Appendix A

Notice of Preparation and Scoping Comments Recieved

Notice of Preparation

Date: October 4, 2019

To: Office of Planning and Research, Responsible and Trustee Agencies, and Interested Parties

From: City of Fremont, Planning Division

Subject: Notice of Preparation of an Environmental Impact Report for the Morrison Canyon Road Traffic Safety Project (PWC8981)

The City of Fremont (City) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the City-sponsored project described below. We request comments from the public and public agencies regarding the scope and content of the EIR.

Pursuant to Section 15060(d) of the California Environmental Quality Act (CEQA) Guidelines, the City's preliminary review of the proposed project indicates that an EIR will be required for the project and accordingly, the City is moving directly to preparation of an EIR, omitting preparation of an Initial Study.

Project Title: Morrison Canyon Road Traffic Safety Project

Project Applicant: City of Fremont, Public Works Department

Project Location: As shown in the Project Area Map, (**Attachment 1**), the proposed project would include the approximately 0.8-mile portion of Morrison Canyon Road in the City of Fremont (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23), located immediately east of the intersection of Morrison Canyon Road and Ridge Terrace ("Proposed Western/Bottom Closure") to a location immediately west of the intersection of Morrison Canyon Road and Vargas Road ("Proposed Eastern/Top Closure").

Existing Conditions: Morrison Canyon Road (the Road) is a one-lane, bi-directional road that connects Mission Boulevard to Vargas Road. The Road primarily provides access to the rural hillside properties in the Morrison Canyon and Vargas Road areas. The roadway has been historically a dirt/gravel trail that has received a chip seal maintenance treatment over the years, as necessary. In the project area, the Road is a winding, approximately nine-foot wide road at its narrowest point. The Road cuts through steep slopes that have often resulted in closures due to erosion and landslides.

Bi-directional automobile traffic has recently increased along the Road and associated routes, as weekday commuters have sought to avoid traffic along Interstate 680 and/or Mission Boulevard. Given the narrow, winding nature of the Road, this increase in automobile trips has contributed to a considerable increase in two-way vehicle conflicts, especially because many sections lack width for two cars to pass by each other, often requiring one vehicle to reverse to make space. The increased automobile traffic also presents additional safety concerns for pedestrians and bicyclists, who frequent the Road to access Vargas Plateau Regional Park, which is accessible from a location east of Vargas Road.

On October 16, 2018, the City of Fremont approved a temporary closure of the Road, which became effective November 17, 2018. The temporary closure includes signage and barricades indicating the roadway access restrictions, and allows continued access for emergency response vehicles, emergency access for local residents within the rural hill area, and non-vehicular uses (pedestrian and bicycle). This temporary closure, which is currently active, is achieved through the use of flexible plastic barricades that are mountable by most automobiles and navigable for pedestrians and bicyclists.

The City has preliminarily identified the following objectives for the temporary closure:

1) Eliminate the use of Morrison Canyon Road and Vargas Road as a commuter traffic route.

2) Retain Morrison Canyon Road as route for emergency vehicle access to serve the hillside community. It is noted that the "lower" portion of Morrison Canyon Road needs to be retained to serve properties with driveway access at Ridge Terrace.
3) Substantially eliminate the occurrence of two-way traffic on Morrison Canyon Road.

Project Description: The City is proposing to permanently close to private automobile use the above noted 0.8 miles of Morrison Canyon Road, from the Proposed Western/Bottom Closure to the Proposed Eastern/Top Closure (in other words, from the intersection of the Road and Ridge Terrace to where the Road intersects Vargas Road.

The proposed project would permanently enact the temporary closure conditions described above, which are active as of October 16, 2018. However, the proposed project will be analyzed against an assumed baseline of roadway conditions prior to the October 16, 2018 temporary closure.

The closure would be implemented through a series of flexible delineators or bollards, the same or similar to the barriers currently utilized. One or more additional advanced warning signs and flashing beacons would be added along the Road. Since the barriers are mountable, emergency movement/access would not be hindered. In addition, the Road would remain open to pedestrian and bicycle uses because the barriers would be passable by pedestrians and bicyclists.

