Study

LEGEND

SENSY, MAJOR AND MINOR CONTOURS

PROPOSED 2:1 MAX BUT SLORE

PROPOSED 2:1 MAX-CHT SLORE.

PROPOSED SPOT ELEVATION

PROMINE OR FINISHED SHIPFACE

CANWOOD STREET OFFICES

CANWOOD STREET

AGOURA HILLS CALIFORNIA

887.0 TW/0' RETAIN 889.0 TW / g' RETAIN

PREPARED BY:

Holmes Enterprises

Structural and Civil Engineering Ime
200 Wicks Rd. Moorpark, CA. 93021
(805) 532-1571 fox(805) 532-1596

893.0 TM 890' J' RETAIN 97.Q TW

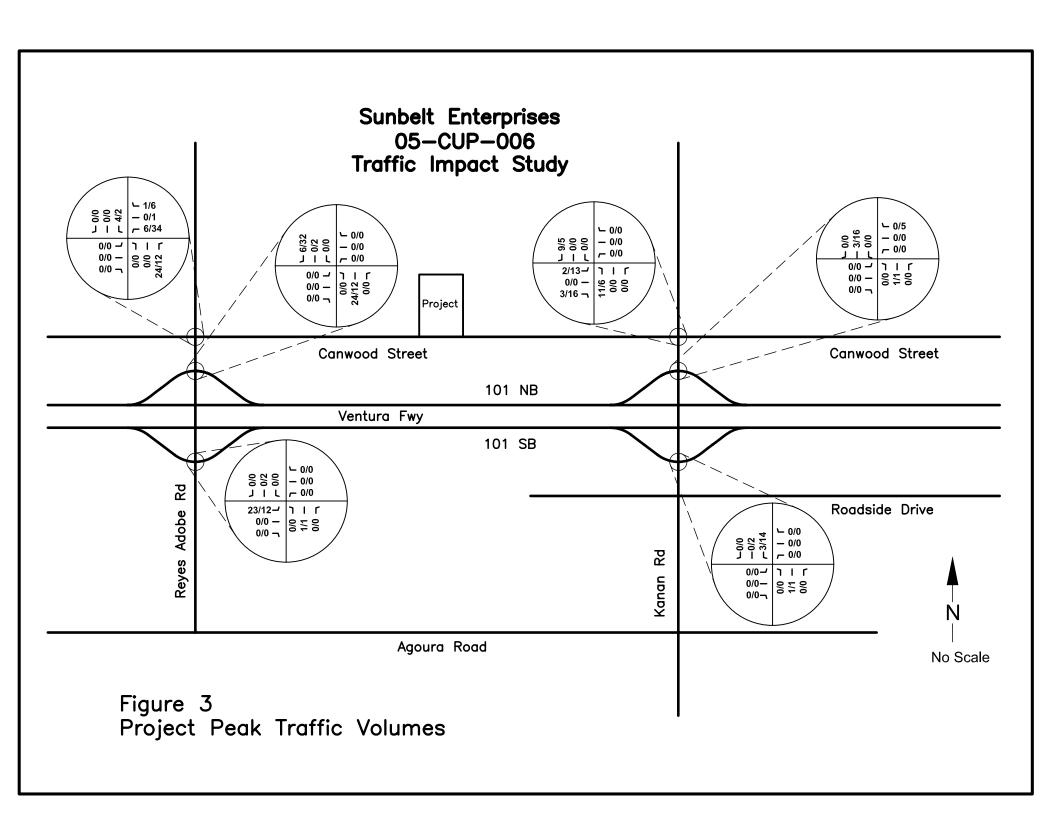
1

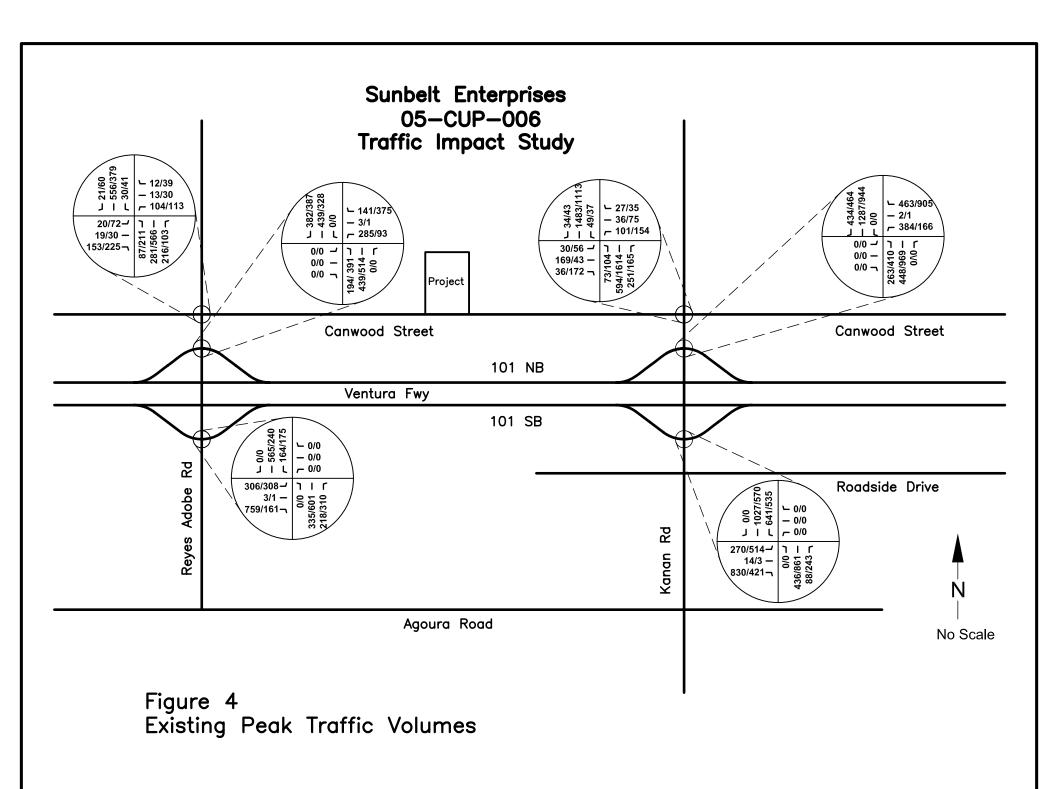
GRASSY SWALE DETAIL

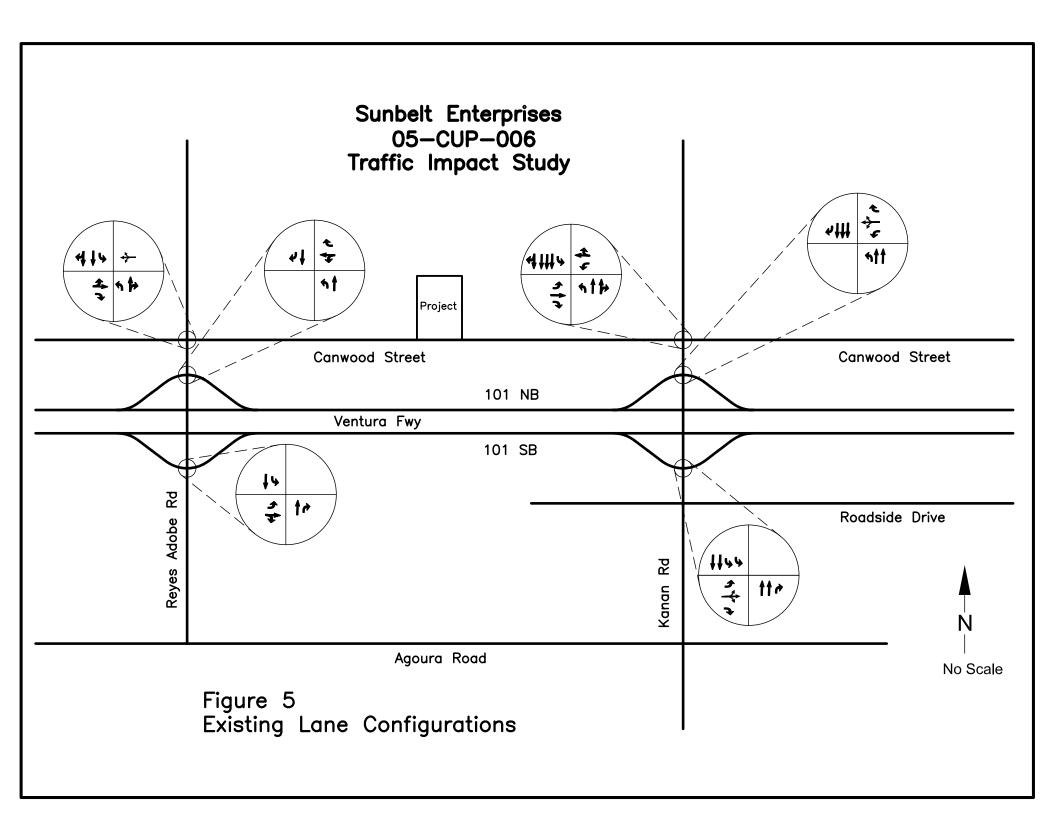
PRELIMINARY GRADING STUDY

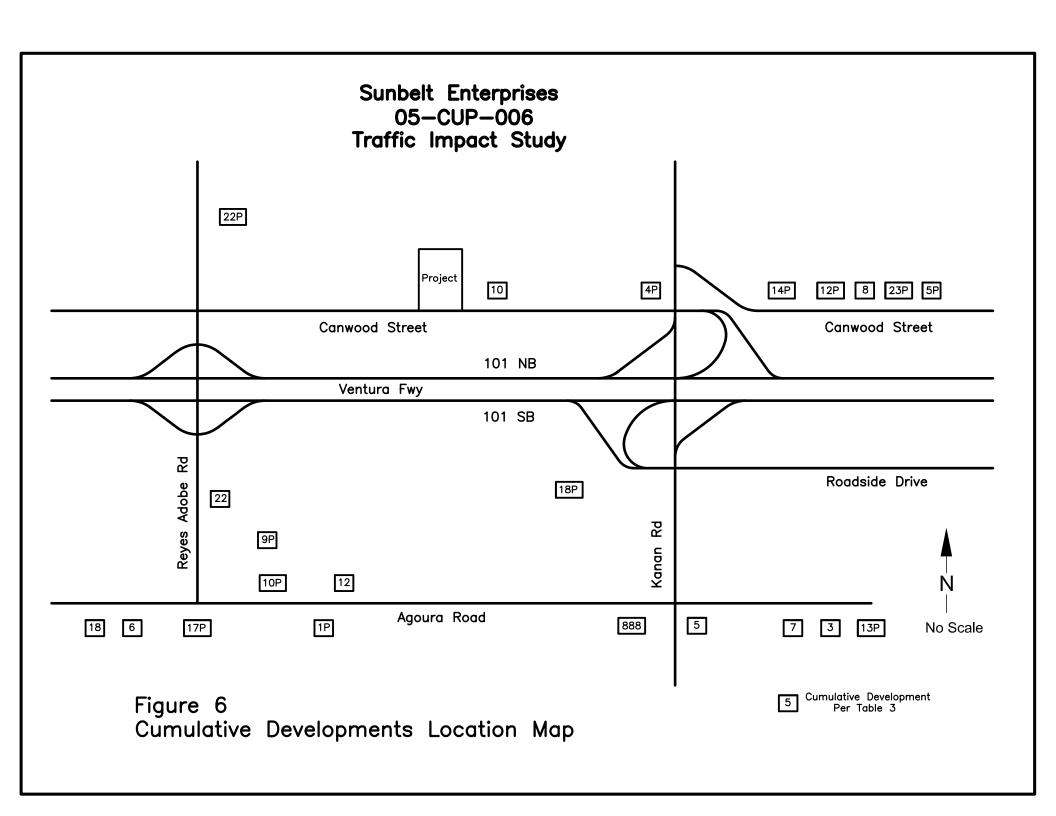
Figure 2

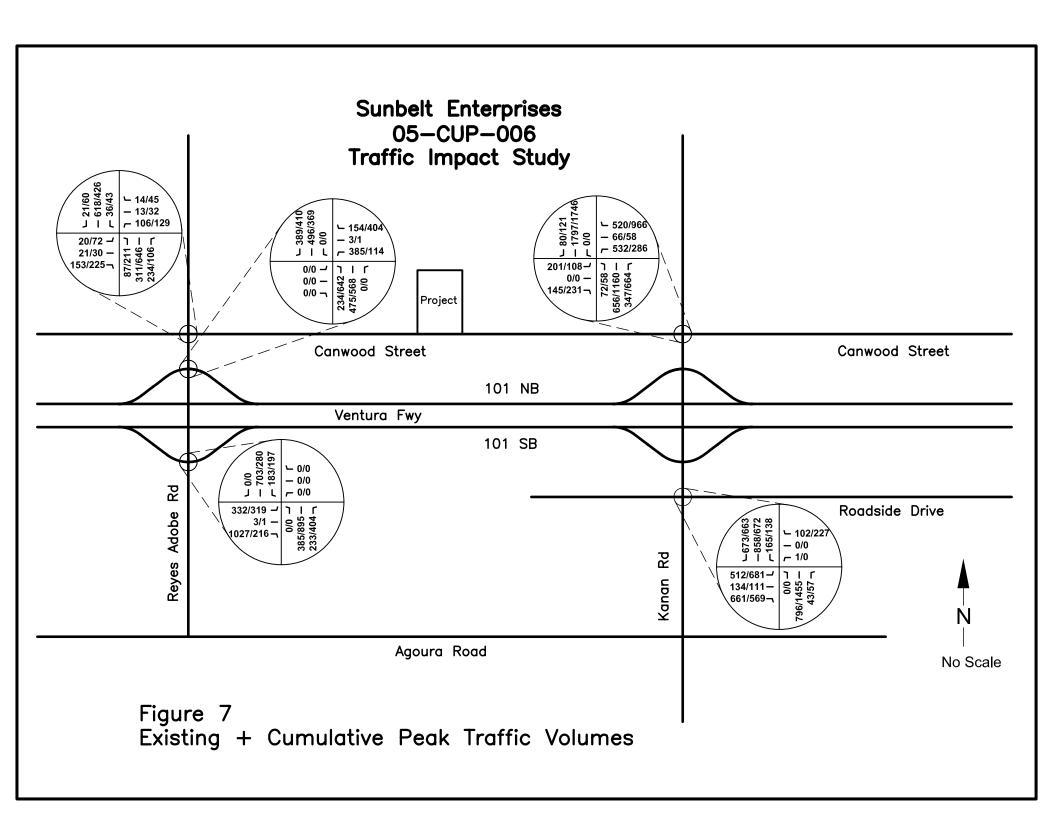
SUNBELT CORPORATE CENTER II

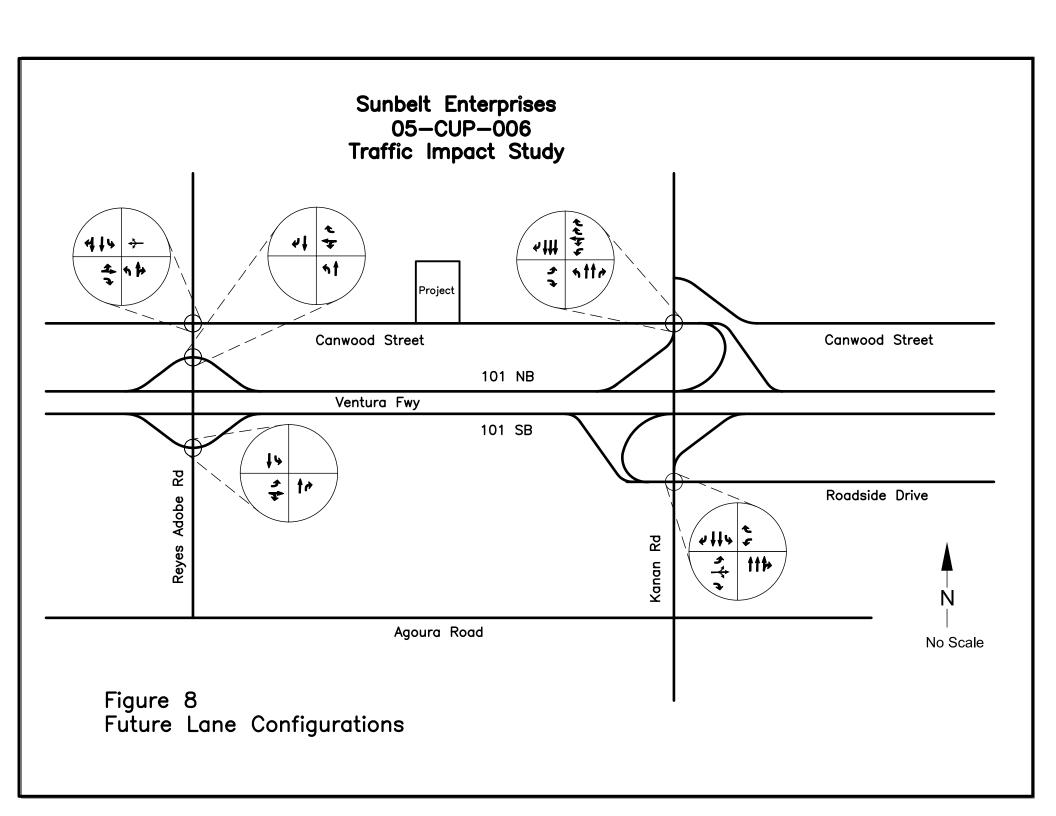












APPENDICES

APPENDIX A

INTERSECTION LEVEL OF SERVICE THRESHOLDS

INTERSECTION LEVEL OF SERVICE THRESHOLDS

For signalized intersections, the level of service (LOS) is based on the Intersection Capacity Utilization (ICU) value. A general description of operating conditions and corresponding ICU ranges is as follows:

Los	Description of Operating Conditions	ICU Range
A	Unobstructed flow; no approach is fully utilized by traffic and no vehicle waits longer than one red indication.	0.00 - 0.60
В	Stable operation; an occasional approach phase is fully utilized and a substantial number are approaching full use.	0.61 - 0.70
С	Stable operation with intermittent loading. Occasionally, drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles.	0.71 – 0.80
D	Delays to approaching vehicles may be substantial for short periods during the peak period, with periodic clearance of developing queues.	0.81 – 0.90
Е	Unstable flow conditions with long queues over extended periods. Capacity occurs at the limits of this level.	0.91 – 1.00
F	Forced flow conditions, with demand exceeding capacity; highly variable delay and long backups.	Above 1.00

APPENDIX B

TRAFFIC COUNT DATA

CLIENT:

MEYER, MOHADDES ASSOCIATES

PROJECT:

AUGORA HILLS

DATE:

TUESDAY, DECEMBER 6TH, 2005

PERIODS:

7:00 AM TO 9:00 AM AND

4:00 PM TO 6:00 PM

INTERSECTION:

N/S REYES ADOBE ROAD

Ε/W CANWOOD STREET

15 MIN COUNTS						7:00 AM T	0 9:00 AM	147.37 76		and Arthur Salah									
	1	2	3	4	- 5	6	7	8	9	10	11	12	14,500 (18) 1804 (18)						
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL	AM PEAK HOU	IR			A	
700-715	2	56	0	0	2	4	1	6	16	16	0	0	103	800-900				L	12
715-730	6	58	1	0	2	13	1	13	8	17	0	1	120				1		
730-745	1	84	2	1	2	12	9	30	11	19	1	1	173		21 55	6 30		←	13 ,
745-800	6	84	5	4	4	14	7	38	19	35	2	9	227			1	1		♠
800-815	8	112	2	2	3	19	31	39	29	42	0	4	291	•	-	, L	-		104
315-830	4	117	8	1	4	22	47	62	11	36	5	3	320			•	1	Ψ	
330-845	4	161	10	2	4	30	72	88	20	34	4	5	434	_		A			N
845-900	5	166	10	7	2	33	66	92	27	41	10	8	467		20		←	^	_ → ~
HOUR TOTALS			TAME:		的人的	drija.					作为多种								
2750 370 3	11	2	3	4	- 5	6	7	8	9	10	11	12	5	CANWOOD STR	19	>	87	281	216
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL				1		
700-800	15	282	8	5	10	43	18	87	54	87	3	11	623		153	_	1		
715-815	21	338	10	7	11	58	48	120	67	113	3	15	811			V	ł	REYES	ADOBE ROAL
730-830	19	397	17	8	13	67	94	169	70	132	8	17	1011				•		
745-845	22	474	25	9	15	85	157	227	79	147	11	21	1272						
800-900	21	556	30	12	13	104	216	281	87	153	19	20	1512						

15 MIN COUNTS			Property.	inge di		6:00 PM T	O 6:00 PM	國際指導	Tare No.	14 4 1 E		distribute.						
Fourth or to the fire	1	2	3	4	- 1.5	6	7	8	9	10	11	12						
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL	PM PEAK HOUR			A	
400-415	12	112	16	8	5	32	30	119	45	63	5	13	460	445-545		· ·	39	
415-430	11	105	6	5	6	20	31	124	51	44	8	10	421			1		
430-445	11	94	11	8	8	18	20	117	41	52	4	10	394	60	379	41	< 30	
445-500	15	100	11	11	5	25	24	104	46	48	11	11	411		-			♠
500-515	17	90	12	11	8	34	21	162	60	69	8	28	520	← !	₩	└→	113	į.
515-530	17	98	9	11	7	26	33	154	53	54	10	1.7	489				Y	40
530-545	11	91	9	6	10	28	25	146	52	54	1	16	449		A			W
545-600	15	91	11	9	2	29	26	118	37	45	6	20	409	72-		 ←	\uparrow $ ightharpoonup$	- 1
HOUR TOTALS							机分类的	and the second	医克拉氏腺			AT ELAK				1 1		2
	1.1	2	3	4	- 5	6	7	8	9	10	11	12	50 MH	CANWOOD STR 30-	>	211	566 103	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL			l		
400-500	49	411	44	32	24	95	105	464	183	207	28	44	1686	225-				
415-515	54	389	40	35	27	97	96	507	198	213	31	59	1746		V		REYES ADOBE F	ROAD
430-530	60	382	43	41	28	103	98	537	200	223	33	66	1814			•		
445-545	60	379	41	39	30	113	103	566	211	225	30	72	1869					
500-600	60	370	41	37	27	117	105	580	202	222	25	81	1867					