All improvements are anticipated to occur within the existing public right-of-way.

Potential Environmental Effects: The Draft EIR will address all of the following topic areas from Appendix G of the CEQA Guidelines.

Aesthetics	Agriculture and Forestry Resources	Air Quality
Biological Resources	Cultural Resources	Energy
Geology and Soils	Greenhouse Gas Emissions	Hazards and Hazardous Materials
Hydrology and Water Quality	Land Use and Planning	Mineral Resources
Noise	Population and Housing	Public Services
Recreation	Transportation	Tribal Cultural Resources
Utilities and Service Systems	Wildfire	Mandatory Findings of Significance

As required by CEQA, the EIR will also include identification and consideration of alternatives to the proposed project, including a No Action/No Project Alternative.

Due to time limits mandated by CEQA, all comments and responses must be submitted and postmarked no later than thirty (30) days following issuance of this Notice of Preparation. Please send all comments and responses in writing by email or letter to the following address:

City of Fremont, Planning Division
Attn: Bill Roth, Senior Planner
39550 Liberty Street, P.O. Box 5006
Fremont, CA 94537
Email: broth@fremont.gov

If you have any questions regarding the Morrison Canyon Traffic Safety Project, or about the information provided in this NOP, please contact Bill Roth via the email address listed above, or at (510) 494-4450.

Signature (Lead Agency): 

Attachments:

Attachment 1: Project Area Map

Attachment A: Project Area Map

ICF

Written Comments Received for the
Morrison Canyon Road Traffic Safety Project (PWC8981)
Notice of Preparation

Comment #1

From: Kathy Heinze
Sent: Wednesday, October 09, 2019 9:07 AM
To: Bill Roth
Subject: Morrison Canyon Drive Closure

Dear Bill,

I'm very happy to hear the road will be permanently closed. The road is too narrow, it will cut down on the commuter cut through traffic, and will prevent people illegally dump trash in the canyon.

This is the only road improvement underway I totally support. The lane diets and other methods are doing nothing to address the commuter cut through traffic and not addressing the increase population growth by all the multi units being built which will not address low income housing needs.

I would like to see Fremont be more creative and address the cut through traffic. Reducing the width of lanes do not help the aging population who live here. They struggle with the wide turns and are becoming a hazard and more crashes will happen.

Thank you! Close Morrison Canyon Dr is greatly appreciated!

Kathy

Comment #2

From: jose
Sent: Monday, October 14, 2019 11:17 AM
To: Bill Roth
Subject: PWC8981 - Closure of Morrison Canyon Road

I fully support the closure of Morrison Canyon Road as described in the "Notice of Preparation" that I just got in the mail.

Furthermore, I suggest to allow and promote the cyclist traffic in the same road to alleviate such traffic on Niles Canyon. Cyclist traffic in Niles Canyon is very dangerous and a sure recipe for accidents that can be prevented with this simple action.

With my consideration,

Jose Alvarellos

Comment #3
From: Craig Wood
Sent: Monday, October 14, 2019 3:59 PM
To: Bill Roth
Subject: Input for EIR, Morrison Canyon Traffic Safety Project

City of Fremont, Planning Division
Attn: Bill Roth, Senior Planner
39550 Liberty Street, PO Box 5006
Fremont, CA 94537

Thank you for this opportunity to provide input for the Environmental Impact Report for the Morrison Canyon Road Traffic Safety Project (PWC8981).

I have lived at 551 Maar Place for the past fourteen years. My backyard looks directly up Morrison Canyon and I can see and hear traffic headed up the road. I also walk up the canyon frequently, so I have first-hand knowledge of traffic on Morrison Canyon Road (MCR).

Hazards and Hazardous Materials, Noise:

The MCR speed surveys prior to October 16, 2018 significantly underestimated traffic speed at the base of the hill. Many of the late afternoon cut-through drivers would loudly accelerate to high speeds at the bottom of the hill, often screeching tires as they hit the curves farther up the hill. Auto near-misses with pedestrians and cyclists were frequent but probably not usually reported to police.

Through-traffic on MCR is now a small fraction of the October 2018 volumes, and the speed of the now offending vehicles seems much slower. The lower speeds and volumes of traffic significantly decrease the chances of a tragic solo accident or collisions between autos and pedestrians or cyclists. Traffic noise of sharp acceleration at the bottom of the hill is now almost non-existent.

The temporary barriers on MCR at Ridge Terrace and at Vargas Road are an impediment to traffic, but an even more robust solution might curb further offenders.

The signs currently in place at the bottom of the hill advising that the road is “closed ahead” are unclear to some drivers about exactly where the last turnaround opportunity really is, and these drivers continue up the hill and then try to turn around. Turning around on MCR at Ridge Terrace is dangerous and almost impossible. The signage at the bottom of the hill implies but does not explicitly state that the last turnaround opportunity is HERE, at the bottom of the hill. Some type of painted round-a-bout where turnaround is desired, along with different signage might keep more drivers from ascending up the hill.

Wildfire:

Morrison Canyon naturally contains one of the highest concentrations of flammable, dry brush anywhere east of the city of Fremont. Closing MCR to through-traffic significantly reduces traffic volume and therefore wildfire dangers for populated areas, particularly when we have the Diablo (east) winds.

Hydrology and Water Quality:

Illegal dumping continued along lower Morrison Canyon (below Ridge Terrace) after October, 2018, but at a slightly lower frequency. Illegal dumping along mid- MCR between Ridge Terrace and Vargas Road is significantly reduced since October, 2018. The illegal dumping frequently appears to be construction materials (e.g. containers of paint, caulking), sometimes in liquid form, and these materials soak into the soil and sometimes reach the bottom of the canyon where there is running water. This pollution could taint wells at the bottom of the hill, or flow directly into the SF Bay. Hopefully permanent closure of MCR will reduce this illegal dumping even more.

Transportation

There has been major construction at the very end of MCR over the past few months. This construction has brought significantly increased volumes of large trucks and heavy equipment onto Vargas Road. I'm not certain what is being constructed, but permanent closure of Morrison Canyon Road will ensure that any future construction or commercial traffic will stay away from the dangerous conditions on lower and mid-Morrison Canyon Road.

Craig Wood
551 Maar Place, Fremont, CA

Comment #4

From: Rod Schurman
Sent: Friday, October 18, 2019 11:06 AM
To: Bill Roth
Subject: Morrison Canyon Traffic Safety Project, PWC 8981, EIR

Hi Bill,

We received the Notice of Preparation and request for comments on the subject EIR. The subject area is outside of USD's Service Area and Sphere of Influence, and USD has no facilities that will be impacted by the road closure. As such, USD has no issues with the project.

Regards,

Rod Schurman, P.E.
Technical Services Engineer
Customer Service
Direct (510) 477-7617
Fax to email (510) 477-7317
Union Sanitary District
5072 Benson Rd., Union City, CA 94587-2508
(510) 477-7500 www.unionsanitary.ca.gov

Comment #5

VARGAS RANCH
41256 VARGAS RD.
FREMONT CA. 94539

FM: Pamela Lopez, Abel Vargas, John Vargas, Michele Whitfield
TO: Bill Roth, Senior Planner, City of Fremont

Subj: Response to EIR report for Morrison Canyon Road Traffic Safety Project (PWC8981)

Greetings Mr. Roth. The purpose of this letter is to provide the City with the Vargas family's feedback concerning the planned closure of Morrison Canyon Road. Our family continues to completely oppose the decision to permanently close Morrison Canyon Rd. to Vargas Rd. & Morrison Canyon Rd. residents, as this access is essential for the health and safety of those of us who live in this area. This is the resident's most direct route to public safety facilities such as police, fire and hospitals.

Our first preference would be for the City to allow for local access from Morrison Canyon to Vargas Rd for residents of those roads, irrespective of how this is implemented. However, should the proposal for permanent closure be implemented, it is imperative that residents of Vargas and Morrison Canyon roads be allowed to use these roads in times of emergencies such as Vargas Road being closed due to inclement weather or falling trees. This must also extend to personal emergencies such as getting to a local hospital in a more expedient manner. This is in addition to providing access to emergency response vehicles.