CLIENT:

MEYER, MOHADDES ASSOCIATES

PROJECT: DATE: AUGORA HILLS TUESDAY, DECEMBER 6TH, 2005

PERIODS:

7:00 AM TO 9:00 AM AND

4:00 PM TO 6:00 PM

INTERSECTION:

N/S REYES ADOBE ROAD

E/W U.S.101 FWY NB

15 MIN COUNTS	tradition.	197, Galler	63590			7:00 AM T	O 9:00 AN		dia sa	16 2 45 a 12 A green will					177/64/1/10(c) (1876-1984) 1970-1971	
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL	AM PEAK HOUR		A
700-715	19	56	0	11	1	31	0	9	1	0	0	0	128	800-900		141
715-730	21	71	0	10	0	39	0	7	11	0	0	0	159			` \
730-745	36	79	0	29	0	51	0	20	10	0	0	0	225	382	439	0
745-800	42	80	0	26	0	74	0	40	14	0	0	0	276		ŀ	1 1
800-815	68	109	0	30	0	83	0	78	30	0	0	0	396	لـــ	V	285
815-830	80	103	0	29	0	75	0	82	40	0	0	0	409			de
830-845	120	110	0	35	1	71	0	145	58	0	0	0	540		A	JN .
845-900	114	117	. 0	47	2	56	0	134	66	0	0	0	536	0		<
HOUR TOTALS						44.77		i di kara					14 14 1			
	1	1, 2	3	4	5	6	7	8	9	10	11	12	Pitalia Talahan	U.S.101 FWY NE 0		194 439 0
TIME	SBRT	SBTH	SBLT	WBRT	WETH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL			1
700-800	118	286	0	76	1	195	0	76	36	0	0	0	788	0	 -1	į
715-815	167	339	0	95	0	247	0	145	65	0	0	0	1058		₩	REYES ADOBE ROAD
730-830	226	371	0	114	0	283	0	220	94	0	0	0	1308			•
745-845	310	402	0	120	1	303	0	345	142	0	0	0	1623			
800-900	382	439	0	141	3	285	0	439	194	0	0	0	1883			

15 MIN COUNTS						4:00 PM T	O 6:00 PM	ranksi Pante Tomber	334. 33	on and	a de la color								
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	电子器 的现在	PM PEAK HOU	IR			A	
400-415	113	88	0	55	2	19	0	127	56	0	0	0	460	500-600				375	
415-430	98	71	0	79	0	21	0	128	57	0	0	0	454						
430-445	100	70	0	76	1	19	0	100	72	0	0	0	438		387 32	8 0		< 1	
445-500	92	85	0	78	1	24	0	112	67	0	0	0:	459			1			♠
500-515	110	80	0	105	1	15	0	130	102	0	0	0	543	•	」 ↓	· L>	.	93	
515-530	100	77	0	101	0	27	0	133	98	0	0	0	536					Y	_de
530-545	100	74	0	92	0	19	0	131	98	0	0	. 0	514			^	Ţ		- y w
545-600	77	97	0	77	0	32	0	120	93	0	0	0	496		0			↑ →	
HOUR TOTALS	Artifering Marie States			10年1月2日 10年1日 - 10月1日		on entroder lich die fogskal Miller	a addition		1. 香草糖色										ı
	PARTE.	2	3	4	5	6	7	8	9	10	11	12		U.S.101 FWY NE	0	→	391	514 0	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	ЕВТН	EBLT	TOTAL				1		
400-500	403	314	٥	288	4	83	0	467	252	0	0	0	1811		0	7			
415-515	400	306	0	338	3	79	0	470	298	0	0	0	1894			₩		REYES ADOBE	ROAD
430-530	402	312	0	360	3	85	0	475	339	0	0	0	1976				•		
445-545	402	316	0	376	2	85	0	506	365	0	0	0	2052						
500-600	387	328	0	375	1	93	0	514	391	0	0	0	2089						

CLIENT:

MEYER, MOHADDES ASSOCIATES

PROJECT:

AUGORA HILLS

DATE:

TUESDAY, DECEMBER 6TH, 2005

PERIODS:

7:00 AM TO 9:00 AM AND REYES ADOBE ROAD

4:00 PM TO 6:00 PM

INTERSECTION:

N/S REYES ADOBE RO E/W U.S. 101 FWY SB

15 MIN COUNTS					Alleria Maria	7:00 AM T	O 9:00 AM		Righting	使用数							
PEDION	1 SBRT	2 SBTH	3 SBLT	4	5 WBTH	6 WBLT	7 NBRT	. 8 NBTH	9 NBLT	10	11 EBTH	12 EBLT		ANA DE AIZ LIQUE			
PERIOD	SELT	والتناش المستحدث			إخسنت			-		_	EDIN		TOTAL	AM PEAK HOUR	i		^
700-715	0	33	50	0	0	0	21	3	0	27	이	6	140	800-900			0
715-730	0	52	61	0	0	0	18	11	0	33	0	7	182				
730-745	0	83	58	0	0	0	24	16	0	47	0	14	242		0 565	164	← —0
745-800	0	101	51	o	0	0	20	18	0	78	0	35	303				
800-815	0	121	52	0	0	0	17	49	0	185	1	53	478	←	l' 🗼	L.>	0
815-830	0	146	39	0	0	0	55	68	0	240	1	66	615	-			₩
830-845	0	156	35	0	0	0	69	107	0	200	1	93	661		A		
845-900	0	142	38	0	0	0	77	111	0	134	0	94	596		306	←	
HOUR TOTALS		arana serakai Kalendaran	ine di inti		Dec 18		Editor.		arranga Arranga		National Park		AND THE				
	1	2	3	. 2.4	- 5	6	7	8	9	10	11	12	HI SHE W	U.S. 101 FWY SI	3>		0 335 218
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL				
700-800	0	269	220	0	0	0	83	48	0	185	0	62	867		759	İ	
715-815	0	357	222	0	0	0	79	94	0	343	1	109	1205		\		REYES ADOBE RO
730-830	0	451	200	0	0	0	116	151	0	550	2	168	1638			•	
745-845	0	524	177	0	0	0	161	242	0	703	3	247	2057				
800-900	0	565	164	ol	0	0	218	335	0	759	3	306	2350				

15 MIN COUNTS		partire.			di estroid	4:00 PM T	O 6:00 PM											
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 FRI T	TOTAL	PM PEAK HOU	D			
400-415	0	50	58	ח	0	٥	84	119	0	30	0	71	412	500-600	ix.		1	
415-430	o	38	54	0	0	0	57	111	0	30	1	73	364	500-000		1	U	
430-445	ol	44	42	ō	ō	o	74	107	0	30	1	73	371		0 240	175	← —0	
445-500	0	55	59	٥	0	0	67	110	0	39	0	62	392				•	A
500-515	0	55	42	0	0	0	103	164	0	38	0	75	477	*	_] ↓	→	0	I
515-530	0	53	44	0	0	0	76	139	0	25	0	81	418				¥	de
530-545	0	46	41	0	0	0	84	175	0	60	1	71	478		^			- y n
545-600	0	86	48	0	0	0	47	123	0	38	0	81	423		308		↑ ┌→	
HOUR TOTALS				diner,						anga sagar salah Tabunah pangan		治规则特别	Taylor Manager Manager					В
	1	2	3	4	5	6	7	8	9	10	11	12		U.S. 101 FWY SI	1>	0	601 310	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL					
400-500	0	187	213	0	0	0	282	447	0	129	2	279	1539		161	ļ		
415-515	이	192	197	0	0	0	301	492	0	137	2	283	1604		*		REYES ADOBE	ROAD
430-530	0	207	187	0	0	0	320	520	0	132	1	291	1658					
445-545	0	209	186	0	0	이	330	588	0	162	1	289	1765					
500-600	0	240	175	0	0	0	310	601	0	161	1	308	1796					

CLIENT:

MEYER, MOHADDES ASSOCIATES

PROJECT:

AUGORA HILLS

DATE:

TUESDAY, DECEMBER 6TH, 2005

PERIODS:

7:00 AM TO 9:00 AM AND

4:00 PM TO 6:00 PM

INTERSECTION:

N/S KANAN ROAD

Ε/W **CANWOOD STREET**

15 MIN COUNTS	12.12		311546		10 C	:00 AM TO	9:00 AM			sanjar 14. a							Annual distance of the last of		insomblines of the Steen	
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL	AM PEAK-HO	JR			*		
700-715	0	186	5	2	3	27	36	29	3	8	1	0	300	800-900				L	-27	
715-730	0	208	3	1	0	22	30	62	4	16	3	1	350							
730-745	1	246	5	o	4	23	38	90	10	22	6	3	448		34 148	3 49	1		- 36	٨
745-800	7	298	5	5	9	30	56	145	19	22	20	8	624			-				A
800-815	6	333	8	4	6	31	56	153	16	18	21	2	654		√ لے	\vdash	·l	1	101	
815-830	7	336	15	5	4	20	57	131	10	30	38	6	659	_				¥		. dr
830-845	. 8	390	14	9	8	23	66	156	21	45	51	9	800			^				JN
845-900	13	424	12	9	18	27	72	154	26	43	59	13	870		30			1		1
HOUR TOTALS			经价值	经数据					建树林	动物的种类	第4版4 的	以 不是 1000	经分割的							,
NECO PER CAMPAG	1	2	3	4	5	6	7	8	9	10	11	12		CANWOOD STR	169	→	73	594	251	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL				ı			
700-800	8	938	18	8	16	102	160	326	36	68	30	12	1722		136	٦				
715-815	14	1085	21	10	19	106	180	450	49	78	50	14	2076			¥	1	KANAN	ROAD	
730-830	21	1213	33	14	23	104	207	519	55	92	85	19	2385				-			
745-845	28	1357	42	23	27	104	235	585	66	115	130	25	2737							
800-900	34	1483	49	27	36	101	251	594	73	136	169	30	2983							

15 MIN COUNTS						1:00 PM TO	06:00 PM											
PERIOD -	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL	PM PEAK HOU	R		A	
400-415	13	293	8	4	18	43	42	340	34	51	9	14	867	500-600			35	
415-430	14	294	12	6	5	27	40	337	34	40	6	8	823					
430-445	15	255	13	10	10	42	37	327	17	30	7	9	772		43 1113	37	< 75	À
445-500	16	260	7	8	7	36	40	366	21	34	14	10	819					⋪
500-515	9	282	9	8	41	34	40	371	28	48	9	16	895	*	」 ↓	→	154	I
515-530	13	285	12	7	12	38	45	390	28	51	10	12	903				V	. de
530-545	13	258	9	7	12	52	45	425	27	38	12	16	914		^		4 .	JN
545-600	8	288	7	13	10	30	35	428	21	35	12	12	899		56		│ 	
HOUR TOTALS			经制件	257776	Depote the	EXEMPLY TO		是中央基础	得到15年的	图图图图	经制制等	数UP EE					1 1 1	
	1	2	3	4	5	6	7	. 8	9	10	11	12		CANWOOD STR	43>	1	184 1614 165	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL			1	•	
400-500	58	1102	38	28	40	148	159	1370	106	155	36	41	3281		172			
415-515	54	1091	41	32	63	139	157	1401	100	152	36	43	3309		*		KANAN ROAD	
430-530	53	1082	41	33	70	150	162	1454	94	163	40	47	3389					
445-545	51	1085	37	30	72	160	170	1552	104	171	45	54	3531					
500-600	43	1113	37	35	75	154	165	1614	104	172	43	56	3611					

CLIENT:

MEYER, MOHADDES ASSOCIATES

PROJECT:

AUGORA HILLS

DATE:

TUESDAY, DECEMBER 6TH, 2005

PERIODS:

7:00 AM TO 9:00 AM AND

4:00 PM TO 6:00 PM

INTERSECTION:

N/S KANAN ROAD

Ε/W U.S. 101 FWY NB

5 MIN COUNTS	NOW LINE	100 mm	数246%		47.00	7:00 AM T	9:00 AM	The served of Carlons Carlon State (Carlons)		1.40		archie und d					
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL	AM PEAK HOUR			*
700-7:15	35	182	0	40	0	67	0	31	12	0	0	0	367	800-900			463
15-730	44	215	0	61	0	70	0	38	16	0	0	0	444				
730-745	57	235	0	79	0	112	0	50	27	0	0	0	560	434	1287	0	< 2
/45-800	73	266	0	107	1	104	0	113	49	0	0	0	713				
900-815	80	292	0	110	0	110	0	113	62	0	0	0	767	←	₩	→	384
315-830	95	307	0	107	1	96	0	94	71	0	0	0	771	***	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		(
30-845	125	329	0	116	0	103	0	118	62	0	0	0	853		^		, ,
845-900	134	359	0	130	1	75	0	123	68	0	0	0	890		0		Î [**
HOUR TOTALS	建一种基本	wert.	细胞的		能等級	新新花	4-19-59										
	1	2	- 3	4	- 5	6	7	8	9	10	11	12		U.S. 101 FWY NI	0>	263	3 448 0
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL				
700-800	209	898	0	287	1	353	0	232	104	0	0	0	2084		00	1	
715-815	254	1008	0	357	1	396	0	314	154	0	0	0	2484		*	1	KANAN ROAD
730-830	305	1100	0	403	2	422	0	370	209	0	0	0	2811				
745-845	373	1194	0	440	2	413	0	438	244	0	<u> </u>	0	3104				
800-900	434	1287	0	463	2	384	0	448	263	0	ol	0	3281				

15 MIN COUNTS					独态机器	1:00 PM T	O 6:00 PM		d which is		· 护心。									
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL	PM PEAK HOU	JR	٠		*		
400-415	115	249	0	179	0	49	0	217	84	0	0	0	893	500-600				<u> </u>	905	
415-430	113	222	0	210	1	42	0	201	99	0	0	0	888				1			
430-445	113	223	0	195	0	43	Ð	217	80	0	0	0	871		464 9	14 0	1		·1	A
445-500	123	229	0	182	0	43	0	216	97	0	0	0	890				1			1
500-515	115	238	0	216	0	25	0	229	103	0	0	0	926	•	۱ لب	∤ ∟;	>	Ţ	166	
515-530	129	230	0	201	0	54	0	244	90	0	0	0	948					· ·		de
530-545	116	235	0	247	0	38	0	262	115	이	0	0	1013			^			_ 6	JN
545-600	104	241	0	241	1	49	0	234	102	0	0	0	972		0	1		1		1
HOUR TOTALS					\$P. 图18650	表示的	经产品的		高級企業等	计编数数数										
	1	2	3	4	5	6	7	8	9	10	11	12		U.S. 101 FWY NI	0	→	410	969	0	
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL				-			
400-500	464	923	0	768	1	177	0	851	360	0	0	0	3542		0	7				
415-515	464	912	0	803	1	153	0	863	379	0	0	0	3575			₩		KANAN	ROAD	
430-530	480	920	0	794	0	165	0	906	370	0	0	0	3635							
445-545	483	932	0	846	0	160	0	951	405	0	0	0	3777							
500-600	464	944	0	905	1	166	0	969	410	0	0	0	3859							

CLIENT:

MEYER, MOHADDES ASSOCIATES

PROJECT:

AUGORA HILLS

DATE: PERIODS: TUESDAY, DECEMBER 6TH, 2005

7:00 AM TO 9:00 AM AND

4:00 PM TO 6:00 PM

INTERSECTION:

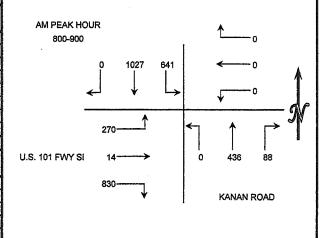
15 MIN COUNTS

KANAN ROAD N/S FΛV U.S. 101 FWY SB

		0.0. 10										
rajudije de la Portojskop de la		26 11 16 16 16 16 16 16 16 16 16 16 16 16			7:00 AM T	O 9:00 AN	n e selection			1479 W D.		99.35
1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	A Comment of the
0	102	145	0	0	0	36	27	0	64	1	22	3
0	153	154	0	0	0	29	38	0	71	0	25	4
0	170	154	0	0	0	34	70	0	126	0	32	5
0	217	157	0	0	0	23	79	0	244	3	40	7

	1	2	3	4		6	7	> 8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	0	102	145	0	0	0	36	27	0	64	1	22	397
715-730	0	153	154	0	0	0	29	38	0	71	0	25	470
730-745	0	170	154	0	0	0	34	70	0	126	0	32	586
745-800	0	217	157	0	0	0	23	79	0	244	3	40	763
800-815	0	245	166	0	0	0	32	107	0	240	0	77	867
815-830	0	258	162	0	0	0	23	101	0	217	0	69	830
830-845	0	256	151	0	0	0	20	127	0	178	2	71	805
845-900	0	268	162	0	0	0	13	101	0	195	12	53	804
HOUR TOTALS			HE STATE OF	Jack Chi	经 有数据	記録なお記							WAR E

HOUR TOTALS	A Park Hill			Market H	1545								
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT		12 EBLT	TOTAL
700-800	0	642	610	0	0	0	122	214	0	505	4	119	2216
715-815	0	785	631	0	0	0	118	294	0	681	3	174	2686
730-830	0	890	639	0	0	0	112	357	0	827	3	218	3046
745-845	0	976	636	0	0	0	98	414	0	879	5	257	3265
800-900	0	1027	641	0	0	0	88	436	0	830	14	270	3306



15 MIN COUNTS		4544	348576F			4:00 PM T	O 6:00 PN	Light ye	医对抗的	编数数数	萨拉姆		Chieffe L					Annual Control of the State of	
	1	2	3	4	5	6	7	8	9	10	11	12	rection as t						
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL	PM PEAK HO	DUR			A	
400-415	0	152	117	0	0	0	60	203	0	82	1	125	740	445-545				<u> </u>	- 0
415-430	0	157	132	0	0	0	76	194	0	84	0	123	766						
430-445	0	139	118	0	0	0	54	169	0	102	0	100	682		<u>o</u>	570	535	←	 0
445-500	0	169	120	0	0	0	59	211	0	109	1	120	789			1			
500-515	0	110	140	0	0	0	55	209	0	114	0	117	745		← J	₩	\rightarrow		 0
515-530	0	141	141	0	0	0	77	224	0	103	0	139	825	_				Y	
530-545	0	150	134	0	0	0	52	217	0	95	2	138	788	·-		^			
545-600	0	143	133	0	0	0	49	221	0	106	0	124	776		514-		*	↑	ightharpoonup
HOUR TOTALS			Table Commence	KYENG.		ing and the floor of the street and	14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1-14-5	All years		72.30.47	ar or Later	574.744.74 374.744.74						
	3.0	2	3	4	5	6	7	- 8	9	10	11	-12	1412.13	U.S. 101 FWY SI	3-	>		0 861	243
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL				- 1		
400-500	0	617	487	0	0	0	249	777	0	377	2	468	2977		421-		- 1		
415-515	0	575	510	0	0	0	244	783	0	409	1	460	2982			₩		KANA	N ROAD
430-530	0	559	519	0	0	0	245	813	0	428	1	476	3041				•		
445-545	0	570	535	0	0	0	243	861	0	421	3	514	3147						
500-600	0	544	548	0	0	0	233	871	0	418	2	518	3134						

CLIENT:

MEYER, MOHADDES ASSOCIATES

PROJECT:

AUGORA HILLS

DATE:

TUESDAY, DECEMBER 15TH 2005

PERIODS:

7:00 AM TO 9:00 AM AND

4:00 PM TO 6:00 PM

INTERSECTION:

N/S KANAN ROAD E/W ROADSIDE DRIVE

15 MIN COUNTS	4.1			1.1.1.4		7:00 AM T	O 9:00 AN					eria (Paja) Katalan			
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTM	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL	AM PEAK HOUR	^
700-715	16	205	29	10	0	0	8	93	3	2	0	8	374	800-900	102
715-730	11	236	34	12	0	0	10	90	2	2	0	10	407		
730-745	12	239	46	13	0	0	4	109	1	0	0	1	425	76 1127	299 ← 0
745-800	13	246	53	21	0	0	7	161	3	1	0	7	512	1 1	1 1
800-815	22	263	61	25	0	0	11	151	1	12	1	2	549	← +	→
815-830	14	287	82	26	0	0	12	131	0	4	1	10	567		
830-845	23	275	93	29	0	1	13	139	0	3	0	2	578	^	
845-900	17	302	63	22	0	0	4	149	2	6	1	6	572	20	
HOUR TOTALS	4.7 No. 188		100							4.5	enger die				
100	1	2	3	4	5	. 6	7	8	9	10	11	12		ROADSIDE DRI\ 3 →	3 570 40
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL		
700-800	52	926	162	56	0	0	29	453	9	5	0	26	1718	25	
715-815	58		194	71	0	0	32	511	7	15	1	20	1893	₩	KANAN ROAD
730-830	61		242	85	0	0	34	552	5	17	2	20	2053		
745-845	72	1071	289	101	0	1	43	582	4	20	2	21	2206		
800-900	76	1127	299	102	0	1	40	570	3	25	3	20	2266		

15 MIN COUNTS		1,000	a de Pre	1087	100	4:00 PM T	O 6:00 PM		1. 3.46		10.0									
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT		PM PEAK HOU	JR			^		
400-415	8	181	80	45	0	0	12	232	2	7	1	9	577	500-600				\	- 227	
415-430	11	211	65	58	0	0	20	242	1	7	1	5	621					_	_	
430-445	6	158	71	41	0	0	9	219	1	9	0	9	523		44	800	249	<u> </u>	-0	A
445-500	8	178	63	52	0	0	10	212	0	4	0	6	533			1				T
500-515	13	182	56	63	0	0		203	0	8	0	5	549	•	ب	₩	→	V	→0	
515-530	8	213	72	64	0	0		225	1	5	2	1	602							W
530-545	13	187	63		이	0	10	231	1	11	0	10	579			^	4	•	→ '	y
545-600	10	218	58	47	0	0	15	197	1	0	0	10	556		26					
HOUR TOTALS			30.00			grid = 113		garang di		Helita F			100					1	1	
	1	. 2	3	4	5	6	7	8	9	10	11	12	4.55	ROADSIDE DRIN	2			3 856	55	
TIME	SBRT	SBTH	SBLT	WERT	WBTH	WBLT	NBRT	NBTH	NBLT		EBTH	-	TOTAL				ı			
400-500	33	728	279	196	0	0	51	905	4	27	2	29	2254		24		Ī			
415-515	38	729	255	214	0	0	58	876	2	28	1	25				•	I	KANAN	ROAD	
430-530	35	731	262	220	0	0	49	859	2	26	2	21	2207							
445-545	42	760	254	232	0	0	50	871	2	28	2	22								
500-600	44	800	249	227	0	0	55	856	3	24	2	26	2286							***************************************

APPENDIX C

LOS CALCULATIONS
FOR
MORNING PEAK HOUR

Sunbelt 05-CUP-006 Agoura Traffic Impact Study

			olume.									
ICU 1	. (Loss	as (Level O	enath	용) Me	ethod (Base V	olume	Alter	native	·)	
*****						*****	*****	****	*****	****	****	*****
Intersection *********	****	****	*****	****	****							
Cycle (sec): Loss Time (sec) Optimal Cycle	<u>.</u>	4	40			Level	Of Sei	cvice:	:			В
						, , , , , , , ,			Canw			
Street Name: Approach:	Mas	ath Da	Reyes	Auobe	th D	annd.	₽-	ot Pr	und	พ	set B	hauc
Movement:	1901	LUI DO	Juna	T -	- w. YCTI D(_ D	T	_ m	D	T. ~	. m	~ R
movement:	~ نا `	- T	- K		- 1	K	ا	- 1	1	1	· · · · · ·	
Control: Rights: Min. Green:	P:	rotect	ted	Pı	cotect	ted	r Sp.	Lit Ph	nase	sp]	Lit P	hase
Rights:		Incl	ıde		Incl	ıde	•	Incl	ıde	-	Incl	ude
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 (0 0	1 0	1 () 1	1 0	0 3	L O	0 1	0 (1!	0 0
Volume Module			•	•								
Base Vol:	87	281	216	30			20	19	153			
Growth Adj:	1.00	1.00	1.00						1.00		1.00	
Initial Bse:	87	281	216	30	556	21	20	19	153			
User Adj:					1.00			1.00			1.00	
PHF Adj:	1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	
PHF Volume: Reduct Vol:	87	281	216	30 0	556	21	20	19	153	104		
Reduct Vol:	0	0				0	0	0		0		
Reduced Vol:												
PCE Adj:	1.00	1.00	1.00						1,00		1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Vol.:	. 87	281	216	. 30	556	21	. 20	19	153	. 104	13	12
Cohemotics Fi												
Saturation Fl				1600	1600	1600	1600	1600	1600	1600	1600	1600
Sat/Lane: Adjustment:	1 00	1 00	1 00	1 00		1.00					1.00	
Lanes:						0.07				0.81		
Final Sat.:	1600	905	605	1600	3084	116	0.31	770	1600			
rinar sac.:	1	500		1		1	1			1		
Capacity Anal				ı			•		'	ı		'
Vol/Sat:				0.02	0.18	0.18	0.02	0.02	0.10	0.08	0.08	0.08
Crit Moves:		***	*	***		· · · -						
*******					****	*****	*****	*****	*****	****	****	****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing AM
Future Volume Alternative = Existing + Project AM

______ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) **************** Intersection #1 Reyes Adobe / Canwood ****************** 100 Cycle (sec): Critical Vol./Cap.(X): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Loss Time (sec): XXXXXX 42 Level Of Service: Optimal Cycle: *********** Reyes Adobe Canwood Street Name: North Bound South Bound West Bound East Bound Approach: Movement: L - T - R $L - T - R \quad L - T - R$ L - T - R |----| Split Phase Protected Split Phase Control: Protected Include Include Rights: Include Include 0 0 0 0 0 0 0 0 0 0 0 0 Min. Green: 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 1 0 0 1 0 Lanes: _____| Volume Module: 30 556 20 19 104 Base Vol: 87 281 216 21 153 13 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 30 556 104 12 Initial Bse: 87 281 216 21 20 19 153 13 0 1 0 0 0 0 0 6 Added Vol: 0 0 24 4 0 0 0 0 0 Ω 0 0 0 PasserByVol: 0 0 Initial Fut: 87 281 240 34 556 21 20 19 153 110 13 13 User Adi: 1.00 PHF Adj: 13 21 20 19 110 13 PHF Volume: 87 281 240 34 556 153 0 0 0 0 0 0 0 0 0 0 n n Reduct Vol: 19 13 87 281 240 21 20 110 13 Reduced Vol: 34 556 153 PCE Adj: MLF Adi: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Final Vol.: 87 281 240 34 556 21 20 19 153 110 13 _____|___|____| Saturation Flow Module: 1.00 0.54 0.46 1.00 1.93 0.07 0.51 0.49 1.00 0.81 0.09 0.10 Final Sat.: 1600 863 737 1600 3084 116 821 779 1600 1294 153 153 -----| Capacity Analysis Module: Vol/Sat: $0.05 \ 0.33 \ 0.33 \ 0.02 \ 0.18 \ 0.18 \ 0.02 \ 0.02 \ 0.10 \ 0.08 \ 0.08 \ 0.08$ **** **** **** **** Crit Moves: *************************

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing AM
Future Volume Alternative = Existing + Project AM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************* Intersection #1 Reyes Adobe / Canwood ******************* Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 38 Level Of Service: ******************** Street Name: Reves Adobe Canwood Approach: North Bound South Bound East Bound Movement: L - T - R L - T - R East Bound West Bound L - T - R L - T - R _____| Split Phase Split Phase Protected Protected Control: Include Include Include Cvc Rights: 0 0 0^1 0 0 0 0 0 0 0 0 Min. Green: 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 Volume Module: 153 104 Base Vol: 87 281 216 30 556 21 20 19 13 1.00 1.00 1.00 1.00 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 30 556 21 20 19 153 104 13 Initial Bse: 87 281 216 0 0 24 0 0 4 0 0 0 0 6 Added Vol: PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 87 281 34 556 13 240 21 20 19 153 110 13 Initial Fut: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adj: 1.00 1.00 PHF Adj: PHF Volume: 87 281 34 556 13 240 21 20 19 153 110 1.3 0 0 0 0 0 0 0 Reduct Vol: 0 0 0 34 556 20 87 281 240 21 19 153 110 Reduced Vol: PCE Adj: MLF Adj: 21 110 13 13 87 281 240 34 556 20 19 153 Final Vol.: _____ Saturation Flow Module: Sat/Lane: Capacity Analysis Module: Vol/Sat: 0.05 0.33 0.33 0.02 0.18 0.18 0.02 0.02 0.10 0.08 0.08 0.08 Crit Moves: **** **** ****

Mitigation: Add EBRT overlap

Traffix 7.8.0115 (c) 2006 Dowling Assoc. Licensed to INTERWEST CONSULTING

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative AM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ****************************** Intersection #1 Reves Adobe / Canwood **************** 100 Cycle (sec): Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 44 Level Of Service: ************************ Street Name: Reves Adobe Canwood Approach: North Boundary L - T - R North Bound South Bound East Bound West Bound L - T - R L - T - R L - T - R Protected Protected Split Phase Split Phase Include Include Include Control: Include 0 0 0 Include Rights: Min. Green: 0 0 0 0 0 0 0 0 0 Lanes: 1 0 0 1 0 1 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 _____| Volume Module: Base Vol: 87 281 216 30 556 21 20 19 153 104 13 30 556 Initial Bse: 87 281 216 21 20 19 104 13 153 12 6 0 30 18 0 0 Added Vol: 2 2 62 0 0 2 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 87 311 36 618 Initial Fut: 234 21 20 21 153 106 13 14 1.00 1.00 User Adj: PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Volume: 87 311 234 36 618 21 20 21 153 106 13 Reduct Vol: 0 0 0 0 0 . 0 0 0 0 0 0 Ω Reduced Vol: 87 311 234 36 618 21 106 13 20 21 153 14 PCE Adj: MLF Adj: Final Vol.: 87 311 234 36 618 21 20 21 153 106 13 14 Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.05 0.34 0.34 0.02 0.20 0.20 0.03 0.03 0.10 0.08 0.08 0.08 Crit Moves: **** **** *************************

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project AM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) *********************** Intersection #1 Reyes Adobe / Canwood 100 Critical Vol./Cap.(X): 0.655 Cycle (sec): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 45 Level Of Service: XXXXXX ********************** Reves Adobe Canwood Street Name: Approach: North Bound South Bound East Bound West Bound L - T - R L - T - R L - T - R L - T - R Movement: _____ Protected Protected Split Phase Split Phase Control: Include Include Include Include Rights: 0 0 0 0 0 0 0 0 0 0 0 0 Min. Green: 1 0 0 1 0 1 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 Volume Module: 30 556 21 20 19 153 104 13 87 281 216 Base Vol: 1.00 1.00 104 13 12 Initial Bse: 87 281 216 30 556 21 20 19 153 10 62 0 0 2 0 6 0 3 Added Vol: Ó 30 30 0 0 0 0 0 0 0 0 0 0 0 0 PasserByVol: 87 311 40 618 20 15 21 21 153 110 13 Initial Fut: 246 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adj: PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Volume: 87 311 246 40 618 21 20 21 153 110 0 0 0 0 0 0 0 0 0 0 0 0 Reduct Vol: 1.5 40 618 21 20 21 153 110 13 Reduced Vol: 87 311 246 PCE Adi: MLF Adj: 110 13 87 311 246 40 618 21 20 21 153 Final Vol.: Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.05 0.35 0.35 0.03 0.20 0.20 0.03 0.03 0.10 0.09 0.09 0.09 **** **** **** **** Crit Moves: ******************

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project AM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ****************** Intersection #1 Reyes Adobe / Canwood **************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 40 Level Of Service: XXXXXX ************************** Street Name: Reyes Adobe Canwood North Bound South Bound East Bound Approach: West Bound L - T - R L - T - RL - T - R L - T - R Control: Protected Split Phase Protected Split Phase Include Rights: 0vl 0 0 Include Include Min. Green: 0 0 0 0 0 0 0 0 0 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 Volume Module: 87 281 30 556 Base Vol: 216 21 20 19 153 104 13 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Initial Bse: 87 281 30 556 216 21 20 19 153 104 13 12 Added Vol: 0 30 30 10 62 0 0 2 0 0 3 6 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 87 311 246 40 618 21 20 21 153 110 User Adj: PHF Adj: 40 618 21 20 21 PHF Volume: 87 311 246 153 110 Reduct Vol: 0 0 0 0 0 0 0 Ω 0 0 0 0 Reduced Vol: 87 311 40 618 21 20 21 246 153 110 13 15 87 311 246 40 618 21 20 21 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PCE Adj: 1.00 1.00 1.00 MLF Adj: $1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00$ 87 311 Final Vol.: 246 40 618 21 20 21 153 110 13 Saturation Flow Module: Lanes: 1.00 0.56 0.44 1.00 1.93 0.07 0.49 0.51 1.00 0.80 0.09 Final Sat.: 1600 893 707 1600 3095 105 780 820 1600 1275 151 Capacity Analysis Module: Vol/Sat: 0.05 0.35 0.35 0.03 0.20 0.20 0.03 0.03 0.10 0.09 0.09 Crit Moves: ****

Mitigation: Add EBRT overlap

Sumbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing AM Volume

	Base Volume Alternative = Existing AM Volume													
Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) ***********************************														
Intersection														
*********	*****	: * * * * * *	******	*****	****	*****	****	****	*****	*****	****	*****		
Cycle (sec):									o.(X):		0.6			
Loss Time (se	ec):		10 (Y+R	=4.0 s	sec)	Averag	re Dela	av (se	ec/veh)	:	xxx	XXX		
Optimal Cycle	z •	4	47			Level	Of Set	rvice:				В		
*****	****	***	- · * * * * * * *	****	****	*****	****	****	*****	****	****	****		
Street Name:			Reyes						NB On &					
Approach:	Nor	th Bo	ound	Sou	ith Bo	ound	Εa	ast Bo	ound	We	st Bo	ound		
Movement: L - T - R L - T - R L - T - R L - T - R														
Control: Protected Protected Split Phase Split Phase														
Rights: Include Include Include Include														
Rights: Include Include Include Include Min. Green: 0														
Lanes: 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 0 1 0 1														
							1							
Volume Module			_				_	_						
Base Vol:									0		3			
Growth Adj:									1.00					
Initial Bse:			0	0			_	-	0	285	3			
User Adj:	1.00	1.00	1.00	1.00				1.00						
PHF Adj: PHF Volume:	1.00	1.00	1.00	1.00	1.00			1.00			3			
Reduct Vol:			0 0	0					0 0	265	_			
Reduced Vol:									0		3			
PCE Adj:									1.00					
MLF Adj:	1 00	1 00	1.00						1.00					
Final Vol.:											3			
				1		1	1							
Saturation F				•			'		. '	•		1		
Sat/Lane:				1600	1600	1600	1600	1600	1600	1600	1600	1600		
Adjustment:								1.00			1.00	1.00		
							0.00	0.00	0.00	0.99	0.01	1.00		
Lanes: Final Sat.:	1600	1600	0	0	1600	1600	0	0	0	1583	17	1600		
Capacity Anal	Lysis	Modu.	le:											
Vol/Sat:	0.12	0.27					0.00	0.00	0.00			0.09		
Crit Moves:					***					****				
****	****	****	*****	****	****	*****	****	·***	*****	****	****	*****		

Sunbelt 05-CUP-006 Agoura Traffic Impact Study

Base Volume Alternative = Existing AM

Future Volume Alternative = Existing + Project AM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ***************** Intersection #3 Reyes Adobe / 101 NB **************** Cycle (sec): 100 Critical Vol./Cap,(X): 0.676 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 47 Level Of Service: XXXXXX ******************** Street Name: Reyes Adobe 101 NB On & Off Ramps East Bound West Bound North Bound South Bound Approach: L - T - R L - T - R L - T - R Movement: _____ Protected Split Phase Split Phase Protected Control: Include 0 0 0 Include Include Rights: Include 0 0 0 0 0 0 0 0 Min. Green: 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 1 0 0 1 Lanes: Volume Module: 285 194 439 0 0 439 382 0 0 0 3 141 Base Vol: 1.00 1.00 1.00 1.00 1.00 1.00 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 285 3 141 Initial Bse: 194 439 0 0 439 382 0 0 0 0 0 0 6 0 0 0 0 0 24 0 Added Vol: 0 0 0 0 0 0 0 0 PasserByVol: 0 0 0 Initial Fut: 194 463 n 0 439 388 0 0 0 285 3 141 User Adj: PHF Adi: 0 439 0 0 0 285 3 141 194 463 0 388 PHF Volume: 0 0 0 0 0 0 0 n 0 0 0 Ω Reduct Vol: 388 0 0 439 0 0 0 285 3 141 Reduced Vol: 194 463 PCE Adj: MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0 0 439 Final Vol.: 194 463 388 0 0 0 285 3 141 Saturation Flow Module: Final Sat.: 1600 1600 0 0 1600 1600 0 0 0 1583 17 1600 Capacity Analysis Module: Vol/Sat: 0.12 0.29 0.00 0.00 0.27 0.24 0.00 0.00 0.00 0.18 0.18 0.09 Crit Moves: **** **** ************************

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing AM
Future Volume Alternative = Existing + Project AM

```
Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
******************
Intersection #3 Reyes Adobe / 101 NB
*************************
                        100 Critical Vol./Cap.(X): 0.676 0,674
Cycle (sec):
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 47 Level Of Service:
                                                                                   xxxxxx
*************************
Street Name: Reyes Adobe 101 NB On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R
_____|
                  Protected Include OV Protected
                                                          Split Phase Split Phase
                                                       Include
0 0 0
                                                                           Include
0 0
Min. Green: 0 0 0 0 0 0
                1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 1 0 0 1
                                                                           285
              194 439 0
                                     0 439
                                                382
                                                          0
                                                               0
0
Initial Bse: 194 439 0 0 439
                                                  382
                                                        0 0
                                                                             285
                           0 0 0
0 0 0
0 0 439
                0 24
                                                  6
                                                                              0
Added Vol:
                                                                 0
                                                        υ
0
                                                               0
0
PasserByVol:
                  0
                      0
                                                   0
                                                                        0
                                                                               0
                                                                                            0
                                                                             285
Initial Fut: 194 463
                                                 388
                                                                        0
                                                                                     3
                                                                                          141
               User Adj:
PHF Adj:
PHF Volume: 194 463 0 0 439
Reduct Vol: 0 0 0 0 0
Reduced Vol: 194 463 0 0 439
                                                        0 0 0 285 3
                                                388
                                                        0
                                                388
PCE Adj:
               MLF Adj:
Final Vol.: 194 463 0 0 439 388 0 0 0 285 % 141 44
Saturation Flow Module:

      Sat/Lane:
      1600 1600
      1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600
      1600 1600

Capacity Analysis Module:
Vol/Sat: 0.12 0.29 0.00 0.00 0.27 0.24 0.00 0.00 0.00 0.18 0.18 0.09
```

Mitigation: Eliminate WB through movement and overlap SB right turn with WB phase.

Traffix 7.8.0115 (c) 2006 Dowling Assoc. Licensed to INTERWEST CONSULTING

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative AM

							.ــــــــــــــــــــــــــــــــــــ						
ICU 1	Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)												
*****												****	
Intersection *********	#3 Re	eyes <i>I</i>	Adobe /	101 1	NB *****	·****	****	****	*****	****	****	****	
Cycle (sec):		10	00			Critic	al Vo	L./Car	o.(X):		0.7	99	
Loss Time (se	ec):		10 (Y+R	=4.0 :	sec)	Averag	e Dela	ay (se	ec/veh)	:	xxxx	xx	
Optimal Cycle			66			Level							
******	****	****	*****	****	****	*****						*****	
Street Name:			Reyes	Adobe				101 1	NB On &	Off Ra	amps		
Approach:	No	rth Bo	ound	Sou	ith Bo	ound	E	ast Bo	ound		st Bo		
Movement:	L -	- T	- R	, L -	- T	- R	L -	- Т	- R	. L -	T	- R	
Control:													
Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 0													
Lanes: 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 1 0 0 1													
				1		1				1			
Volume Module													
Base Vol:			0	. 0	439		. 0	0	0	285	3	141	
Growth Adj:			1.00		1.00	1.00		1.00		1.00		1.00	
Initial Bse:		439	0	0	439	382	0	0	0	285	3	141	
Added Vol:	40	36	0	. 0	57	7	0	0	0	100	0	13	
PasserByVol:			0	0	0	0	0	-	0	0	0	0	
Initial Fut:			. 0	0		389	0	0	0	385	3	154	
User Adj:	1.00		1.00		1.00	1.00		1.00		1.00		1.00	
-	1.00		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Reduct Vol:	234	4/5	0 0	0	496 0	389	0	0	0	385	3	154	
Reduced Vol:	_	-	-		•	0	0	0	0	0	0	154	
PCE Adj:			$\frac{0}{1.00}$	1 00	496	389 1.00	0	1 00	_	385	3	154	
MLF Adj:			1.00		1.00	1.00		1.00	$\frac{1.00}{1.00}$	1.00 1		$1.00 \\ 1.00$	
Final Vol.:			1.00		496	389	1.00		1.00	385	3	154	
Saturation F						,	'		'	1		ı	
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600 1	L600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.99 (0.01	1.00	
Final Sat.:	1600	1600	0	0	1600	1600	0	0	0	1588	12	1600	
Final Sat.: 1600 1600 0 0 1600 1600 0 0 0 1588 12 1600													
Capacity Anal													
	0.15 ****	0.30	0.00	0.00	0.31		0.00	0.00	0.00	0.24			
Crit Moves: ********			*****	****			***			***	***		

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project AM ______ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************************ Intersection #3 Reves Adobe / 101 NB **************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 67 Level Of Service: XXXXXX ********************* 101 NB On & Off Ramps Street Name: Reyes Adobe East Bound West Bound North Bound South Bound Approach: $L - T - R \quad L - T - R \quad L - T - R$ Movement: L - T - R _____ Protected Control: Protected Split Phase Split Phase Include 0 0 0 Include Include Include Rights: 0 0 0 0 0 0 0 0 Min. Green: 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 0 1 0 0 1 _____|__| Volume Module: Ω 0 439 382 0 0 0 285 3 Base Vol: 194 439 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Growth Adj: 1.00 1.00 1.00 1.00 1.00 0 0 0 439 382 0 0 285 141 Initial Bse: 194 439 100 0 13 48 0 0 58 10 0 0 0 Added Vol: 40 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 497 Initial Fut: 234 487 0 0 385 154 392 0 3 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adj: PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0 0 497 392 0 0 0 385 3 PHF Volume: 234 487 0 0 0 0 0 0 0 0 0 Reduct Vol: 0 0 Reduced Vol: 234 487 0 0 497 0 0 0 385 - 3 154 392 PCE Adj: MLF Adj: Final Vol.: 234 487 0 0 497 392 0 0 0 385 3 154 _____| Saturation Flow Module: 0 0 0 1588 12 1600 Final Sat.: 1600 1600 0 0 1600 1600 _____ Capacity Analysis Module: Vol/Sat: 0.15 0.30 0.00 0.00 0.31 0.25 0.00 0.00 0.00 0.24 0.24 0.10 Crit Moves: **** **** ********************* Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing AM Volume

Level Of Service Computation Report ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative) ***********************************		I	Base \	Volume	Alteri	nativ	e = Exi	sting	AM V	olume			
**************************************							-		_				
Intersection #5 Reyes Adobe / 101 SB ***********************************													
Cycle (sec): 100 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx Optimal Cycle: 117 Level Of Service: E ***********************************							*****	****	****	*****	*****	****	*****
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx Optimal Cycle: 117							****	****	****	*****	****	****	*****
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx Optimal Cycle: 117	Cycle (sec):		10	00			Critic	cal Vo	l./Car	o.(X):		0.	929
Optimal Cycle: 117	Loss Time (se										:	xxx	xxx
Street Name: Reyes Adobe South Bound East Bound West Bound Movement: L - T - R	Optimal Cycle	⊋;	1:	17		,	Level	Of Sea	rvice	•			E
Movement: L - T R L - T A A A	*******	****	****	*****	*****	****	*****	*****	****	*****	****	****	*****
Movement: L - T R L - T A A A	Street Name:			Reyes	Adobe				10:	l On &	Off Ra	amps	
Movement: L - T R L T T R L D	Approach:	No	rth Bo	ound	Sou	ith B	ound	Ea	ast Bo	ound	We	est B	ound
Control: Protected Include Inc													
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0													
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Control:	Pi	rotect	ted]	Permi	tted	P	rotect	ted	Pi	rotec	ted
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Rights:		Incl	ude		Incl	ıde		Inclu	ıde	1	Incl	ude
Volume Module: Base Vol: 0 335 218 164 565 0 306 3 759 0 0 0 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Min. Green:	. 0	0	0	0	0	0	0	0	0	0.	0	0
Volume Module: Base Vol: 0 335 218 164 565 0 306 3 759 0 0 0 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Lanes:	0 () 1	0 1	1 () 1	0 0	1 (0 0	1 0	0 (0 0	0 0
Base Vol: 0 335 218 164 565 0 306 3 759 0 0 0 0 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0										1	1		
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Volume Module	€;											
Initial Bse: 0 335 218 164 565 0 306 3 759 0 0 0 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Base Vol:	0	335	218	164	565	0	306	3	759	0	0	0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	~				1.00	1.00	1.00				1.00	1.00	1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Initial Bse:	0	335	218	164	565	0	306	3	759	0	0	0
PHF Volume: 0 335 218 164 565 0 306 3 759 0 0 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							1.00				1.00	1.00	1.00
Reduced Vol: 0 335 218 164 565 0 306 3 759 0 0 0 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0							-						
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0					0	- 0	0	0	0	0	0	- 0	0
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
Final Vol.: 0 335 218 164 565 0 306 3 759 0 0 0 0	~					1.00	1.00	1.00	1.00	1.00			
Saturation Flow Module: Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 160					1.00	1.00	1.00				1.00	1.00	1.00
Saturation Flow Module: Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 160											_	_	-
Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 160													
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0													
Lanes: 0.00 1.00 1.00 1.00 1.00 0.00 1.00 0.01 0.99 0.00 0.00													
Final Sat.: 0 1600 1600 1600 1600 0 1600 6 1594 0 0 0 1600 1600 1600 1600 1600 1600													
Capacity Analysis Module: Vol/Sat: 0.00 0.21 0.14 0.10 0.35 0.00 0.19 0.48 0.48 0.00 0.00 0.00	Final Sat.:	0	1600	1600					6	1594	0	0	0
Vol/Sat: 0.00 0.21 0.14 0.10 0.35 0.00 0.19 0.48 0.48 0.00 0.00 0.00													
Crit Moves: **** ****				0.14	0.10			0.19			0.00	0.00	0.00
*****	orac moves.									ł .			