Finally, if residents of the two roads are allowed to use the road in emergency situations, this information needs to be communicated to the general public to avoid any misunderstanding.
We appreciate this opportunity to provide comments on this project.

Sincerely,
Pamela Lopez, Abel Vargas, John Vargas, Michele Whitfield

Comment #6

From: Jay Underwood
Sent: Monday, October 21, 2019 11:04 AM
To: Bill Roth; Hans Larsen; Noe Veloso
Subject: Morrison Canyon Road NOP

Hi Bill,

I wanted to make sure I commented with my family's support of the Morrison Canyon Road safety project. The road is behind our back fence, and we have seen a huge difference in amount of traffic since the closure, there are now noticeably fewer cars driving up the hill.

As a cyclist, hiker, and father of small child, I greatly appreciate the efforts of the city to make this area safer. Frankly, when the road was still open to traffic, I felt like it was just a matter of time until one of the drivers hit someone on the hill. The altercations between the angry drivers, who were often speeding, and the pedestrians also worried me since those situations seemed quite volatile in nature.

I appreciate the efforts from you and your team, also from Hans and Noe, who I know have worked a lot on this as well. One suggestion would be to post some kind of "penalty" sign or number we can call to report abusers, as I still see folks drive right over the barricades onto the closed section from time to time. I'm not sure that will stop that level of brashness, but at least maybe they will think twice or empower the hikers/bikers to report the abuse.

Thank you for undertaking this, please let us know if there is anything we can do to help.

Best regards,
Jay Underwood
457 Maar Ave, Fremont, CA 94536

Comment #7

From: Assis Hou
Sent: Thursday, October 24, 2019 3:03 PM
To: Bill Roth
Subject: Keep Morrison Canyon Rd Safe

Hi Bill,
Please keep Morrison Canyon Rd closed for cars. I ride my bike at Morrison Canyon Rd after work all the time. Since it was closed to cars I feel way safer to ride my bike and don't need to worry about getting pushed off the cliff by cars. The road is just too narrow for cars. There is literally no room for cars to pass by pedestrians and cyclists. Please keep it closed for cars.

Thanks!

--
Hou

Comment #8

From: Larry Plaza
Sent: Friday, October 25, 2019 11:32 PM
To: Bill Roth
Subject: Morrison Canyon road

I live near Pickering & Canyon heights. I have used Morrison Canyon road both before it was closed and now after. Once while hiking uphill a car came downhill. I stood near the edge of the roadway closest to the ravine/creek.

It was a moderately close fit. The driver kept watching the uphill side of his car as he inched by me but by giving more than adequate clearance for his uphill side he was squeezing the space i had to stand in. Ultimately by the time his side mirror came by i was standing on the little bit of asphalt curb.

Then the curb crumbled and i slid downhill . I held my position but could not get myself back up, the dropoff is too steep. Finally the driver grabbed my hand and with my struggling i got back on the road.

That was to be the last time for me on Morrison Canyon. Until it was blocked to thru traffic. Now i enjoy it again, just up there today!

Please continue to block thru traffic and let the walkers & bicyclists enjoy the peace and nature so near to us.

Thank you,
Larry Plaza

Comment #9

From: Ed & Monika
Sent: Saturday, October 26, 2019 8:11 AM
To: Bill Roth
Subject: Morrison Canyon Road

Dear Mr. Roth,

Morrison Canyon road is dangerous for vehicles and wonderful for hikers. It's such a great place to exercise and get in touch with nature - such a plus for Fremont.

Please keep the road closed to vehicles.