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing AM Future Volume Alternative = Existing + Project AM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ****************** Intersection #5 Reyes Adobe / 101 SB Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 117 100 Critical Vol./Cap.(X): E ***************** Street Name: Reyes Adobe 101 On & Off Ramps North Bound South Bound East Bound
L - T - R L - T - R East Bound West Bound Approach: L - T - R Movement: Control: Permitted Protected Protected Protected Include Include Rights: Include Include 0 0 0 0 0 0 0 0 0 0 0 0 Min. Green: Lanes: _____ Volume Module: 0 Base Vol: 0 335 218 164 565 0 306 3 759 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Growth Adj: 1.00 1.00 0 Initial Bse: 0 335 218 164 565 0 306 - 3 759 0 0 0 0 Added Vol: 0 1 0 0 0 0 23 0 Ω 0 . 0 0 0 0 0 0 0 0 0 0 O PasserByVol: Initial Fut: 0 336 218 164 565 329 759 0 0 3 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1,00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adi: 0 0 PHF Volume: 0 336 218 164 565 329 3 759 0 0 . 0 0 0 0 0 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 0 336 218 164 565 329 3 759 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: Final Vol.: 0 336 218 164 565 0 329 3 759 0 0 _____ ---||------Saturation Flow Module: Sat/Lane: $0.00\ 1.00\ 1.00\ 1.00\ 1.00\ 0.00\ 1.00\ 0.01\ 0.99\ 0.00\ 0.00\ 0.00$ Lanes: 0 1600 1600 1600 1600 0 1600 6 1594 0 0 Final Sat.: _____|__|__| Capacity Analysis Module: Vol/Sat: 0.00 0.21 0.14 0.10 0.35 0.00 0.21 0.48 0.48 0.00 0.00 0.00 Crit Moves: **** **** **** ******************

Crit Moves: ****

_____ Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative AM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ***************** Intersection #5 Reyes Adobe / 101 SB ***************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 180 Level Of Service: XXXXXX F ****************** Street Name: Reyes Adobe 101 On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R Control: Protected Protected Protected Protected Rights: Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 Lanes: 0 0 1 0 1 1 0 1 0 0 1 0 0 0 0 0 0 _____| Volume Module: Base Vol: 0 335 218 164 565 0 306 3 759 0 0 0 Initial Bse: 0 335 0 218 164 565 0 306 3 759 19 138 15 268 0 0 0 Added Vol: 0 50 0 26 0 0 0 0 0 0 332 3 1027 PasserByVol: 0 0 0 Initial Fut: 0 385 233 0 0 0 0 0 0 183 703 0 0 PHF Adi: 0 0 0 PHF Volume: 0 385 233 183 703 0 332 3 1027 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 385 233 183 703 0 332 3 1027 0 0 0 Reduct Vol: Reduced Vol: MLF Adj: Final Vol.: 0 385 233 183 703 0 332 3 1027 0 0 0 _____|___|___| Saturation Flow Module: Lanes: Final Sat.: 0 1600 1600 1600 1600 0 1600 5 1595 0 0 ______|____| Capacity Analysis Module: Vol/Sat: 0.00 0.24 0.15 0.11 0.44 0.00 0.21 0.64 0.64 0.00 0.00 0.00

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project AM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ****************** Intersection #5 Reyes Adobe / 101 SB ***************** Critical Vol./Cap.(X): 1.184 Cycle (sec): 100 10 (Y+R=4.0 sec) Average Delay (sec/veh): XXXXXX Loss Time (sec): Optimal Cycle: F Level Of Service: 180 ******************** 101 On & Off Ramps Street Name: Reyes Adobe North Bound South Bound East Bound West Bound Approach: L - T - R L - T - R L - T - RL - T - R Movement: _____ Protected Protected Protected Protected Include Include Include Include Rights: 0 0 0 0 0 0 0 0 0 0 Min. Green: 0 0 1 0 1 1 0 1 0 0 1 0 0 1 0 0 0 0 0 0 Lanes: ____| __|____| Volume Module: 0 0 335 164 565 759 0 0 Base Vol: 218 0 306 - 3 0 0 0 0 164 565 306 3 759 Initial Bse: 0 335 218 19 139 0 0 37 0 268 Added Vol: 0 51 15 0 0 0 0 0 0 Λ 0 0 . 0 O 0 PasserByVol: Initial Fut: 0 386 233 183 704 0 343 3 1027 0 0 0 PHF Adj: PHF Volume: 0 386 233 183 704 0 343 3 1027 0 0 0 0 0 0 183 704 0 0 Reduct Vol: Ω 0 0 0 Ω 3 1027 233 0 0 386 343 0 - 0 Reduced Vol: PCE Adj: MLF Adi: Final Vol.: _____ Saturation Flow Module: Final Sat.: 0 1600 1600 1600 0 1600 5 1595 0 0 Capacity Analysis Module: Vol/Sat: 0.00 0.24 0.15 0.11 0.44 0.00 0.21 0.64 0.64 0.00 0.00 0.00 Crit Moves: **** **** ****************** Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing AM Volume

								onort				
- arr 1	Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) ***********************************											
1CU 1	(Loss	as C	*****	engtn *****	*****	*****	*****	****	*****	*****	****	*****
Intersection	#2 Ka	nan /	Canwoo	od *****	****	*****	*****	****	*****	****	****	****
Cycle (sec):		10	00			Critic	al Vol	/Car	o.(X):		0.5	63
Loss Time (se	c):	1	LO (Y+R=	=4.0 s	ec)	Averag	e nere	ty (se	c/ven)	:	XXXX	XX
Ontimal Cycle	. •	7	37			Level	Of Ser	vice	;			A
********	****	****	*****	****	****	*****	****	****	*****	*****	****	****
Street Name:			Kana						Canw	ood		
Approach:	Nor	th Bo	ound	Sou	ith Bo	ound	Εε	st Bo	ound	₩e	st Bo	und
Morromont.	т	ηn	B	T	- ጥ	R	Т, -	- Т	– R	L -	· T	– R
Control:	Ŧ	ermit	ted	·	Permi	tted	I	ermit	ted	H	ermit	ted
Rights:			ıde		Inclu	ıde		Inclu	ıde		Inclu	ıde
		^	Δ.	Λ	^	Λ	. 0	Ω	Ω	Ω	0	0
Lanes:	1 () 1	1 0	1 (3	1 0	1 () 1	0 1	1 (0	1 0
							1			i		
Volume Module			•	•		•	•					
Base Vol:		594	251	49	1483	34	30	169	136	101	36	27
Growth Adi:	1.00		1.00	1.00	1.00	1.00	1.00	1,00	1.00	1.00	1.00	1.00
Initial Bse:		594	251		1483		30	169	136	101	36	27
	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1,00	1.00
PHF Adj:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	73	594	251	49	1483	34	30	169	136	101	36	27
	0	0	0	0	0	. 0	0	. 0	0	. 0	0	0
Reduced Vol:		_	251	49	1483		30	169	136	101	36	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:			251		1483		30	169	136	101	36	27
Saturation F.												
Sat/Lane:		1600			1600			1600			1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00			1.00			1.00	1.00
Lanes:				1.00	3.91	0.09		1.00			0.57	0.43
Final Sat.:	1600	2249	951	1600	6257	143		1600			914	
Capacity Ana:	lysis	Modu.	le:									
Vol/Sat:	0.05	0.26				0.24	0.02	0.11	0.09	0.06	0.04	0.04
Crit Moves:		***		***				***		***		
*****	****	****	*****	****	****	*****	*****	****	*****	****	****	*****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing AM
Future Volume Alternative = Existing + Project AM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) **************** Intersection #2 Kanan / Canwood ***************** Cycle (sec): 100 Critical Vol./Cap.(X): 0.563 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 37 Level Of Service: XXXXXX ******************* Street Name: Kanan Canwood Approach: North Bound South Bound East Bound L-T-R L-T-REast Bound West Bound L - T - R L - T - R Movement: _____| Permitted Permitted Control: Permitted Permitted Include Rights: Include Include Include 0 0 0 0 0 0 0 0 0 0 Min. Green: 1 0 1 1 0 1 0 3 1 0 1 0 1 0 1 1 0 0 1 0 _____| 30 169 101 27 Base Vol: 73 594 251 49 1483 34 136 36 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1,00 Initial Bse: 73 594 251 49 1483 34 30 169 136 101 36 27 0 0 0 9 0 0 Added Vol: 11 0 2 3 0 0 PasserBvVol: 0 0 0 0 0 0 0 0 0 0 0 0 27 Initial Fut: 84 594 251 49 1483 43 32 169 139 101 36 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: PHF Volume: 49 1483 27 84 594 251 43 32 169 139 101 36 Reduct Vol: σ Ω 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 84 594 251 49 1483 43 32 169 139 101 36 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adi: 84 594 251 43 101 36 Final Vol.: 49 1483 32 169 139 Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.05 0.26 0.26 0.03 0.24 0.24 0.02 0.11 0.09 0.06 0.04 0.04 Crit Moves: **** **** ****

Sunbelt 05-COP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing AM Volume

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing AM
Future Volume Alternative = Existing + Project AM

	Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)											
ICU 1	(Loss *****	as C <u>y</u>	cle Le	ngth 8 *****	;) Met	hod (F	uture *****	Volum	e Alte	rnativ *****	.**** .G)	*****
Intersection	#49 F	(anan	/ 101	NB *****	****	*****	****	****	*****	****	****	*****
Cycle (sec):		10	0			Critic	al Vol	L./Cap	o.(X):		0.7	712
Loss Time (se	ec):	1	0 (Y+R:	=4.0 5	sec)	Averag	e Dela	ay (se	ec/veh)	:	XXXX	XXX
Optimal Cycle	e :	5	52			Level	Of Sea	vice:	:			С
*******	*****	****	*****	*****	****	*****	*****					****
Street Name:			Kan						√B On &		_	
Approach:	Noi	cth Bo	ound	Sou	ith Bo	ound_	Ea	ast Bo	ound	~ W∈	est Bo	
Movement:	L ~	- T	- R	. L -	- T	- R	. L -	- T	- R	با	· T	- K
Control:	PI	COCECI	ced	PI	Theli	ide ide	sp.	Troli	idse ids	rde	Incl	പ്പ
Rights: Include Include Include Include Min. Green: 0												
Lanes:	1 (າ 2ັ	0 0	0 () 3ັ	0 1	0 (າ ດັ	0 0	1 (1!	0 1
							1			1		
Volume Module			•	•			•		•	•		
Base Vol:	263	448	0	0	1287	434	0	0	0	384	2	463
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	263	448	0	0	1287	434	0	0	0	384	2	463
Added Vol:	0	1	0	0	3	. 0	0	0	0	0	- 0	10
PasserByVol:		Q	0	0	_	0	. 0	-	0	0	0	0
Initial Fut:			0		1290	434	0	0	0	384	2	473
User Adj:			1.00		1.00	1.00		1.00			1.00	
PHF Adj:			1.00		1.00	1.00		1.00		1.00		1.00
PHF Volume:		449	0	_	1290	434	0	0	0	384	2	473
Reduct Vol:		-	0	0	-	0	0	0	•	0	0	0
Reduced Vol:			1 00		1290		1 00	1 00	_	384	1.00	
PCE Adj:	1.00		1.00 1.00		1.00	1.00		1.00			1.00	1.00
MLF Adj: Final Vol.:				1.00		434	0.00				2	
rinar vor.:											_	
Saturation F	•			•					ı	'		
Sat/Lane:				1600	1600	1600	1,600	1600	1600	1600	1600	1600
Adjustment:			1.00		1.00			1.00			1.00	
Lanes:					3.00		0.00	0.00	0.00	1.34	0.01	1.65
Final Sat.:	1600	3200	0	0	4800	1600			0	2146		
	1			1		1						
Capacity Ana.	lysis	Modu.	Le:									
Vol/Sat:			0.00	0.00			0.00	0.00	0.00			0.18
OLAC HOVED.	***				***					***		
*****	****	****	*****	****	****	*****	****	****	*****	*****	****	*****

_____ Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative AM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ********************** Intersection #2 Kanan / Canwood / 10 / Cycle (sec): 100 Critical Vol./Cap.(X): 0.832 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 75 Level Of Service: XXXXXX ************************ Kanan Canwood Street Name: Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - F L - T - R L - T - R ----Protected Protected Split Phase
Include Include Include
0 0 0 0 0 0 0 0 0 Protected Split Phase Control: Include Rights: 0 0 0 0 0 Min. Green: 1 0 2 0 1 0 0 3 0 1 1 0 0 0 1 1 1 0 0 2 Lanes: Volume Module: 0 1584 70 Base Vol: 36 413 263 199 0 136 386 37 1.00 70 199 0 136 Initial Bse: 36 413 263 0 1584 386 37 432 0 213 84 2 9 10 Added Vol: 0 146 29 88 36 243 0 0 72 656 0 0 0 PasserByVol: 0 0 0 0 0 0 145 201 Initial Fut: 347 0 1797 80 532 66 520 User Adj: 1.00 1.00 1.00 1.00 1.00 PHF Adi: 1.00 PHF Adj: PHF Volume: 72 656 347 0 1797 80 201 0 145 532 66 520 Reduct Vol: 0 0 0 Ω 0 0 0 0 80 201 0 145 532 66 Reduced Vol: 72 656 MLF Adj: Final Vol.: 72 656 347 0 1797 80 201 0 145 532 66 520 -----|----||-----||-----||------| Saturation Flow Module:

 Sat/Lane:
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600
 1600 1600 _____| Capacity Analysis Module: Vol/Sat: 0.05 0.21 0.22 0.00 0.37 0.05 0.13 0.00 0.09 0.19 0.19 0.16 Crit Moves: **** **** ****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project AM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ********************* Intersection #2 Kanan / Canwood /10/ ********************* Critical Vol./Cap.(X): 0.847 Cycle (sec): 100 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 79 Level Of Service: XXXXXX ************************ Street Name: Kanan Canwood East Bound North Bound South Bound West Bound Approach: $L - T - R \quad L - T - R$ L - T - R L - T - R Movement: _____ Protected Split Phase Split Phase Protected Include 0 0 0 Include 0 0 Include Include Rights: 0 0 0 0 0 0 Min. Green: 1 0 2 0 1 0 0 3 0 1 1 0 0 0 1 1 1 0 0 2 Lanes: Volume Module: 36 413 70 386 37 432 Base Vol: 263 0 1584 199 0 136 1.00 0 1584 70 199 0 136 386 37 Initial Bse: 36 413 263 19 4 0 12 146 29 Added Vol: 58 243 84 0 213 0 0 0 0 0 0 0 0 0 0 0 0 PasserByVol: 94 656 347 0 1797 89 203 0 148 532 66 520 Initial Fut: 1.00 1.00 1.00 1.00 1.00 1.00 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 89 PHF Volume: 94 656 347 0 1797 203 0 148 532 66 0 0 0 1797 0 89 0 0 203 0 Reduct Vol: 0 0 0 0 0 0 Reduced Vol: 94 656 347 148 532 66 532 66 520 94 656 347 0 1797 89 203 Final Vol.: 0 148 _____|__|___| Saturation Flow Module: Final Sat.: 1600 3200 1600 0 4800 1600 1600 0 1600 2847 353 3200 _____|___|___| Capacity Analysis Module: Vol/Sat: 0.06 0.21 0.22 0.00 0.37 0.06 0.13 0.00 0.09 0.19 0.19 0.16 Crit Moves: **** ******************

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing AM Volume

	E	Base V	olume.	Alter	iative	e = Exi	sting	AM V	olume				
Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) ***********************************													
Intersection	#6 Ka	nan /	/ 101 S	B			+++++			*****	****	*****	
Cycle (sec):											0.		
Loss Time (se	ec):	1	LO (Y+R	=4.0 s	sec)	Averag	e Dela	ay (se	ec/veh)	:	XXX	xxx	
Optimal Cycle	2:		50			Level	Of Sea	cvice	:			С	
******					****							*****	
Street Name:			Kan	an C	D.				SB On &			aund	
Approach: North Bound South Bound East Bound West Bound Movement: $L-T-R$ $L-T-R$ $L-T-R$												– R	
movement:		- I	I			1	1	·	1				
Contract	D.		4	D-	×2+22	- 0 4	Cm.	it + Di	3300	Cm1	1+ Di	296	
Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Lanes: 0 0 2 0 1 2 0 2 0 0 1 0 1! 0 1 0 0 0 0													
Min. Green: 0 0 0 0 0 0 0 0 0 0 0													
Lanes:	0 (2	0 1	2 (2	0 0	1 (1!	0 1	0 0	0	0 0	
Volume Module:													
	e: 0	126	88	611	1027	0	270	14	830	0	0	0	
Growth Adj:					1.00		1.00						
Initial Bse:			88	641			270		830				
User Adj:			1.00		1.00			1.00					
PHF Adj:	1.00	1.00	1.00		1.00			1.00		1.00	1.00	1.00	
PHF Volume: Reduct Vol:	0	436	88 0	641	1027	0	270	14	830	0	0	0	
Reduct Vol:	0	0	0	0	0	Ö	0	0	0	0	0	0	
Reduced Vol:									830				
PCE Adj:			1.00		1.00			1.00					
MLF Adj:	1.00	1.00	1.00			1.00		1.00					
Final Vol.:	U	436	88							0	_	0	
Saturation F	-		-	1			!			1		J	
	1600			1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:			1.00		1.00			1.00		1.00			
Lanes:	0.00	2.00	1.00		2.00			0.03		0.00			
Final Sat.:	0	3200	1600		3200			53		0			
			,				I						
Capacity Anal				0.00	0 20	0.00	0 17	0.00	0.00	0.00	0 00	0.00	
Vol/Sat: Crit Moves:						0.00	0.17	0.26	0.26 ****		0.00	0.00	

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing AM
Future Volume Alternative = Existing + Project AM

TOIL 1	/T 0.0.0		Level O ycle Le							rnatiz	ro.)	
**********												*****
Intersection				-	****	*****	****	****	*****	****	****	*****
Cycle (sec):		10				Critic					0.7	
Loss Time (se										:	XXXX	
Optimal Cycle				a. a. a. a. a. a.		Level					د بلد بلد باد داد د	C
Street Name:	***	****	Kan		****	*****	****		SB On &			*****
Approach:	No	rth Bo			ath Bo	ound	Ea				est Bo	ound
Movement:			- R			- R			– R		- T	
Control:	P:			P:			Sp.		nase	Spl		
Rights:	0	Inclu		0	Incl		•	Incl		0	Incl	
Min. Green: Lanes:		0	0 1	0	_	0 0		_	0 1	0	0	0
names:												
Volume Module	•		,	•		,	1		ı	•		•
Base Vol:	0	436	88	641	1027	0	270	14	830	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	436	88		1027	0	270	14	830	0	0	0
Added Vol:	0	1	0	3	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	437	88		1027	0	270	14	830	0	0	0
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:	0	437	88		1027	0	270	14	830	0	0	0
Reduct Vol: Reduced Vol:	0	0 437	. 88	0	0 1027	0	0 270	0	0 830	0	0	0 0
PCE Adi:	-	1.00	1.00		1.00	1.00		14 1.00	1.00	-	1.00	1.00
MLF Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	0	437	88		1027	0	270	14	830	0	1.00	0
	-					_						
Saturation F	low Mo	odule	:									
Sat/Lane:	1600	1600	1600		1600	1600		1600	1600	1600	1600	1600
	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:		2.00	1.00		2.00	0.00		0.03	1.97			0.00
		3200	1600		3200	0.	1600			. 0	0	0.
	Capacity Analysis Module:											
Vol/Sat:	-			0.20	0.32	0.00	0 17	0.26	0.26	0.00	0 00	0.00
Crit Moves:	0.00	****		***		0.00	0.17	0.20	****	0.00	5.00	0.00
*****	****	****	*****	****	****	*****	****	*****	*****	*****	****	*****