Monika Lee
678 San Carlos Ct.
Fremont

Comment #10

October 24, 2019

City of Fremont, Planning Division
Attn: Bill Roth, Senior Planner
39550 Liberty Street, P.O. Box 5006
Fremont, CA 94537

Via email: broth@fremont.gov

RE: Notice of Preparation of an Environmental Impact Report for the Morrison Canyon Road Traffic Safety Project (PWC8981)

Morrison Canyon Road was temporarily closed nearly one year ago primarily in response to safety concerns due to increased vehicle traffic on this narrow road. The road is extremely narrow in places making it very difficult for two vehicles to pass. The roadway is also used for pedestrians and cyclists to access Vargas Plateau Regional Park. Trying to mix all these users on this narrow roadway is a challenging and potentially dangerous mix.

Closure of Morrison Canyon Road to private vehicles, while allowing it to remain open to pedestrian and bicycle uses is generally a welcome idea. However, road closure to private vehicles restricts residents of Fremont and other nearby cities from access to the Vargas Plateau Regional Preserve parking lot. It is unlikely these residents will travel all the way around via I-680 to access Vargas Plateau.

Park visitation is at all time highs and the population of the City is growing. Vargas Plateau Regional Preserve is a nearby resource. Please ensure the EIR transportation/traffic analysis give serious consideration to park access for residents west of the canyon (e.g. Fremont, Union City, Newark).

Ideally we want to encourage visitation by non-vehicular modes to reduce GHG/VMT, that requires viable options be available. Is there easy, frequent access by public transit? Could the Fremont BART parking lot be used on weekends with bus service to Mission Blvd/Morrison Canyon Road? Will secure bike racks be available for visitors who wish to leave their bikes (or e-bikes) at the base to hike?

If visitors opt to drive personal vehicles to visit Vargas Plateau, where will they park? What could the impacts be to local area residents if visitor levels grow to mirror those at Mission Peak-Stanford staging? If visitation grows how will VMT be impacted?

Again, I'm supportive of the road closure to private vehicles for safety reasons, provided appropriate alternatives can be found to allow access to Vargas Plateau Regional Preserve for residents on the west side of the canyon.

I look forward to the opportunity to comment on the DEIR.

Thank you for your consideration.

Sincerely,

Jannet Benz
Fremont, CA

> **From:** Jannet Benz
> **Sent:** Tuesday, October 29, 2019 1:33 PM
> **To:** Bill Roth
> **Subject:** Re: NOP Morrison Canyon Road Traffic Safety Project (PWC8981)

Hello Mr. Roth,

Thank you for taking the time to call and discuss this project yesterday.

As noted in my attached letter, I hope the scope of the EIR will address access to Vargas Plateau Regional Park for residents west of the Canyon (e.g. Fremont, Newark, Union City,etc.). It is unlikely those visiting by personal vehicle will drive all the way around to get to the parking via I-680.

It would be preferable to explore access via non-vehicular modes, but to get people out of their cars there need to be easy, seamless, convenient options.

The letter mentions considering Fremont BART parking lot w/ bus connection to Mission Blvd/Morrison Canyon Rd.

OR Fremont BART + city "bike share" bike to Morrison Canyon and/or the Vargas Plateau entrance.

OR can the City utilize the RR bridge over Mission Blvd that could provide connectivity from Central Park?

OR would the professional office buildings across the street @ Mission/Walnut allow their parking lots to be used on weekend days for visitor parking?

The suggestions should consider appropriate secure bike racks for traditional bikes and e-bikes at the base of Morrison Canyon Rd and at the parking lot of Vargas Plateau Regional Park.

As part of the scope of this EIR, I hope Fremont can develop a model that encourages non-vehicular access to this Regional Park that can be used for others to avoid the need to construct parking which simply encourages more driving.

https://usa.streetsblog.org/2016/01/13/social-engineering-cities-that-build-more-parking-get-more-traffic/

Sorry for the long message. Hopefully some of these ideas are useful,

Kind Regards,

Jannet Benz
Fremont, CA

Comment #11

From: Bike Fremont
Sent: Saturday, October 26, 2019 4:47 PM
To: Bill Roth
Subject: Bike Fremont Support of Morrison Canyon Road Traffic Safety Project (PWC8981)

Dear Mr. Roth,
Bike Fremont enthusiastically endorses the proposed project to permanently close the specified 0.8 mile area of Morrison Canyon Road to private automobiles. The pilot program for this closure has been a great success and has made this area of road safe for bicyclists and pedestrians including families.

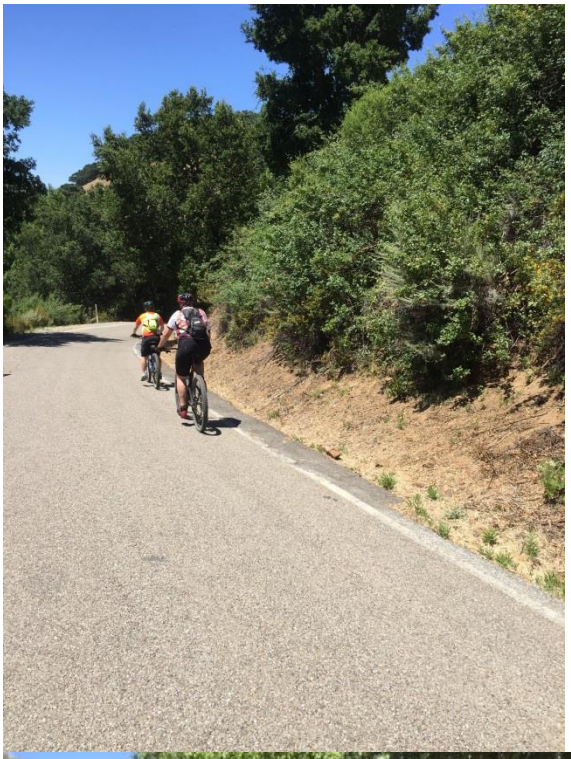
We have walked and biked the car free portion of the trail and find it a great and safe recreational resource. It also offers a new and safe route to reach Vargas Plateau.

Please see some photos we took of folks enjoying the car free section of Morrison Canyon Road.

We urge the City of Fremont to proceed with this project to keep this section of Morrison Canyon Road free from private automobiles.

Best Regards,

Juliette Johnson
Bike Fremont



Comment #12

From: T. Wu
Sent: Sunday, October 27, 2019 5:28 PM
To: Bill Roth
Subject: Proposed Permanent Closure of Morrison Canyon Road to Private Automobiles

Dear Mr. Roth,
I enthusiastically endorse the proposed project to permanently close the specified 0.8 mile area of Morrison Canyon Road to private automobiles. The pilot program for this closure has been a great success and has made this area of road safe for bicyclists and pedestrians including families with children. It also offers a new and safe route to reach Vargas Plateau.
*****

Tim

Comment #13

From: James Rardin
Sent: Sunday, October 27, 2019 5:55 PM
To: Bill Roth
Subject: In favor of Morrison Canyon permanent closure

Dear Mr. Roth,
I am very much in favor of the proposed project to permanently close the area of Morrison Canyon Road to private automobiles that is currently closed. The current closure has made that street safe for cyclists and pedestrians. I have used it several times to reach Vargas Plateau Regional park with our High School mountain bikers club. We tried it once before the closure and it was far too dangerous for the students. The closure has provided a great way to reach the park with the kids and enjoy the recreational and scenic aspects it provides.

Respectfully,
James Rardin

James Rardin
CentriPEDAL Bikes LLC
3636 Thornton Avenue
Fremont, CA 94536

Comment #14

From: Harvey Wong
Sent: Sunday, October 27, 2019 6:18 PM
To: Bill Roth
Subject: Keep Morrison Canyon Rd Closed

Hi,

I endorse keeping Morrison Canyon Rd closed to automobile traffic. It's great to be able to run up / ride down Morrison Canyon without having to watch out for cars.