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative AM _____ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ********************** Intersection #96 Kanan / Roadside ********************** Cycle (sec): 100 Critical Vol./Cap.(X): 0.651 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 45 Level Of Service: xxxxxx ********************* Roadside Street Name: Kanan Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - F L - T - R _____ Control: Protected Protected Split Phase Split Phase Rights: Include Ovl Include Ovl Min. Green: 0 0 0 0 0 0 0 0 0 0 Lanes: 0 0 2 1 0 1 0 2 0 1 1 0 1! 0 1 1 0 0 0 1 --|-----||------| Volume Module: Base Vol: 0 590 43 165 623 641 284 134 504 1 0 1 0 284 134 Initial Bse: 0 590 43 165 623 102 641 504 0 235 0 0 32 0 0 0 0 0 206 228 157 0 0 0 Added Vol: 0 0 0 . 0 PasserByVol: 0 0 - 0 0 Initial Fut: 0 796 43 165 858 1 0 102 512 134 673 661 PHF Volume: 0 796 43 165 858 673 512 134 661 1 0 0 102 MLF Adj: Final Vol.: 0 796 43 165 858 673 512 134 661 1 0 102 _____| Saturation Flow Module: Final Sat.: 0 4554 246 1600 3200 1600 1880 492 2428 1600 0 1600 -----| Capacity Analysis Module:

Vol/Sat: 0.00 0.17 0.17 0.10 0.27 0.42 0.27 0.27 0.27 0.00 0.00 0.06

Crit Moves: **** ****

______ Sunbelt 05-CUP-006 Agoura Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project AM _____ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ********************* Intersection #96 Kanan / Roadside ******************* 100 Critical Vol./Cap.(X): Cycle (sec): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 45 Level Of Service: XXXXXX В ******************* Kanan Street Name: Roadside East Bound West Bound North Bound South Bound Approach: L - T - R L - T - RL - T - R L - T - RMovement: Protected Split Phase Split Phase Protected Ovl Include Ovl Include 0 0 0 0 0 0 0 0 0 0 0 0 Min. Green: 1 0 0 0 1 0 0 2 1 0 1 0 2 0 1 1 0 1! 0 1 Lanes: Volume Module: Base Vol: 0 590 43 165 623 641 284 134 504 1 0 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 284 134 0 102 Initial Bse: 0 590 43 165 623 641 504 1 0 235 0 208 32 240 0 157 O 0 0 Added Vol: 0 0 0 0 0 0 0 Ω 0 Ω 0 PasserByVol: 0 0 798 165 858 673 524 134 661 1 Initial Fut: 43 User Adi: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 43 165 858 1 0 102 673 PHF Volume: 0 798 524 134 661 0 0 0 0 0 0 0 Ω Ω Reduct Vol: 0 0 0 0 Reduced Vol: 0 798 43 165 858 673 524 134 661 1 102 PCE Adj: MLF Adi: Final Vol.: 0 798 43 165 858 673 524 134 661 Saturation Flow Module: 0.00 2.85 0.15 1.00 2.00 1.00 1.19 0.30 1.51 1.00 0.00 1.00 Lanes: 0 4555 245 1600 3200 1600 1907 488 2405 1600 0 1600 Capacity Analysis Module: Vol/Sat: 0.00 0.18 0.18 0.10 0.27 0.42 0.27 0.27 0.27 0.00 0.00 0.06 Crit Moves: **** **** **** **** *******************************

APPENDIX D

LOS CALCULATIONS FOR AFTERNOON PEAK HOUR

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Rase Volume Alternative = Existing PM Volume

	В	ase V	olume.	Altern	ative	= Exi	sting	PM Vo	lume				
ICU 1	(Loss	as C	Level O Cycle L	enath	용) Me	thod (Base V	olume	Alter	native *****	****	****	
Intersection	#1 Re	yes P	Adobe /	Canwo	od	ملك ملك ملك ملك ملك ملك م	****	- 4 4 4 4 4		*****	****	*****	
	****		. * * * * *)U	****	****	Critic	al Vol	/Car). (X):		0.	798	
Loss Time (se	ec):	1	LO (Y+R	=4.0 s	sec)	Averag	e Dela	ıy (se	ec/veh)	:	XXX	xxx	
Loss Time (se Optimal Cycle	· :****	****	56 ******	****	****	Level	Of Ser	vice:	: *****	*****	***	C *****	
Street Name:			Reves	Adobe					Canw	ood			
Approach:	Nor	th Bo	ound	Sou	ith Bo	ound	Ea	ast Bo	ound	W∈	st B	ound	
Movement:	Г -	T	- R	L -	- T	- R	L -	- T	- R	L -	T	- R	
										(
Control:	Pr	otect	ted .do	F.1	coteci	tea .do	Sp.	Incli	iase	261	Incl	nde	
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0													
Rights: Include Include Include Min. Green: 0													
							1					1	
Volume Module			•	•		·	·						
Base Vol:	211	566	103	41	379	60	72			113			
Growth Adj:								1.00					
Initial Bse:			103		379		72	30	225	113	30		
User Adj:			1.00		1.00			1.00		1.00			
PHF Adj:					1.00			1.00		1.00			
PHF Volume: Reduct Vol:	211	566	103	41			72		225 0	113	30		
			0	0 41			-		225				
Reduced Vol:			103 1,00					1.00					
PCE Adj:	1.00	1 00	1 00				1.00						
MLF Adj: Final Vol.:	211	566	103	41	379	60			225		30		
Saturation F				•		•	•						
Sat/Lane:				1600	1600	1600	1600	1600			1600	1600	
Adjustment:	1.00	1.00	1.00		1.00			1.00					
Lanes:	1.00	0.85	0.15			0.27		0.29		0.63			
Final Sat.:	1600	1354	246	1600	2763	437	1129	471				343	
				1					1)	
Capacity Anal	Lysis	Modu.	re:	0 02	0 14	0 14	0.00	0.00	0.14	0 11	0 11	0 11	
Vol/Sat:				0.03 ***		0.14	0.06	0.06		0.11			
Crit Moves:						*****	*****	****					

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Future Volume Alternative = Existing + Project PM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ****************** Intersection #1 Reyes Adobe / Canwood ******************** 100 Cycle (sec): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 75 Critical Vol./Cap.(X): 0.833 XXXXXX Reyes Adobe Canwood . Street Name: North Bound South Bound East Bound West Bound Approach: L - T - R $L - T - R \quad L - T - R$ L - T - R Movement: |-----| Split Phase Split Phase Protected Control: Protected Include Include Include Include0 0 0 0 0 0 0 0 0 0 0 Min. Green: 0 0 1! 0 0 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 Lanes: Volume Module: 72 30 225 30 39 Base Vol: 211 566 103 41 379 60 113 1.00 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 41 379 225 30 39 Initial Bse: 211 566 103 60 72 30 113 34 6 0 0 0 0 Ω 1 Added Vol: 0 0 12 2 0 0 0 0 0 0 0 0 PasserByVol: 0 0 Initial Fut: 211 566 43 379 60 72 30 225 147 45 1.1.5 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 31 45 60 72 30 225 147 PHF Volume: 211 566 115 43 379 0 0 0 0 0 0 0 0 0 0 0 0 Reduct Vol: 147 30 45 43 379 60 72 225 31 Reduced Vol: 211 566 115 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 MLF Adj: 45 Final Vol.: 211 566 115 43 379 60 72 30 225 147 31 _____| Saturation Flow Module: Adjustment: 1.00 0.83 0.17 1.00 1.73 0.27 0.71 0.29 1.00 0.66 0.14 0.20 Lanes: Final Sat.: 1600 1330 270 1600 2763 437 1129 471 1600 1055 222 323 Capacity Analysis Module: Vol/Sat: 0.13 0.43 0.43 0.03 0.14 0.14 0.06 0.06 0.14 0.14 0.14 0.14 **** **** Crit Moves: *************** Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing PM
Future Volume Alternative = Existing + Project PM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************** Intersection #1 Reyes Adobe / Canwood Cycle (sec): 100 Critical Vol./Cap.(X): 0.756 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 58 Level Of Service: ********************** Street Name: Reyes Adobe Canwood Approach: North Bound South Bound East Bound Movement: L - T - R L - T - R East Bound West Bound L - T - R _____|___|___| Protected Protected Split Phase Split Phase 0 V1 Include Include Include 0 0 0 0 0 0 0 Min. Green: 0 0 Lanes: 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 Volume Module: Base Vol: 211 566 103 41 379 60 72 30 225 113 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 41 379 Initial Bse: 211 566 103 60 72 30 225 113 30 39 Added Vol: 0 0 12 2 0 0 0 0 0 34 1 6 0 0 0 0 0 0 PasserByVol: 0 0 0 0 0 Ω Initial Fut: 211 566 43 379 60 72 225 115 30 147 31 45 User Adi: PHF Adj: PHF Volume: 211 566 115 43 379 60 72 30 225 147 0 0 0 0 0 Reduct Vol: 0 0 0 0 0 0 0 72 30 Reduced Vol: 211 566 115 43 379 60 225 147 31 45 MLF Adi: 43 379 60 72 30 225 Final Vol.: 211 566 115 147 31 Saturation Flow Module: 1.00 0.83 0.17 1.00 1.73 0.27 0.71 0.29 1.00 0.66 0.14 0.20 Final Sat.: 1600 1330 270 1600 2763 437 1129 471 1600 1055 222 Capacity Analysis Module: Vol/Sat: 0.13 0.43 0.43 0.03 0.14 0.14 0.06 0.06 0.14 0.14 0.14 0.14 Crit Moves: **** **** **** **** *****************

Mitigation: Add EB RT overlap

Traffix 7.8.0115 (c) 2006 Dowling Assoc. Licensed to INTERWEST CONSULTING

Sunbelt 05-CUP-006 Traffic Impact Study

Future Volume Alternative = Existing + Cumulative PM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) **************** Intersection #1 Reyes Adobe / Canwood ***************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 86 Level Of Service: XXXXXX ********************** Street Name: Reyes Adobe Canwood Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - F L - T - R _____|___| Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Include
 Include
 Include
 Include

 0
 0
 0
 0
 0
 0
 0
 0 0 Min. Green: Lanes: 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 Volume Module: 211 566 103 41 379 60 72 30 225 Base Vol: 113 225 Initial Bse: 211 566 103 41 379 60 72 30 113 30 0 2 47 0 0 0 16 2 Added Vol: 0 80 3 6 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0
 211
 646
 106
 43
 426
 60
 72
 30
 225
 129
 32

 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00

 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 72 Initial Fut: 211 646 45 User Adj: PHF Adj: 1.00 PHF Volume: 211 646 43 426 60 72 30 0 0 106 225 129 32 45 0 0 0 0 Reduct Vol: 0 0 0 0 0 0 Ω 43 426 60 72 Reduced Vol: 211 646 106 129 32 30 225 4.5 MLF Adj: Final Vol.: 211 646 106 43 426 60 72 30 225 129 32 -----| Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.13 0.47 0.47 0.03 0.15 0.15 0.06 0.06 0.14 0.13 0.13 0.13 Crit Moves: **** **** ****

TO AND ADD TO AD Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project PM _____ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************* Intersection #1 Reyes Adobe / Canwood ***************** Cycle (sec): 100 0.886 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 94 Level Of Service: XXXXXX ****************** Street Name: Reyes Adobe Canwood Protected Protected Split Phase Split Phase Control: Include Include Include Rights: Include 0 0 0 0 0 0 0 0 0 0 Min. Green: 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 Volume Module: 41 379 72 30 225 Base Vol: 211 566 103 60 113 30 1.00 Initial Bse: 211 566 103 41 379 60 72 30 225 113 30 39 10 0 0 0 Added Vol: 0 80 4 47 1 34 2 11 0 0 0 0 0 0 0 0 0 PasserBvVol: 0 0 0 45 426 72 Initial Fut: 211 646 113 60 31 225 147 32 50 1.00 1.00 1.00 User Adj: PHF Adj: PHF Volume: 211 646 113 45 426 60 72 31 225 147 32 0 0 0 0 0 0 0 0 0 0 Reduct Vol: Ω 0 45 426 60 72 31 Reduced Vol: 211 646 225 147 32 113 PCE Adj: MLF Adj: Final Vol.: 211 646 113 45 426 60 72 31 225 147 32 50 _____|__|__| Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.13 0.47 0.47 0.03 0.15 0.15 0.06 0.06 0.14 0.14 0.14 0.14 Crit Moves: **** **** **** ****

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ***************** Intersection #1 Reyes Adobe / Canwood ****************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 69 Level Of Service: XXXXXX *************** Canwood Street Name: Reyes Adobe Street Name: Reyes Adobe Canwood

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - F L - T - R _____| Control: Protected Protected Split Phase Split Phase Rights: Include Include Ovl Include Include Ovl 0 0 0 0 0 0 0 0 0 0 0 Min. Green: Lanes: 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 _____| | -_----| Volume Module: Base Vol: 211 566 103 41 379 60 72 30 225 113 30 Initial Bse: 211 566 103 41 379 60 72 30 225 113 30 2 0 80 10 4 47 0 0 1 0 34 11 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 PasserByVol: PHF Adj: 60 0 60 45 426 72 31 0 0 PHF Volume: 211 646 113 225 147 0 0 45 426 Reduct Vol: 0 0 0 0 0 0 0 72 Reduced Vol: 211 646 113 225 32 147 50 31 MLF Adj: Final Vol.: 211 646 113 45 426 60 72 31 225 147 32 Saturation Flow Module: Lanes: 1.00 0.85 0.15 1.00 1.75 0.25 0.70 0.30 1.00 0.64 0.14 0.22 Final Sat.: 1600 1362 238 1600 2805 395 1118 482 1600 1027 224 349 Capacity Analysis Module: Vol/Sat: 0.13 0.47 0.47 0.03 0.15 0.15 0.06 0.06 0.14 0.14 0.14 Crit Moves: **** **** ****

Mitigation: Add EB RT overlap

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing PM

Future Volume Alternative = Existing PM

Future Volume Alternative = Existing + Project PM

______ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ***************** Intersection #3 Reves Adobe / 101 NB ************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 77 Level Of Service: XXXXXX ****************** Street Name: Reyes Adobe 101 NB On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R Approach: North Bound Movement: L - T - R _____|__| Protected Protected Include Include Control: Split Phase Split Phase Include 0 0 0 Rights: Include 0 0 0 0 0 0 0 0 Min. Green: Lanes: 1 0 1 0 0 0 0 1 0 1 0 0 0 0 Volume Module: 0 328 387 93 Base Vol: 391 514 0 0 0 - 0 1 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0 328 Initial Bse: 391 514 0 387 0 0 0 93 1 375 0 0 2 0 0 0 0 0 0 Added Vol: 0 12 32 ő 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 Initial Fut: 391 526 0 330 375 0 419 0 0 93 1 User Adj: PHF Adj: PHF Volume: 391 526 0 0 330 93 1 375 419 0 0 0 0 0 0 0 0 0 Reduct Vol: Reduced Vol: 391 526 0 0 330 419 MLF Adj: Final Vol.: 391 526 0 0 330 419 0 0 93 1 375 _____| ____| ____| _____| _____| ____| ____| ____| ____| ____| _____| ____| Saturation Flow Module: _____ Capacity Analysis Module: Vol/Sat: 0.24 0.33 0.00 0.00 0.21 0.26 0.00 0.00 0.00 0.06 0.06 0.23 Crit Moves: **** *** *************************

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Volume

	Base 7	Volume A	Altern	ative	e = Exi	sting	PM Vo	olume			
ICU 1	(Loss as (Level O: Cycle Le	ength	용) Me	thod (Base V	olume	Alter	native *****	;) :****	*****
Intersection *******					****	*****	****	*****	****	****	*****
Cycle (sec): Loss Time (se	10	00	4.0 -		Critic	al Vol	L./Cap	o. (X):	_	0.8	321
Optimal Cycle	٠,	72			Level (Of Sei	cvice:				D
Street Name: Approach:	North B	ound	Sou	ith Bo	ound	Ea	ast Bo	ound	We	est Bo	ound
Movement:	L - T	- R	L -	- T	- R	L -	- T	- R	L -	- T	- R
Control:	Protec	 ted	Pı	otect	ced	ag.	Lit Ph	nase	[q2	it Ph	ıase
Control: Rights:	Incl	ude		Inclu	ıde	-	Inclu	ıde	_	Inclu	ıde
Min. Green:								0			0
Lanes:	1 0 1	0 0	. 0 () 1	0 1	, 0 () ()	0 0	0 3	. 0	U 1
Volume Module			1			,			1		l.
Base Vol:		0	0	328	387	0	0	0	93	1	375
Growth Adj:	1.00 1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:		Ö	0	328	387	0	-		93	1	375
User Adj:		1.00	1.00		1.00		1.00			1.00	
PHF Adj:		1.00	1.00		1.00		1.00	1.00 0	1.00 93	1.00	1.00 375
PHF Volume: Reduct Vol:		0	0			0		-	93		373
Reduced Vol:			0		387	0 0	0	0	93	1	375
PCE Adj:			_	1.00			1.00			1.00	
MLF Adj:				1.00			1.00			1.00	1.00
Final Vol.:	391 514	0	0	328	387	0	. 0	0	93	1	375
		-						1	1		
Saturation Fl Sat/Lane:	1600 1600 1600 1600		1600	1600	1600	1.600	1600	1600	1600	1600	1600
Adjustment:				1.00			1.00			1.00	
Lanes:				1.00			0.00			0.01	
Final Sat.:	1600 1600	0	0	1600	1600	0	0	0	1583	17	1600
	•	· · · · · · · · · · · · · · · · · · ·			1			1			
Capacity Anal			a. a-							0 0 -	0.00
Vol/Sat:	0.24 0.32	0.00	0.00	0.21	0.24		0.00	0.00	0.06	0.06	0.23
Crit Moves:		*****	****	****			****	******	****	****	

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing PM
Future Volume Alternative = Existing + Project PM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) Intersection #3 Reyes Adobe / 101 NB ************************* Cycle (sec): 100 Critical Vol./Cap.(X): 0.841 0.786 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 77 Level Of Service: xxxxxx *********************** Street Name: Reyes Adobe 101 NB On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R _____|__|__|__|| Protected Protected Include OVL Include Split Phase Split Phase Rights: Include OVL Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 1 0 0 1 Lanes: 391 514 0 0 328 387 0 0 0 93 Base Vol: 0 Initial Bse: 391 514 0 0 328 387 0 0 93 0 0 0 0 0 2 0 0 0 0 0 330 0 12 32 0 0 0 Added Vol: 0 0 PasserByVol: 0 0 0 0 0 Initial Fut: 391 526 93 375 419 0 1 User Adj: PHF Adj: PHF Volume: 391 526 0 0 330
Reduct Vol: 0 0 0 0 0
Reduced Vol: 391 526 0 0 330 93 1 0 0 0 419 PCE Adj: Final Vol.: 391 526 0 0 330 419 0 0 0 93 1 375.376 Saturation Flow Module: Capacity Analysis Module: 0.03 Vol/Sat: 0.24 0.33 0.00 0.00 0.21 0.26 0.00 0.00 0.00 0.06 0.06 0.23 Crit Moves: ****

Mitigation: Eliminate WB through movement and overlap SB RT with WB phase.

Traffix 7.8.0115 (c) 2006 Dowling Assoc. Licensed to INTERWEST CONSULTING

Crit Moves: ****

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************************* Intersection #3 Reyes Adobe / 101 NB *************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 180 Level Of Service: XXXXXX ****************** Street Name: Reyes Adobe 101 NB On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R South Bound East Bound L - T - R Movement: L - T - R __ _____ Protected Protected Split Phase Split Phase Include Include Include: Control: Rights: Min. Green: Lanes: 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 1 0 1 __|____|| Volume Module: Base Vol: 391 514 0 0 328 387 0 0 93 Initial Bse: 391 514 0 0 328 387 0 0 93 1 Added Vol: 251 54 0 0 41
PasserByVol: 0 0 0 0 0
Initial Fut: 642 568 0 0 369 23 0 0 0 21 29 0 0 0 0 0 0 0 114 410 0 1 404
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 1.00
 User Adj: PHF Adj: PHF Volume: 642 568 0 0 369
Reduct Vol: 0 0 0 0 0
Reduced Vol: 642 568 0 0 369
 410
 0
 0
 0
 114
 1

 0
 0
 0
 0
 0
 0

 410
 0
 0
 0
 114
 1
 404 . 0 MLF Adj: Final Vol.: 642 568 0 0 369 410 0 0 0 114 1 404 _____|___| Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.40 0.36 0.00 0.00 0.23 0.26 0.00 0.00 0.00 0.07 0.07 0.25

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************************* Intersection #3 Reyes Adobe / 101 NB ***************** 100 1.020 Critical Vol./Cap.(X): Cycle (sec): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 180 Level Of Service: XXXXXX ****************** Reyes Adobe 101 NB On & Off Ramps North Bound South Bound East Bound West Bound L - T - R L - T - R Street Name: Reves Adobe Approach: Movement: L - T - R -----| Protected Protected Split Phase Split Phase Include Include Include Control: Include 0 0 (Rights: 0 0 0 0 0 0 0 0 Min. Green: Lanes: 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 1 0 0 1 Volume Module: Base Vol: 391 514 n 0 328 387 0 0 0 93 1 0 0 328 1 0 Initial Bse: 391 514 387 0 0 93 375 Added Vol: 251 60 0 0 43 39 0 0 21 29 0 0 0 0 0 371 0 0 PasserByVol: 0 0 0 0 0 0 0 0 Initial Fut: 642 574 114 426 404 0 1 User Adj: PHF Adi: 0 0 0 PHF Volume: 642 574 0 371 426 0 114 Reduct Vol: 0 0 0 0 0 Reduced Vol: 642 574 0 0 371 0 426 404 PCE Adj: MLF Adj: Final Vol.: 642 574 0 0 371 426 0 0 0 114 1 404 _____| Saturation Flow Module: Lanes: Final Sat.: 1600 1600 0 0 1600 1600 0 0 0 1586 14 1600 Capacity Analysis Module: Vol/Sat: 0.40 0.36 0.00 0.00 0.23 0.27 0.00 0.00 0.00 0.07 0.07 0.25 Crit Moves: **** **** *******************

Sumbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Volume

	E	Base 1	olume.	Alterr	ative	e = Exi	sting	PM Vo	olume		. _	
TOT 1	/T = = =		Level O							native	<u>, </u>	
1CU 1	. (LOSS	3 as (,**** :Хсте г	*****	6) Me	*****	****	.**** .OTITILE	*****	*****	:/ :****	****
Intersection ********	#5 Re	eyes <i>P</i>	Adobe /	101 8	3B							
Cycle (sec): Loss Time (se	ec):		LO (Y+R	=4.0 \$	sec)	Averag	e Dela	ay (se	ec/veh)	:	XXXX	XXX
Optimal Cycle	٠.	-	71			Level	Of Sei	rvi ce :	<u> </u>			В
Street Name: Approach:	Noi	cth Bo	ound	Sou	ith Bo	ound	Eč	ast Bo	ound	We	est Bo	ound
Movement:	L -	- T	- R	L -	- T	- R	. L -	- T	– R	L -	- T	– R
				1								
Control: Rights:	Pi	cotect	ted	I	Permit	ted	P	rotect	ced	Pı	cotect	ted
Rights:		Incl	ıde		Inclu	ıde		Incl	ıde		Inclu	ade
Min. Green:	0	0	0	. 0	0	0	0	0	0	. 0	0	0
Lanes:												
				1			1					
Volume Module			040	4.0.5	0.40	•	000		1.01	^	^	0
Base Vol:					240			1		0		
Growth Adj:			1.00		1.00			1.00			1.00	
Initial Bse:			310	175	240	0	308	1			1.00	
User Adj: PHF Adj:	1.00	1.00	1.00		1.00	$1.00 \\ 1.00$		1.00			1.00	
	0.1.00		1.00 310		240	1.00	308	1.00	161	0.00		0
			310		240	-			0			-
Reduct Vol: Reduced Vol:	0	601	310	175		0	308 0	1		. 0	0 0	0
PCE Adj:			1.00		1.00			1.00			1.00	
MLF Adj:			1.00		1.00			1.00			1.00	1.00
Final Vol.:			310		240			1.00		0		0
	l ———-		I									-
Saturation F	•		•	1		•	1			,		
	1600		1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:			1.00		1.00			1.00			1.00	
Lanes:			1.00		1.00			0.01		0.00		
Final Sat.:	0	1600				0		10				0
						1						1
Capacity Anal			•			·						
Vol/Sat:				0.11	0.15	0.00	0.19	0.10	0.10	0.00	0.00	0.00
Crit Moves:		***	*				***	*				
*****	****	****	*****	****	****	*****	****	****	*****	****	****	*****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing PM
Future Volume Alternative = Existing + Project PM

	Fut	ure V	olume	Alter	native) = Exi	sting	+ Pro	ject P	M 		
		I	evel 0	f Serv	rice (Computa	tion I	Report				
ICU 1	(Loss	as Cv	cle Le	ngth 9	a) Met	hod (F	uture	Volum	e Alte	rnativ	re)	
*****	*****	****	****	****	****	*****	****	*****	*****	*****	****	*****
Intersection	#5 Re	eyes A	dobe /	101 5	SB							
*****	*****	****	****	****	****	*****	****	*****	****	*****	****	*****
Cycle (sec):		1.0				Critic					0.6	
Loss Time (se	ec):	1	.0 (Y+R	=4.0 \$	sec)	Averag	e Dela	ay (se	c/veh)	:	XXXX	(XX
Ontimal Cycle	a •	7	'3			Level	Of Sei	rvice:				В

Street Name:			Reyes	Adobe		ound		101	On &	Off Ra	amps	
Approach:											est Bo	ound
Movement:	L, -	- T	- R	L -	- T	- R	ь -	- T	- R		- Т	
Control:	Pı	cotect	ed ide]	ermit?	tted			ed			
Rights:	_	Inclu	ıde	_	Inclu	ıde					Inclu	
Min. Green:			0			0			0		0	
Lanes:			0 1			0 0			1 0			
****			1									
Volume Module		607	27.0	175	040		200	-	1.01	0		0
Base Vol:	0	601	310	175	240	0	308	1	161	1 00	1 00	0 1.00
Growth Adj:			1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:		601	310	175		0	308		161	0	0	0
Added Vol:	0	1	0	0	2	0	12		0	0	0	0
PasserByVol: Initial Fut:	0		0	175	0	0	0	0 1	-	0	0	0
			310	175	242	-	320	_	161	_	1.00	1.00
	1.00		1.00		1.00	$1.00 \\ 1.00$		1.00	$\frac{1.00}{1.00}$		1.00	1.00
PHF Adj:			1.00		1.00		320			1.00	1.00	0.1.00
PHF Volume:	0	602	310	175	242	0		_	161 0	0	0	0
Reduct Vol:	0	0	0 310	0 175	242	0	0 320		161	0	0	0
Reduced Vol: PCE Adj:	1.00		1.00		1.00	1.00		1.00		_	1.00	_
			1.00		1.00	1.00		1.00	1.00		1.00	1.00
MLF Adj: Final Vol.:	1.00		310	175			320	1.00			0	0
EIUGI VOI.:											-	
Saturation F	•			1		,	1		,	ı		,
Sat/Lane:	1600		1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:			1.00		1.00	1.00		1.00	1.00		1.00	
Lanes:			1.00		1.00			0.01			0.00	
		1600	1600		1600		1600			0.00		0.00
										-	-	-
Capacity Analysis Module:												
Vol/Sat:	_			0.11	0.15	0.00	0.20	0.10	0.10	0.00	0.00	0.00
Crit Moves:	-,	***					***		0.110			
******	****	****	*****	****	****	*****	****	*****	****	*****	****	*****

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************** Intersection #5 Reves Adobe / 101 SB ****************** Cycle (sec): 100 Critical Vol./Cap.(X):
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 169 Level Of Service: Critical Vol./Cap.(X): XXXXXX ************* Street Name: Reyes Adobe 101 On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R _____| Control: Protected Protected Protected Protected Rights: Include Include Include -----| Volume Module: Base Vol: 0 601 310 175 240 0 308 1 161 PHF Adj: 197 280 0 0 197 280 0 0 0 0 0 0 0 0 319 1 216 0 0 0 319 1 216 0 PHF Volume: 0 895 404 0 0 0 895 Reduct Vol: 0 0 0 404 Reduced Vol: Final Vol.: 0 895 404 197 280 0 319 1 216 0 0 Saturation Flow Module: Final Sat.: 0 1600 1600 1600 1600 0 1600 7 1593 0 0 -----| Capacity Analysis Module: Vol/Sat: 0.00 0.56 0.25 0.12 0.17 0.00 0.20 0.14 0.14 0.00 0.00 0.00 Crit Moves: **** ****

______ Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) **************** Intersection #5 Reyes Adobe / 101 SB *************** 100 0.986Critical Vol./Cap.(X): Cycle (sec): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 176 Level Of Service: XXXXXX ********************** 101 On & Off Ramps
East Bound West Bound Street Name: Reves Adobe North Bound South Bound Approach: L-T-R L-T-R L-T-R Movement: L - T - R __|___| Protected Protected Protected Protected Control: Include Include Include Include Rights: 0 0 0 n 0 0 0 0 0 0 0 0 Min. Green: Volume Module: 0 601 310 175 240 0 308 1 0 n Base Vol: 161 0 0 0 Initial Bse: 0 601 310 175 240 308 1 161 0 0 295 22 94 0 17 55 0 0 Added Vol: 42 ი 0 ე0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 896 1 0 0 197 282 325 216 404 Ω Initial Fut: PHF Adj: PHF Volume: 0 896 404 197 282 0 325 1 216 0 0 0 0 0 197 282 0 325 1 Reduct Vol: 0 0 0 0 216 0 0 Reduced Vol: 0 896 404 0 PCE Adj: $1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00\ 1.00$ MLF Adj: Final Vol.: 0 896 404 197 282 0 325 1 216 0 0 _____|__| Saturation Flow Module: _____ Capacity Analysis Module: Vol/Sat: 0.00 0.56 0.25 0.12 0.18 0.00 0.20 0.14 0.14 0.00 0.00 0.00 Crit Moves: **** **** *** ************************ Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing PM Volume

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) ******************* Intersection #2 Kanan / Canwood ******************* Cycle (sec): 100 Critical Vol./Cap.(X): 0.883 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 92 Level Of Service: XXXXXX *************** Street Name: Kanan Canwood Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R _____ _____|__|__| Volume Module: 37 1113 43 56 43 172 154 75 Base Vol: 104 1614 165 PHF Volume: 104 1614 165 37 1113 43 56 43 172 154 75 35 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 104 1614 165 37 1113 43 56 43 172 154 75 35 MLF Adj: Final Vol.: 104 1614 165 37 1113 43 56 43 172 154 75 35 _____| Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.07 0.56 0.56 0.02 0.18 0.18 0.04 0.03 0.11 0.10 0.07 0.07 Crit Moves: **** ****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Future Volume Alternative = Existing + Project PM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ******************* Intersection #2 Kanan / Canwood ************************ Cycle (sec): 100 Critical Vol./Cap.(X):
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 97 Level Of Service: XXXXXX ********************* Street Name: Kanan Canwood

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R _____| _____|___|___| Volume Module: 165 37 1113 56 43 35 Base Vol: 104 1614 43 172 154 Initial Bse: 104 1614 165 37 1113 43 56 43 172 154 5 0 13 0 0 0 0 0 Added Vol: 0 16 0 0 PasserByVol: 0 0 0 0 0 0 Ω 0 35 37 1113 48 69 43 188 154 75 Initial Fut: 110 1614 165 PHF Adj: 37 1113 48 PHF Volume: 110 1614 165 69 43 188 154 75 35 0 0 69 43 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 48 Reduced Vol: 110 1614 37 1113 154 75 165 188 35 1.00 1.00 1.00 1.00 1.00 1.00 188 Saturation Flow Module: Lanes: 1.00 1.81 0.19 1.00 3.83 0.17 1.00 1.00 1.00 1.00 0.68 0.32 Final Sat.: 1600 2903 297 1600 6135 265 1600 1600 1600 1600 1091 509 Capacity Analysis Module: Vol/Sat: 0.07 0.56 0.56 0.02 0.18 0.18 0.04 0.03 0.12 0.10 0.07 0.07 Crit Moves: **** *** **** **** ***********************************

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Volume

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) *********************** Intersection #49 Kanan / 101 NB ************************ Cycle (sec): 100 Critical Vol./Cap.(X):
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 117 Level Of Service: XXXXXX ********************** Street Name: Kanan 101 NB On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R _____|
 Control:
 Protected
 Protected
 Split Phase
 Split Phase

 Rights:
 Include
 Include
 Include

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

 Lanes:
 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 1 0 1! 0 1
 Volume Module: Base Vol: 410 969 0 0 944 464 166 1 905 0 0 0 Initial Bse: 410 969 0 0 944 464 0 0 0 166 1 905 PHF Volume: 410 969 0 0 944 464 0 0 0 166 1 905 Reduct Vol: 0 0 0 0 944 464 0 0 0 0 166 1 905 Reduced Vol: 410 969 0 0 944 464 0 0 0 166 1 905 -----| Saturation Flow Module: Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 1.00 0.01 1.99 Final Sat.: 1600 3200 0 0 4800 1600 0 0 1600 4 3196 Capacity Analysis Module: Vol/Sat: 0.26 0.30 0.00 0.00 0.20 0.29 0.00 0.00 0.00 0.10 0.28 0.28 Crit Moves: *********************************

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing PM
Future Volume Alternative = Existing + Project PM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ****************** Intersection #49 Kanan / 101 NB ***************** Cycle (sec): Critical Vol./Cap.(X): 0.931 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 118 Level Of Service: XXXXXX ********************* 101 NB On & Off Ramps th Bound East Bound West Bo Street Name: Kanan Approach: West Bound L - T - R L - T - R Movement: _____| Protected Protected Split Phase Split Phase Control: Include Include Include Include Rights: 0 0 0 0 0 0 0 0 0 0 Min. Green: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 Lanes: Volume Module: 905 Base Vol: 410 969 0 0 944 464 0 0 166 1 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Growth Adj: 1.00 1.00 1.00 1.00 1.00 0 0 0 0 0 944 464 166 1 905 Initial Bse: 410 969 1 5 Added Vol: 0 0 0 16 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 Initial Fut: 410 970 0 0 960 464 0 0 0 166 1 910 1.00 1.00 1.00 1.00 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 0 0 PHF Volume: 410 970 0 0 960 464 0 166 1 910 0 0 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 960 0 0 166 1 Reduced Vol: 410 970 464 0 PCE Adj: MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 464 Final Vol.: 410 970 0 0 960 0 0 0 166 1 910 -----||-----||-----||------| Saturation Flow Module: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Adjustment: Final Sat : 1600 3200 0 0 4800 1600 Capacity Analysis Module: Vol/Sat: 0.26 0.30 0.00 0.00 0.20 0.29 0.00 0.00 0.00 0.10 0.28 0.28 Crit Moves: **** ***

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative PM

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ******************** Critical Vol./Cap.(X): 0.973 Cycle (sec): 100 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 157 Level Of Service: XXXXXX ************************ Canwood Street Name: Kanan South Bound East Bound
L - T - R L - T - R West Bound Approach: North Bound Movement: L - T - R |-----| Protected Split Phase Split Phase Protected Control: Include 0 0 0 Include Include Rights: Include 0 0 0 0 0 0 0 0 Min. Green: 1 0 2 0 1 0 0 3 0 1 1 0 0 0 1 1 1 0 0 2 Lanes: ___|___|| Volume Module: 51 870 410 0 1267 118 99 0 172 167 53 909 Base Vol: 1.00 Initial Bse: 51 870 410 0 1267 118 99 0 172 167 53 909 0 479 19 290 254 7 0 77 22 119 5 57 Added Vol: 0 0 0 0 0 PasserByVol: 0 0 0 0 0 0 0 249 Initial Fut: 70 1160 664 0 1746 125 121 286 58 966 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.001.00 1.00 1.00 PHF Volume: 70 1160 0 1746 125 121 0 249 286 58 966 664 0 0 0 1746 Reduct Vol: 0 0 n 0 Ω 0 0 Ω 0 0 121 0 249 Reduced Vol: 70 1160 125 286 58 664 PCE Adi: MLF Adj: Final Vol.: 70 1160 664 0 1746 125 121 0 249 286 58 ______ Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.04 0.36 0.42 0.00 0.36 0.08 0.08 0.00 0.16 0.11 0.11 0.30 **** **** Crit Moves:

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Volume

						Computa					
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)											
Intersection #6 Kanan / 101 SB ***********************************											
Cycle (sec): 100 Critical Vol./Cap.(X): 0.732 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx Optimal Cycle: 54 Level Of Service: C											xxx
Ontimal Cycle			54	2.0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Level	Of Sei	rvice:		•	C
Optimal Cycle: 54 Level Of Service: C											
Street Name: Kanan 101 SB On & Off Ramps Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R											
Approach:	No	cth Bo	ound	Sot	ath Bo	ound	Ea	ast Bo	ound	West B	ound
Movement:	L -	- Т	- R	L -	- T	- R	L -	- T	- R	ь - т	- R
Control: Rights: Min. Green: Lanes:	Pı	cotect	ted	P	rotect	ted	Spl	Lit Pl	nase	Split P	hase
Rights:		Inclu	ıde		Incl	ıde		Inclu	ıde	Incl	ude
Min. Green:	0	0	0	0	0	0	0	0	0	0 0	0
Lanes:	0 () 2	0 1	2 (0 2	0 0	1 (1!	0 1	0 0 0	0 0
Volume Module											
Volume Module	∌ :										
			243							0 0	
Growth Adj:			1.00		1.00				1.00		
Initial Bse:			243	535	570					0 0	
User Adj:			1.00		1.00				1.00		
PHF Adj:	1.00	1.00	1.00	1.00						1.00 1.00	
PHF Volume:	0	861	243	535	570	0				0 0	
Reduct Vol:										0 0	
Reduced Vol:										0 0	
PCE Adj:	1.00	1.00	1.00							1.00 1.00	
MLF Adj:	1.00	1.00	1.00						1.00	1.00 1.00	
Final Vol.:	0	861								0 0	
	•										
Saturation Fl											4.000
Sat/Lane:								1600			
Adjustment:	1.00	1.00	1.00	1.00					1.00		
Lanes:						0.00				0.00 0.00	
Final Sat.:	. 0	3200	1600	.3200	3200	0	2630	15	2154	. 0 0	0
Capacity Anal	lveic	Modu	 a:				1		1		
Vol/Sat:				0 17	0 18	0.00	0.20	0 20	0.20	0 00 0 00	0.00
Crit Moves:	0.00	***	k 0.13	***	* ^.TO	0.00	0.20	***		0.00 0.00	0.00
********						*****	****	****	*****	*****	*****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Future Volume Alternative = Existing + Project PM

_____ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) Intersection #6 Kanan / 101 SB Cycle (sec): 100 Critical Vol./Cap.(X): 0.736 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 55 Level Of Service: XXXXXX ********************* Street Name: Kanan 101 SB On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - F L - T - R Split Phase Split Phase Protected Protected Control: Include Include 0 0 Include 0 0 Rights: Include 0 0 Min. Green: 0 0 0 0 0 Volume Module: 535 570 0 861 243 0 Base Vol: 514 3 421 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Initial Bse: 0 861 243 535 570 0 514 3 421 0 0 14 2 0 0 Added Vol: 0 0 1 PasserByVol: 0 0 0 0 0 0 0 0 0 Initial Fut: 0 862 243 549 572 0 514 3 421 Ó 0 O PHF Adj: 0 0 PHF Volume: 0 862 243 549 572 0 514 3 421 0 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 3 0 862 549 572 514 Reduced Vol: 243 421 0 PCE Adj: MLF Adj: Final Vol.: 0 862 243 549 572 0 514 3 421 0 0 Saturation Flow Module: Lanes: 0.00 2.00 1.00 2.00 2.00 0.00 1.64 0.01 1.35 0.00 0.00 0.00 Final Sat.: 0 3200 1600 3200 3200 0 2630 15 2154 0 0 ~~~~~~||-----||-----| Capacity Analysis Module: Vol/Sat: 0.00 0.27 0.15 0.17 0.18 0.00 0.20 0.20 0.20 0.00 0.00 Crit Moves: **** **** *** ***************************** Sunbelt 05-CUP-006 Traffic Impact Study

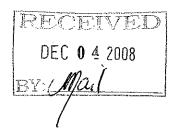
______ Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************** Intersection #96 Kanan / Roadside ************** 100 Critical Vol./Cap.(X): Cycle (sec): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 77 Level Of Service: XXXXXX ******************* Street Name: Kanan Roadside East Bound West Bound North Bound South Bound Approach: L - T - R $L - T - R \quad L - T - R$ L - T - R Movement: _____| Protected Protected Split Phase Split Phase Include Ovl Include Ovl O O O O O Control: Rights: 0 0 0 0 Min. Green: 0 0 2 1 0 1 0 2 0 1 1 0 1! 0 1 1 0 0 0 1 Volume Module: Base Vol: 0 882 57 138 442 535 517 111 358 0 1.00 0 0 227 Initial Bse: 0 882 57 138 442 535 517 111 358 0 232 0 574 0 0 0 Added Vol: 0 128 169 0 211 0 0 0 0 0 0 0 Ω 0 PasserByVol: 0 0 57 138 674 686 111 569 0 0 0 1456 663 Initial Fut: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 User Adj: PHF Adj: 663 686 111 569 0 0 227 0 1456 57 138 674 PHF Volume: . 0 0 0 0 Ω 0 0 0 0 0 0 0 Reduct Vol: 0 1456 57 138 674 686 111 569 . 0 0 227 Reduced Vol: 663 PCE Adj: MLF Adj: 0 1456 57 138 674 663 686 111 569 0 0 227 Final Vol.: _____| Saturation Flow Module: Lanes: 0.00 2.89 0.11 1.00 2.00 1.00 1.51 0.24 1.25 1.00 0.00 1.00 Final Sat.: 0 4619 181 1600 3200 1600 2411 390 1999 1600 0 1600 _____| Capacity Analysis Module: Vol/Sat: 0.00 0.32 0.32 0.09 0.21 0.41 0.28 0.28 0.28 0.00 0.00 0.14 Crit Moves: **** **** **** ********************

6B Agoura Hills 05-CUP-006 Traffic Study Addendum. Interwest Consulting Group. November 20, 2008.



November 20, 2008

Mr. John Brock Sunbelt Enterprises 1801 Solar Drive, Suite 250 Oxnard, CA 93030



Subject:

Agoura Hills 05-CUP-006 Traffic Impact Study Addendum

Dear John:

As directed by the City of Agoura Hills, we have prepared this addendum to our January 3, 2007 report to reflect the U.S. 101 Freeway – Reyes Adobe Road interchange area improvements that will begin construction in the Spring of 2009. The improvements will affect the intersection of Reyes Adobe Road – Canwood Street, as well as both offramp intersections. The improvements consist of the following:

Southbound Offramp Intersection

- Add northbound through lane.
- Add southbound left turn lane.
- Add southbound through lane.

Northbound Offramp Intersection

- Add northbound through lane.
- Add northbound left turn lane.
- Convert southbound right turn lane to through-right lane.

Canwood Street Intersection

- Add northbound through lane.
- Add northbound left turn lane.
- Add a second westbound lane and stripe the approach to provide a left turn lane and a through-right lane.

The updated future intersection lane configurations are shown in the revised Figure 8 (attached). Updated level of service (LOS) calculations were performed for the affected intersections; the calculation sheets are provided in the appendix and the results are reflected in the revised Table 2. Although the Kanan interchange LOS calculations were not affected, the original LOS results for those intersections are included in Table 2 for convenience.

Table 2. Intersection AM/PM Peak LOS Results

	ı aı	7C 2. 1110	JI SCCHOL	ı AM/PM	I Can LO) ICSUILS		
	Scenario		Reyes Adobe - Canwood	Reyes Adobe – U.S. 101 SB Offramp	Reyes Adobe – U.S. NB Offramp	Kanan - Canwood	Kanan – U.S. 101 SB Offramp	Kanan – U.S. 101 NB Offramp
	Existing	ICU	0.61	0.93	0.68	0.56	0.70	0.71
	Existing	LOS	В	Е	В	A	В	C
	Existing +	ICU	0.63	0.93	0.68	0.56	0.70	0.71
	Project	LOS	В	Е	В	A	В	C
AM	Existing +	ICU	0.49	0.96	0.69	•	0.65	0.83
	Cumulative	LOS	Α	Е	В	1	В	D
	Existing + Cumulative	ICU	0.49	0.96	0.69	-	0.65	0.85
	+ Project	LOS	A	Е	В	-	В	D
	Existing	ICU	0.80	0.67	0.82	0.88	0.73	0.93
		LOS	C	В	D	D	C	Е
	Existing +	ICU	0.83	0.68	0.84	0.89	0.74	0.93
	Project	LOS	D	В	D	D	C	Е
PM	Existing +	ICU	0.58	0.64	0.81	-	0.84	0.96
	Cumulative	LOS	A	В	D	-	D	E
	Existing + Cumulative	ICU	0.60	0.65	0.82	_	0.84	0.97
	+ Project	LOS	A	В	D	-	D	Е

Because the freeway interchange improvements will not affect the Existing and Existing + Project scenarios, the LOS results still indicate that the project will cause significant project-specific impacts to the Reyes Adobe – Canwood and Reyes Adobe – Northbound Offramp intersections during the afternoon peak period. However, the LOS results indicate that the interchange improvements will mitigate project-specific impacts at both of these intersections. Furthermore, the interchange improvements will improve intersection operation such that the project will no longer cause any significant cumulative impacts.

Based on these findings, it is concluded that project mitigation will consist of payment of traffic impact fees, a portion of which will be used to construct the Reyes Adobe interchange improvements.

Mr. John Brock November 20, 2008 Page 3

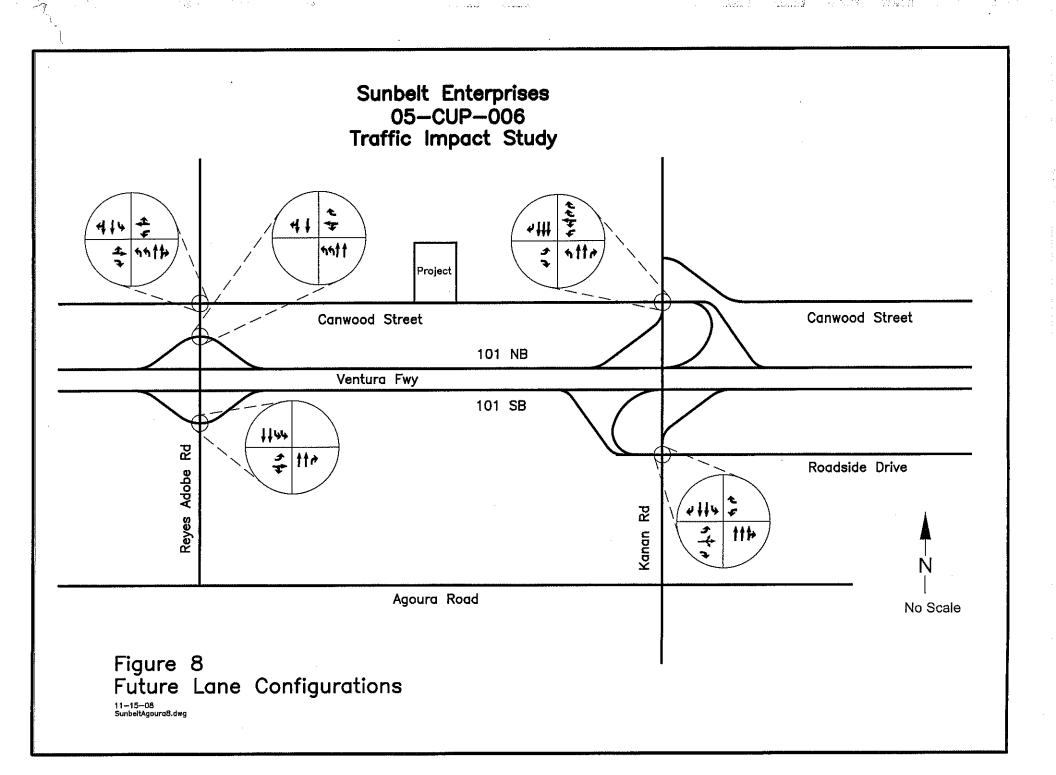
If you have any questions regarding this addendum or are in need of further services, please don't hesitate to contact me.

Sincerely,

Mark Wessel, P.E.

Mark aderel

081120 Agoura 05-CUP-006 traffic study addendum.doc



APPENDICES

APPENDIX A

LOS CALCULATIONS FOR MORNING PEAK HOUR

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing AM Volume

------Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) ******************************* Intersection #1 Reves Adobe / Canwood ************************************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 40 Level Of Service: XXXXXX ****** ************************ Street Name: Reyes Adobe Canwood Approach: North Bound South Bound Movement: L - T - R L - T - R East Bound West Bound L - T - R L - T - R L - T - R _____| Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 0 Lanes: 1 0 0 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 Volume Module: 87 281 Base Vol: 216 30 556 21 20 19 153 104 13 Initial Bse: 87 281 216 30 556 21 20 19 1.53 104 13 12 PHF Volume: 87 281 216 30 556 21 20 19 1.53 104 13 12 0 Reduct Vol: 0 0 0 0 0 0 0 0 Ω 0 Reduced Vol: 87 281 216 30 556 21 20 19 153 12 104 13 FinalVolume: 87 281 216 30 556 21 20 19 153 104 13 12 _____ Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.05 0.31 0.31 0.02 0.18 0.18 0.02 0.02 0.10 0.08 0.08 0.08 Crit Moves: **** **** ****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing AM Future Volume Alternative = Existing + Project AM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ******************************* Intersection #1 Reyes Adobe / Canwood ***************** Cycle (sec): 100 Critical Vol./Cap.(X): 0.628 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 42 Level Of Service: XXXXXX ******************************* Street Name: Reyes Adobe Canwood Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R _____
 Control:
 Protected
 Protected
 Split Phase
 Split Phase

 Rights:
 Include
 Include
 Include

 Min. Green:
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 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
 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
 0
 Volume Module: Base Vol: 87 281 216 30 556 21 20 19 153 104 13 Initial Bse: 87 281 216 30 556 21 20 19 153 104 13 12 0 0 24 4 0 0 0 0 0 0 0 0 0 0 0 Added Vol: б Ω 1 PasserByVol: 0 0 0 0 0 Initial Fut: 87 281 240 34 556 21 20 19 153 110 13 _____| ____| ____| ____| ____| ____| ____| ____| ____| ____| ____| ____| Saturation Flow Module: Lanes: 1.00 0.54 0.46 1.00 1.93 0.07 0.51 0.49 1.00 0.81 0.09 0.10 Final Sat.: 1600 863 737 1600 3084 116 821 779 1600 1294 153 153 Capacity Analysis Module: Vol/Sat: 0.05 0.33 0.33 0.02 0.18 0.18 0.02 0.02 0.10 0.08 0.08 0.08 Crit Moves: **** **** **** *************************

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative AM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************************* Intersection #1 Reyes Adobe / Canwood ************************* Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 33 Level Of Service: XXXXXX ********************* Street Name: Reyes Adobe Canwood Approach: North Bound South Bound East Bound Movement: L-T-R L-T-REast Bound West Bound L - T - R Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 0 Lanes: 2 0 1 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1 0 Volume Module: Base Vol: 87 281 216 30 556 21 20 19 153 104 13 12 Initial Bse: 87 281 30 556 216 21 20 19 153 104 13 18 6 62 0 0 0 0 30 18 Added Vol: 0 2 0 0 2 0 0 0 PasserByVol: 0 0 0 0 0 0 - 0 Initial Fut: 87 311 234 36 618 21 20 21 153 106 13 14 PHF Volume: 87 311 234 36 618 21 20 21 153 106 13 14 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 87 311 234 36 618 21 20 21 153 106 13 14 36 618 21 20 21 153 106 13 14 _____| Saturation Flow Module: Lanes: 2.00 1.14 0.86 1.00 1.93 0.07 0.49 0.51 1.00 1.00 0.48 0.52 Final Sat.: 3200 1826 1374 1600 3095 105 780 820 1600 1600 770 830 _____| Capacity Analysis Module: Vol/Sat: 0.03 0.17 0.17 0.02 0.20 0.20 0.03 0.03 0.10 0.07 0.02 0.02 Crit Moves: **** **** **** **** *****************************

______ Sunbelt 05-CUP-006 Agoura Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project AM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) *********************************** Intersection #1 Reyes Adobe / Canwood *********************************** Cycle (sec): 100 Critical Vol./Cap.(X): 0 491 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 33 Level Of Service: XXXXXX Street Name: Reyes Adobe Canwood Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - RL - T - R Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 Lanes: 2 0 1 1 0 1 0 1 1 0 0 1 0 0 1 1 0 0 1 0 Volume Module: 87 281 216 30 556 Base Vol: 21 20 19 153 104 13 Initial Bse: 87 281 30 556 21 104 13 216 20 19 153 12 0 2 30 0 6 0 Added Vol: 0 30 10 62 0 - 3 0.0 PasserByVol: 0 0 0 0 0 0 0 0 0 Initial Fut: 87 311 40 618 21 20 246 110 21 153 13 15 PHF Volume: 87 311 246 40 618 21 20 21 153 110 13 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 - 0 Reduced Vol: 87 311 246 40 618 21 20 21 153 110 13 15 MLF Adj: FinalVolume: 87 311 246 40 618 21 20 21 153 110 13 15 -----| Saturation Flow Module: _____ Capacity Analysis Module: Vol/Sat: 0.03 0.17 0.17 0.03 0.20 0.20 0.03 0.03 0.10 0.07 0.02 0.02 Crit Moves: ****

Sumbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing AM Volume

Base Volume Alternative = Existing AM Volume												
Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)												

Intersection #3 Reyes Adobe / 101 NB ***********************************												
Cycle (sec): 100												
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx										xxx		
Optimal Cycle	∍:		47			Level	Of Sea	cvice.	:			В
*****	****	****	*****	****	****	*****	*****	****	*****	*****	****	*****
Street Name:			Reyes	Adobe				101 1	NB On &	Off F	Ramps	
Approach:	No:	rth B	ound	Soi	ith Bo	ound	Εa	ast Bo	ound	Off Ramps West Bound		
Movement:	L ·		- R			- R			- R		- т	
Control:	P:	rotec	ted	Pı	rotect	ted				Sp.		
Rights:		Incl	ted ude		Incl	ıde		Incl	ıde	-	Incl	
Min. Green:	0	0	0		0	0		0	0	0	0	0
Lanes:	1 (0 1	0 0	0 () 1	0 1	0 (0 0	0 0	0 1	L 0	0 1
					- -		{]		
Volume Module	e:								,	•		· ·
Base Vol:	194	439	0	0	439	382	0	0	0	285	3	141
Growth Adj:	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	194	439	0	0	439	382	0	0	0	285	3	141
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	194	439	0	0	439	382	0	0	0	285	3	141
Reduct Vol:	0	0	0	0	0	. 0	0	0	0	0	0	0
Reduced Vol:	194	439	0	0	439	382			. 0	285	3	141
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
FinalVolume:	194	439	0	0	439	382	0		0	285	3	141
				ļ 		[
Saturation Fl	Low Mo	odule	:	•		•	•		•	•		'
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00
Lanes:	1.00	1.00	0.00		1.00		0.00	0.00			0.01	1.00
Final Sat.:	1600	1600	0	0			0			1583		1600
Capacity Anal				•			•		•	•		'
Vol/Sat:				0.00	0.27	0.24	0.00	0.00	0.00	0.18	0.18	0.09
Crit Moves:	****				***					***		
*****	****	****	*****	*****	****	*****	****	****	*****	****	****	*****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing AM Future Volume Alternative = Existing + Project AM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************************************ Intersection #3 Reyes Adobe / 101 NB Cycle (sec): 100 Critical Vol./Cap.(X): 0.676 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 47 Level Of Service: XXXXXX Street Name: Reyes Adobe 101 NB On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1 0 0 0 0 0 0 1 0 0 1 ---|-----||------| Volume Module: Base Vol: 194 439 0 0 439 382 0 0 0 285 .3 7 4 1 Initial Bse: 194 439 0 0 439 0 285 3 382 0 0 141 Added Vol: 0 24 0 0 0 6 PasserByVol: 0 0 0 0 0 0 Initial Fut: 194 463 0 0 439 388 0 0 0 0 0 0 0 0 0 0 0 0 0 285 3 141 PHF Adj: PHF Volume: 194 463 0 0 439 388 0 0 0 285 3 141 Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.12 0.29 0.00 0.00 0.27 0.24 0.00 0.00 0.00 0.18 0.18 0.09 Crit Moves: **** **** **** ************************************

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative AM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) *********************** Intersection #3 Reyes Adobe / 101 NB ********************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 49 Level Of Service: Street Name: Reyes Adobe 101 NB On & Off Ramps
Approach: North Bound South Bound East Bound West Bound L-T-R L-T-R L-T-R Movement:
 Control:
 Protected
 Protected
 Split Phase
 Split Phase

 Rights:
 Include
 Include
 Include

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

 Lanes:
 2
 0
 2
 0
 0
 0
 1
 0
 0
 0
 0
 0
 0
 1
 0 0 0 _____| ____| _____| _____| _____| _____| ____| ____| Volume Module: Base Vol: 194 439 0 0 439 382 0 0 285 0 0 439 Initial Bse: 194 439 0 382 0 0 285 3 141 0 Added Vol: 40 36 0 57 13 PasserByVol: 0 0 0 Initial Fut: 234 475 0 0 0 0 0 **4**96 389 0 PHF Adj: PHF Volume: 234 475 0 0 496 389 0 0 0 385 3 154 0 0 0 496 Reduct Vol: 0 0 0 Reduced Vol: 234 475 0 0 0 0 0 0 0 0 0 389 0 0 0 385 3 154 0 Saturation Flow Module: Lanes: 2.00 2.00 0.00 0.00 1.12 0.88 0.00 0.00 0.00 0.99 0.01 1.00 Final Sat.: 3200 3200 0 0 1793 1407 0 0 0 1588 12 1600 Capacity Analysis Module: Vol/Sat: 0.07 0.15 0.00 0.00 0.28 0.28 0.00 0.00 0.00 0.24 0.24 0.10 Crit Moves: **** ****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing AM Volume

Base Volume Alternative = Existing AM Volume												
Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) ***********************************												
Intersection #5 Reyes Adobe / 101 SB												

Cycle (sec): 100 Critical Vol./Cap.(X): 0.929 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx									CXX			
Optimal Cycle	∋:	1,1	L7			Level	Of Se	rvice	:			E
******												*****
Street Name: Approach:	Nort	th Bo	Reyes	adobe	ı+h Ba	nund	ti.	10.	l On &	Off Ra	amps	
Movement:	L -	T	- R	L -	тскі Бу - Т	- R	Ε	ав с в о - Т	B	7	ສວເ D(- ຖາ	- R
				[i]					
Control:	Pro	otect	ced	I	Permit	tted	P:	rotect	teđ	Pi	cotect	ed
Rights:		Inclu	ıde	_	Incl	ıde	_	Inclu	ıde	_	Inclu	
Min. Green:	0	0	0	0	0	0	0	. 0	0	0	_ 0	0
Lanes:	U U		U I	1	J <u>1</u>	0 0 		ט כ	1 0	U (0 0
Volume Module				1		1	1					(
Base Vol:		335	218	164	565	0	306	3	759	0	0	0
Growth Adj:			1.00	1.00	1.00	1.00		1.00			1.00	
Initial Bse:			218	164		0	306	3	759	0	0	0
User Adj:			1.00	1.00				1.00			1.00	
PHF Adj:			1.00	1.00		1.00		1.00			1.00	
PHF Volume: Reduct Vol:	0	335	218	164		0 0	306	3	759 0	0	0	0
Reduct Vol:			0 218	-	0				0 759			0
			1.00	164 1.00				1.00			1.00	
PCE Adj: MLF Adj:	1.00	1 00	1.00	1.00				1.00			1.00	
FinalVolume:			218		565				759			
	- -											
Saturation F												
Sat/Lane:				1600				1600			1600	
Adjustment:			1.00	1.00				1.00			1.00	
Lanes:			1.00	1.00				0.01				
Final Sat.:	. U !	1000	1600	1	1600	0	1600	6	1594	0		
Capacity Anal				1		'	ı		,	'		- 1
Vol/Sat:				0.10	0.35	0.00	0.19	0.48	0.48	0.00	0.00	0.00
Crit Moves:	****				****			****				
********	*****	* * * * 1	*****	****	****	*****	****	****	*****	****	****	

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing AM
Future Volume Alternative = Existing + Project AM

						Computa							
ICU 1	(Loss	as C:	ycle L	ength ⁹	b) Met	thod (F	uture	Volum	ne Alte	ernativ	e)		
Intersection	#5 Re	eyes 2	Adobe .	/ 101 8	BB								
Cycle (sec): 100 Critical Vol./Cap.(X): 0.929													
Loss Time (se	ec):			R=4.0 s	sec)			: xxxxxx					
Optimal Cycle					,	Level				E			
*****	****	****	****	****	****	*****	****	*****	*****	*****	***	*****	
Street Name:			Reyes	Adobe				101	L On &	Off Ra	mps		
Approach:	-					ound East Bound				West Bound			
Movement:		_	- R			- R		- T			· T		
											-	•	
Control:	Pi	rotec				tted	Pı	rotect		Pr	otect		
Rights:	^	Incl			Inclu		•	Inclu		0	Inclu		
Min. Green: Lanes:	0 (_	_	1 (_	0 0	-	0	1 0	0 0	_	0 0	
Lanes.						I							
Volume Module		•		1 1			,					[
Base Vol:	0	335	218	164	565	. 0	306	3	759	0	Ó	0	
Growth Adi:	_	1.00	1.00		1.00	1.00		1.00	1.00	1.00	-	1.00	
Initial Bse:	0	335	218	164	565	0	306	3	759	0	0	0	
Added Vol:	0	1	0	0	0	0	23	ō	0	Ō	ō	ō	
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	0	336	218	164	565	0	329	3	759	0.	0	0	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	336	218	164	565	0	329	3	759	0	0	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	0	336	218	164	565	0	329	3	759	0	0	0	
PCE Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
MLF Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
FinalVolume:	. 0	336	218	164	565	0.	329	3	759	. 0	0	0	
Saturation Fl	'												
Saturation ri		1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Lanes:		1.00	1.00		1.00	0.00		0.01	0.99			0.00	
Final Sat.:		1600	1600		1600	0.00	1600	6	1594	0.00	0.00	0.00	
	-									!			
Capacity Anal	Lysis	Modu	le:		•		•			, ,		ı	
	0.00			0.10	0.35	0.00	0.21	0.48	0.48	0.00	0.00	0.00	
Crit Moves:	****				****	_	_	****	_				
******	****	*****	*****	*****	****	*****	*****	****	*****	*****	****	*****	

_____ Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative AM ______ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ******************* Intersection #5 Reyes Adobe / 101 SB ****************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 146 Level Of Service: xxxxxx ************** Street Name: Reyes Adobe 101 On & Off Ramps Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R _____|__|__| Protected Protected Split Phase Split Phase Include Include Include 0 0 0 0 0 0 0 0 0 Control: Rights: Min. Green: Lanes: 0 0 2 0 1 2 0 2 0 0 1 0 0 1 0 0 0 0 0 ----| Volume Module: 0 306 3 Base Vol: 0 335 218 164 565 759 0 0 306 3 Initial Bse: 0 335 218 164 565 759 0 0 15 Added Vol: 0 50 19 138 Ο 26 0 268 0 0 0 0 0 0 0 385 0 0 0 332 0 0 0 0 0 0 PasserByVol: 0 183 703 3 1027 233 Initial Fut: MLF Adj: FinalVolume: 0 385 233 183 703 0 332 3 1027 0 0 _____ Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.00 0.12 0.15 0.06 0.22 0.00 0.21 0.64 0.64 0.00 0.00 0.00

Crit Moves: ****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project AM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ******************************* Intersection #5 Reyes Adobe / 101 SB Cycle (sec): 100 Critical Vol./Cap.(X):
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 147 Level Of Service: Critical Vol./Cap.(X): XXXXXX ****************************** Street Name: Reyes Adobe 101 On & Off Ramps
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 Lanes: 0 0 2 0 1 2 0 2 0 0 1 0 0 1 0 0 0 0 0 Volume Module: 0 335 218 164 565 Base Vol: 0 306 3 759 0 218 164 565
218 164 565
218 15 19 139
PasserByVol: 0 0 0 0 0
Initial Fut: 0 386
User Additional Fut: 0 386 0 306 3 759 0 0 37 268 0 0 0 0 0 0 0 0 0 343 3 1027 0 0 0 0 0 - 0 PHF Volume: 0 386 233 183 704 0 343 3 1027 0 0 0 FinalVolume: 0 386 233 183 704 0 343 3 1027 0 0 _____| Saturation Flow Module: Lanes: 0.00 2.00 1.00 2.00 2.00 0.00 1.00 0.01 0.99 0.00 0.00 0.00 Final Sat.: 0 3200 1600 3200 3200 0 1600 5 1595 0 0 Capacity Analysis Module: Vol/Sat: 0.00 0.12 0.15 0.06 0.22 0.00 0.21 0.64 0.64 0.00 0.00 0.00

Crit Moves: ****

APPENDIX B

LOS CALCULATIONS FOR AFTERNOON PEAK HOUR

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Volume

-----Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) ******************* Intersection #1 Reyes Adobe / Canwood *********************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 66 XXXXXX ***************************** Street Name: Reyes Adobe Canwood Approach: North Bound South Bound East Bound Movement: L-T-R L-T-REast Bound West Bound L - T - R Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 Lanes: 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0 _____|___|____|____| Volume Module: Base Vol: 211 566 103 41 379 60 72 30 225 113 30 Initial Bse: 211 566 103 41 379 60 72 30 113 30 225 PHF Volume: 211 566 41 379 72 30 60 103 225 113 30 0 0 0 0 0 Reduct Vol: 0 0 0 0 0 0 41 379 60 Reduced Vol: 211 566 72 30 225 30 103 113 39 MLF Adi: FinalVolume: 211 566 103 41 379 60 72 30 225 113 30 39 _____| | ____| | ____| | ____| | ____| | ____| | ____| | ____| | ____| | ____| | ____| | ___| | ___| Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.13 0.42 0.42 0.03 0.14 0.14 0.06 0.06 0.14 0.11 0.11 0.11 Crit Moves: **** **** ****

Sumbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Future Volume Alternative = Existing + Project PM

```
Level Of Service Computation Report
   ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
************************
Intersection #1 Reyes Adobe / Canwood
******************************
Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 75 Level Of Service:
                                  ת
*****************************
Street Name: Reyes Adobe Canwood
                       East Bound West Bound
Approach: North Bound South Bound East Bound Movement: L - T - R L - T - R
                                L - T - R
_____
       Protected Protected Split Phase Include Include Include
Control:
                              Split Phase
       Include Include Include 0 0 0 0 0 0 0 0 0
                                Include
0 0
Min. Green:
Lanes: 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1! 0 0
~~~~~~| -----| | ------| | ------| | ------|
Volume Module:
Base Vol: 211 566 103
              41. 379
                    60
                       72 30 225
                               113 30
Initial Bse: 211 566
           103
              41 379
                    60 72 30
                             225
                               113 30
               2 0
0 0
43 379
                    0
                        0
Added Vol:
         0
0
            12
                          0
      0
                             0
                                34
                                  1
                                      - 6
PasserByVol:
       0
            0
                     0
                        0
                           0
                              0
                                0
                                   0
                                      Ω
                    60
Initial Fut: 211 566
            115
                        72
                           30
                             225
                                147
                                  31
                                      45
      User Adj:
      PHF Adj:
PHF Volume: 211 566 115
              43 379
                    60
                       72 30
                            225
                                147 31
                                     45
Reduct Vol:
       0 0
            0
               0 0
                     0
                        0
                          0
                             0
                                0
                                   0
                                      0
                    60 72 30 225
Reduced Vol: 211 566 115 43 379
                               147 31
                                      45
MLF Adj:
FinalVolume: 211 566 115 43 379 60 72 30 225 147 31 45
Saturation Flow Module:
Capacity Analysis Module:
Vol/Sat: 0.13 0.43 0.43 0.03 0.14 0.14 0.06 0.06 0.14 0.14 0.14 0.14
```

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative PM

Future Volume Alternative = Existing + Cumulative PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************************ Intersection #1 Reyes Adobe / Canwood ***************************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 39 Level Of Service: XXXXXX Level Of Service: ******************* Street Name: Reyes Adobe Canwood Approach: North Bound South Bound East Bound Movement: L-T-R L-T-REast Bound West Bound L - T - R -----| Control: Protected Protected Include Split Phase Split Phase Rights: Include Include Include 0 0 0 0 0 0 0 0 0 Min. Green: 0 0 Lanes: 2 0 1 1 0 1 0 1 1 0 0 1 0 0 1 0 0 1 0 -----| Volume Module: Base Vol: 211 566 103 41 379 60 72 30 225 113 30 60 72 30 225 113 30 Initial Bse: 211 566 103 41 379 3 2 0 0 0 Added Vol: 0 80 47 0 0 16 2 6 0 0 0 0 0 0 0 PasserByVol: 0 0 Ω Initial Fut: 211 646 72 30 106 43 426 225 129 60 32 45 User Adj: PHF Adj: 1.00 1.00 1.00 1.00 PHF Volume: 211 646 106 43 426 60 72 30 225 129 32 45 0 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 211 646 106 43 426 60 72 30 225 129 32 4.5 FinalVolume: 211 646 106 43 426 60 72 30 225 129 32 45 _____ Saturation Flow Module: _____| Capacity Analysis Module: Vol/Sat: 0.07 0.24 0.23 0.03 0.15 0.15 0.06 0.06 0.14 0.08 0.05 0.05 Crit Moves: ****

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************************ Intersection #1 Reyes Adobe / Canwood **************************** Cycle (sec): 100 Critical Vol./Cap.(X): 0.598 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 40 Level Of Service: XXXXXX Street Name: Reyes Adobe Canwood Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R Control: Protected Protected Split Phase Rights: Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 Split Phase Include 0 0 Lanes: 2 0 1 1 0 1 0 1 1 0 0 1 0 0 1 1 0 0 1 0 ---|------||-------||-------| Volume Module: 41 379 60 Base Vol: 211 566 103 72 30 225 113 30 Initial Bse: 211 566 103 60 41 379 72 30 225 113 30 39 0 1 0 80 10 4 0 47 0 0 2 Added Vol: 34 11 0 0 PasserByVol: 0 0 0 0. 0 0 0 0 0 Initial Fut: 211 646 113 60 45 426 72 31 225 147 32 50 PHF Adj: PHF Volume: 211 646 113 45 426 60 72 31 225 147 32 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 Ω Reduced Vol: 211 646 113 45 426 60 72 31 225 147 32 50 MLF Adj: FinalVolume: 211 646 113 45 426 60 72 31 225 147 32 50 Saturation Flow Module: _____ Capacity Analysis Module: Vol/Sat: 0.07 0.24 0.24 0.03 0.15 0.15 0.06 0.06 0.14 0.09 0.05 0.05 Crit Moves: **** *** *****************

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing PM Volume

______ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) ******************************* Intersection #3 Reyes Adobe / 101 NB Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 72 Level Of Service: ********************************* 101 NB On & Off Ramps
Bound East Bound West Bound
- P T - T - R L - T - F Street Name: Reyes Adobe Approach: North Bound South Bound East Bound Movement: L-T-R L-T-RL - T - R Protected Protected Split Phase Split Phase Include Include O 0 0 0 0 0 0 0 0 Control: Rights: 0 0 Min. Green: Lanes: 1 0 1 0 0 0 0 1 0 1 0 0 0 0 0 1 0 0 1 Volume Module: Base Vol: 391 514 0 0 328 387 0 0 0 0 328 387 0 0 0 93 1 375 Initial Bse: 391 514 0 0 0 0 328 0 0 0 0 0 0 0 0 0 PHF Volume: 391 514 387 93 1 375 0 0 0 0 0 0 328 387 Reduct Vol: 0 Reduced Vol: 391 514 93 FinalVolume: 391 514 0 0 328 387 0 0 0 93 1 375 _____ Saturation Flow Module: Final Sat.: 1600 1600 0 0 1600 1600 0 0 1583 17 1600 -----| Capacity Analysis Module: Vol/Sat: 0.24 0.32 0.00 0.00 0.21 0.24 0.00 0.00 0.00 0.06 0.06 0.23 Crit Moves: **** ****

transfer to the contract of a recommendation of the contract o

Sunbelt 05-CUP-006 Agoura Traffic Impact Study
Base Volume Alternative = Existing PM
Future Volume Alternative = Existing + Project PM

		 1	 Level 0	 f Serv	rice (tion I					
Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ***********************************												
Intersection #3 Reyes Adobe / 101 NB ************************************												
Cycle (sec): 100								341 xxx D				
Street Name:	Street Name: Reyes Adobe 101 NB On & Off Ramps								*****			
Approach: Movement:			ound - R			ound - R			ound - R		est Bo - T	
				l								
Control: Rights:	Control:ProtectedProtectedSplit PhaseSplit PhaseRights:IncludeIncludeIncludeMin. Green:000000									iase		
Min. Green:		0	0	0	0	0	0	0	0	0	0	0
Lanes:			0 0			0 1	-		0 0		. 0	-
Volume Module:												
Base Vol:	391	514	0	0	328	387	0	0	0	93	1	375
Growth Adj:	1.00		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Initial Bse:		514	0	0	328	387	0	0	0	93	1	375
Added Vol:	0	12	0	0	2	32	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:		526	0	0	330	419	0	. 0	0	93	1	375
User Adj:	1.00		1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00		1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	391	526	0	0	33,0	419	0	0	0	93	1	375
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:		526	0	1 00	330	419	0	0	0	93	1	375
PCE Adj: MLF Adj:	1.00		1.00	1.00		1.00		1.00		1.00		1.00
FinalVolume:	391	526	0.00	1.00		1.00 419	1.00	1.00	1.00	1.00 93	1.00	1.00
					220	417	1			I	T	375
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.99	0.01	1.00
Final Sat.:		1600	0	. 0		1600	. 0	0	0	1583	17	1600
Capacity Analysis Module:												
Vol/Sat:				0.00	0.21	0.26	0.00	0.00	0.00	0.06	0.06	0.23
Crit Moves:	****					****						****
*****	****	****	****	****	****	****	****	****	****	*****	****	*****

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative PM

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project PM Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) *********************************** Intersection #3 Reyes Adobe / 101 NB ****************************** Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 71 Level Of Service: XXXXXX 101 NB On & Off Ramps
ad East Bound West Bound

R T - T - R L - T - R Street Name: Reyes Adobe Approach: North Bound South Bound East Bound Movement: L - T - R L - T - R L - T - R _____ Protected Protected Split Phase
Include Include Include
0 0 0 0 0 0 0 0 0 Split Phase Include Min. Green: 0 0 0 Lanes: 2 0 2 0 0 0 0 1 1 0 0 0 0 0 0 1 0 0 1 Volume Module: Base Vol: 391 514 Q. 0 328 387 0 0 0 93 0 0 328 Initial Bse: 391 514 387 93 1 0 0 0 0 43 0 0 0 371 Added Vol: 251 60 0
PasserByVol: 0 0 0
Initial Fut: 642 574 0 39 0 0 0 21 0 29 ő ő 0 0 0 0 0 0 426 0 0 0 114 1 404 PHF Adj: PHF Volume: 642 574 0 0 371 426 0 0 0 114 1 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 Reduced Vol: 642 574 0 0 371 426 0 0 0 0 0 0 0 0 114 1 404 MLF Adj: FinalVolume: 642 574 0 0 371 426 0 0 0 114 1 404 _____ Saturation Flow Module: _____ Capacity Analysis Module: Vol/Sat: 0.20 0.18 0.00 0.00 0.23 0.27 0.00 0.00 0.00 0.07 0.07 0.25 Crit Moves: ****

Sunbelt 05-CUP-006 Agoura Traffic Impact Study

Base Volume Alternative = Existing PM Volume Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) ************************* Intersection #5 Reyes Adobe / 101 SB ************** Cycle (sec): 100 Critical Vol./Cap.(X): 0.668 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 71 Level Of Service: xxxxxx *********************** dobe 101 On & Off Ramps
South Bound East Bound West Bound
L-T-R L-T-R Street Name: Reyes Adobe Approach: North Bound South Bound Movement: L - T - R L - T - R _____| Control: Protected Permitted Protected Rights: Include Include Min. Green: 0 0 0 0 0 0 0 0 0 Protected Include 0 0 Lanes: 0 0 1 0 1 1 0 1 0 0 1 0 0 0 0 0 0 Volume Module: Base Vol: 0 601 310 175 240 0 308 1 161 0 Ω Initial Bse: 0 601 310 175 240 0 308 1 161 0 0 PHF Volume: 0 601 Reduct Vol: 0 0 Reduced Vol: 0 601 175 240 0 308 1 0 0 0 0 0 0 175 240 0 308 1 310 161 0 0 0 0 0 0 0 0 0 0 310 161 FinalVolume: 0 601 310 175 240 0 308 1 161 _____ Saturation Flow Module: Final Sat.: 0 1600 1600 1600 1600 0 1600 10 1590 0 0 _____| Capacity Analysis Module: Vol/Sat: 0.00 0.38 0.19 0.11 0.15 0.00 0.19 0.10 0.10 0.00 0.00 Crit Moves: **** Crit Moves:

Sunbelt 05-CUP-006 Agoura Traffic Impact Study Base Volume Alternative = Existing PM Future Volume Alternative = Existing + Project PM

							 -						
			Level C	of Ser	vice (Computa	ation 1	Report	t				
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)													

Intersection #5 Reyes Adobe / 101 SB ***********************************									*				
Cycle (sec): 100						Critical Vol./Cap.(X): 0.676							
Loss Time (se	ec):		10 (Y+F	₹=4.0	sec)	Averag	je Dela	ay (se	: xxxxxx				
Optimal Cycle: 73 Level Of Service: B													
*******************									*				
Street Name:			Reyes						l On &	Off Ra	mps		
Approach:		rth B				ound				We	st Bo	ound	
Movement:			- R			- R		- Т				- R	
Control:		roteci			Permi			 rotect	-	•	otect		į
Rights:		Incl			Incl		.	Inclu			Incl		
Min. Green:	0	0	0	0		0	0	0	0	0		0	
Lanes:	0 (0 1	0 1	1 (1	0 0	=	_	1 0	-	-	-	
													ı
Volume Module	∋:												
Base Vol:	0	601	310	175	240	0	308	1	161	0	0	0	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	0	601	310	175	240	0	308	1	161	0	0	0	
Added Vol:	0	1	0	0	2	0	12	0	0	0	0	0	
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	0	602	310	175	242	0	320	1	161	0	0	0	
User Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
PHF Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
PHF Volume:	0	602	310	175	242	0	320	1	161	0	0	0.	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	1 00	602	310	175	242	0	320	1	161	0	0	0	
PCE Adj:		1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	
MLF Adj: FinalVolume:	1.00	1.00	1.00 310	175	1.00	1.00		1.00	1.00	1.00		1.00	
	-					0	320	1	161 	. 0	0	0	
Saturation Fl				1									l
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lanes:	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.01	0.99	0.00	0.00	0.00	
	_	1600	1600	1600	1600	0	1600	10	1590	0	0	0	
Capacity Analysis Module:													
Vol/Sat:	0.00		0.19	0.11	0.15	0.00	0.20	0.10	0.10	0.00	0 00	0.00	
Crit Moves:		****					****	5.10	0.10	0.00	5400	0.00	

Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative PM

Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) ************************** Intersection #5 Reyes Adobe / 101 SB Cycle (sec): 100 Critical Vol./Cap.(X): Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh):
Optimal Cycle: 44 Level Of Service: XXXXXX Street Name: Reyes Adobe 101 On & Off Ramps Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - F L - T - R -----| Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 Lanes: 0 0 2 0 1 2 0 2 0 0 1 0 0 1 0 0 0 0 0 -----|----|-----||-------| Volume Module: Initial Bse: 0 601 310
Added Vol: 0 294 94
PasserByVol: 0 0 0
Initial Fut: 0 895 404 175 240 0 0 308 1 161 11 22 40 0 0 55 0 0 0 0 0 0 0 0 319 1 0 0 0 0 0 197 280 216 PHF Volume: 0 895 404 197 280 0 319 1 216 0 0 FinalVolume: 0 895 404 197 280 0 319 1 216 0 0 Saturation Flow Module: Capacity Analysis Module: Vol/Sat: 0.00 0.28 0.25 0.06 0.09 0.00 0.20 0.14 0.14 0.00 0.00 0.00 **** **** **** Crit Moves:

-Sunbelt 05-CUP-006 Traffic Impact Study Future Volume Alternative = Existing + Cumulative + Project PM ______ Level Of Service Computation Report ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative) Intersection #5 Reves Adobe / 101 SB Cycle (sec): 100 Critical Vol./Cap.(X): 0.645 Loss Time (sec): 10 (Y+R=4.0 sec) Average Delay (sec/veh): Optimal Cycle: 44 Level Of Service: XXXXXX ***************************** Street Name: Reyes Adobe 101 On & Off Ramps Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R _____| ____| ____| ____| ____| ____| ____| ____| ____| ____| Control: Protected Protected Split Phase Split Phase Rights: Include Include Include Include Min. Green: 0 0 0 0 0 0 0 0 0 0 Lanes: 0 0 2 0 1 2 0 2 0 0 1 0 0 1 0 0 0 0 0 ---|------||------| Volume Module: 0 601 Base Vol: 310 175 240 0 308 1 161 0 0 Initial Bse: 0 601 Added Vol: 0 295 310 175 240 308 1 0 161 0 0 0 94 22 0 0 0 0 0 0 0 17 55 42 0 - O 0 PasserByVol: 0 0 0 0 0 0 Initial Fut: 0 896 404 197 282 0 0 0 0 0 325 1 216 0 216 0 PHF Volume: 0 896 404 197 282 0 325 1 216 0 0 _____| Saturation Flow Module: Sat/Lane: 1600 Capacity Analysis Module: Vol/Sat: 0.00 0.28 0.25 0.06 0.09 0.00 0.20 0.14 0.14 0.00 0.00 0.00 Crit Moves: **** **** ***

Appendix 7 Noise

Construction Voise Altennation

TO DETERMINE NOISE CONTOURS FOR A GIVEN NOISE LEVEL

ATTENUATION RATE:

6 dBA/DOUBLING OF DISTANCE

hoice: 3, 4.5, or 6)

89 dBA

NOISE LEVEL: REFERENCE DISTANCE:

50 FEET

NOISE CONTOUR		DISTANCE FROM SOURCE	SPECIFIC DISTANCE	NOISE LEVEL
	75	251	20	97.0
	70	446	100	83.0
	65	792	150	79.5
	60	1409	5,000	49.0
	55	2506	7,000	46.1
	50	4456	10,000	43.0

U.S. 101 at Sunbelt Site First Building

DATA	Date:	09/19/08	
Enter ADT:	172000		
Enter vehicle speed:	65		
Enter % of Medium trucks:	2.3		
Enter % of Heavy trucks:	2.3		
Enter % of Evening Traffic -			
(default=18%) Autos:	17		
Medium Trucks:	0.5		
Heavy Trucks:	0.5		
Enter % of Nighttime Traffic -			
(default=15%) Autos:	14		
Medium Trucks:	0.5		
Heavy Trucks:	0.5		
For sustained grades only (> 1	mile),		
enter % road gradient:	0		
Enter distance from site to			
centerline of road, feet:	270		
ESULTS WITHOUT BARRIER EFFECT	S		
Noise Level at site -		Hard Sites	William of the control
Ldn, dBA:	73.4	77.1	ing the second s
CNEL, dBA:		77.6	
For Ground-Level Observers	73.5	, , . 0	
Distance To Contour From	Ldn	CNEL	
Centerline, feet (4.5 dB/2x) -		CITLL	
75 dBA:		228	
70 dBA:		491	
65 dBA:		1058	
60 dBA:		2280	
55 dBA:		4911	
50 dBA:		10581	
30 az::.		_	

4001K6 Noise LEVELS
101 (76.7) - Camwood (71.2) = 5.5
1. Add 1.0 to 76.7 = 77.7 dispensed a front of Elosest blus.

Canwood Street at Sunbelt Site First Building

DATA	Date:	09/19/08		
Enter ADT:	53000			
Enter vehicle speed:	45			
Enter % of Medium trucks:	2.3			
Enter % of Heavy trucks:	2.3			
Enter % of Evening Traffic -				
(default=18%) Autos:	17			
Medium Trucks:	0.5			
Heavy Trucks:	0.5			
Enter % of Nighttime Traffic -				
(default=15%) Autos:	14			
Medium Trucks:	0.5			
Heavy Trucks:	0.5			
For sustained grades only (> 1 r	mile),			
enter % road gradient:	0			
Enter distance from site to				
centerline of road, feet:	145			
ESULTS WITHOUT BARRIER EFFECTS				
Noise Level at site -		Hard Sites		
Ldn, dBA:	68.4	70.7		
CNEL, dBA:	68.8	71.2		
For Ground-Level Observers				
Distance To Contour From	Ldn	CNEL		
Centerline, feet (4.5 dB/2x) -				
75 dBA:	53	56		
70 dBA:	114	121		
65 dBA:	246	262		
60 dBA:	529	564		
55 dBA:	1140	1215		

50 dBA: 2457 2618

Combining Sound Levels in Decibels - Worksheet A

The noise environment at a site is determined by combining the contributions of different noise sources. In these Guidelines, Workcharts are provided to estimate the contribution of aircraft, automobile, truck, and train noise to the total day-night average sound level (DNL) at a site. The DNL contributions from each source are expressed in decibels and entered on Worksheet A. The combined DNL from all the sources is the DNL for the site and is the value used to determine the acceptability of the noise environment.

Sound levels in decibels ARE NOT COMBINED BY SIMPLE ADDITION! The following table shows how to combine sound levels:

Table 1

Difference in Sound Level	Add to Larger Level
0	3.0
ĭ	2.5
2	2.1
2	1.8
5	
4	1.5
5	1.2
3 4 5 6	1.0
7	0.8
8	0.6
9	0.5
10	0.4
12	0.3
	_
14	0.2
16	0.1
greater	
than 16	0

Use the table by first finding the numerical difference in sound level between two levels being combined. Entering the table with this value, find the value to be added to the larger of the two levels, add this value to the larger level to determine the total. Where more than

two levels are to be combined use the same procedure to combine any two levels, then use this subtotal and combine it with any other level, and so on. Fractional numerical values may be interpolated from the table; however, the final result should be rounded to the nearest whole number.

Example 1: In performing a site evaluation, the separate DNL values for airports, road traffic, and railroads have been listed on Worksheet A as 56, 63, and 61 decibels. In order to complete the final evaluation of the site, these separate DNL values must be combined. The difference between 63 and 56 is 7; from the table you find that 0.8 should be added to 63, for a subtotal of 63.8. The difference between 63.8 and 61 is 2.8; from the table you interpolate that approximately 1.9 should be added to 63.8 for a total of 65.7 or 66 dB when rounded to whole numbers. This example shows how noise from different sources may be Acceptable, individually, at a site, but when combined, the total noise environment may exceed the Acceptable DNL limit of 65 decibels.