-Harvey

Comment #15

From: Dennis Addison
Sent: Sunday, October 27, 2019 6:43 PM
To: Bill Roth
Subject: Morrison Canyon closure

Dear Mr. Roth,
I enthusiastically endorse the proposed project to permanently close the specified 0.8 mile area of Morrison Canyon Road to private automobiles. The pilot program for this closure has been a great success and has made this area of road safe for bicyclists and pedestrians including families with children. It also offers a new and safe route to reach Vargas Plateau. The closure also helps eliminate the unsafe use of Morrison Canyon by commute traffic.
*****
Best Regards,
Dennis Addison

Comment #16

From: Cindy Potter
Sent: Sunday, October 27, 2019 8:10 PM
To: Bill Roth
Subject: Morrison Canyon

Dear Mr. Roth,

I endorse the proposed project to permanently close the specified 0.8 mile area of Morrison Canyon Road to private automobiles.
The pilot program for has made this area of road safe for bicyclists and pedestrians including families with children.

Many of us continue to enjoy using the road safely now that it's closed.

Cindy Potter

Comment #17

From: Lori Sommer
Sent: Monday, October 28, 2019 5:44 AM
To: Bill Roth
Subject: Morrison Canyon

Dear Mr. Roth,
Thank you for your work on the project to permanently close 0.8 mile area of Morrison Canyon Road to private automobiles. The pilot program for this closure has been a great success and has made this area of road safe for bicyclists and pedestrians including families with children. It also offers a new and safe route to reach Vargas Plateau. I'm hoping this will become permanent.
Lori Sommer

Comment #18

From: Myvan Quoc
Sent: Monday, October 28, 2019 10:56 AM
To: Bill Roth
Subject: Permanently Close of Morrison Canyon Road

Dear Mr. Roth,

I enthusiastically endorse the proposed project to permanently close the specified 0.8 mile area of Morrison Canyon Road to private automobiles.

The pilot program for this closure has been a great success and has made this area of road safe for bicyclists and pedestrians including families with children.

It also offers a new and safe route to reach Vargas Plateau.

Regards,
Myvan Quoc

Comment #19

From: Heidi Lach
Sent: Monday, October 28, 2019 12:05 PM
To: Bill Roth
Subject: Morrison Canyon Road

Good morning Bill,

My name is Heidi Lach and on behalf of our family, please keep Morrison Canyon closed from car traffic. We live on Canyon Heights Drive and our family walks up Morrison Canyon and my husband rides mountain bikes up Morrison Canyon to Vargas park and ride down to our street 3 to 4 times a week. We enjoy walking Morrison Canyon with no worry from cars.

Before road closure, we have been almost hit by a car few times because cars drive too fast and in some areas there are hardly any curb.

Please keep pedestrians and bikers safe by keeping Morrison Canyon close.

Thank you,
Heidi

Comment #20

From: Pamela Weiss Barr
Sent: Monday, October 28, 2019 5:51 PM
To: Bill Roth
Subject: Morrison Canyon

Dear Bill Roth,

I am writing to you about Morrison Canyon Road. Most mornings I am on Morrison Canyon Road walking with friends. I hope this road remains closed to motor vehicles in the future.

It is not a safe road for cars and trucks. The fact that this road is only 9 feet wide in parts makes it unsafe for both pedestrians and motorists. It doesn't fulfill the requirement of at least 12 feet in width to be labeled as a road in CA.

Since the road closed I have witnessed cement trucks and other very large trucks try to navigate up the road. One driver told me his company directed him up the road so that he could save time getting to the George's property at the end. I have also seen Vargus Road residents drive up and down this road at an unsafe speed knowing that they will not encounter traffic along the road. We should allow only emergency vehicles use of this road, not residents from Vargus.

There is ongoing illegal dumping in the canyon that is unsightly and dangerous for animals. The red flexible stanchion barriers on the closed sections of the road have been removed or tampered with on a number of occasions. The large sign at the intersection of Morrison and Vargus has been vandalized and replaced. A white plastic road barrier was thrown into the canyon by motorists.

Is there a better way of keeping traffic off this road? We need a more permanent solution to keep vehicles off this road, otherwise drivers will continue to use it without fear of fines.

The current situation is obviously better than when the road was open to all. A more limited number of people drive up this road now. However, it feels like an accident waiting to happen when pedestrians share the road with speeding cars. The illegal dumpling and frequent use of the road need to be stopped.

Thanks for your time.

Pamela Weiss Barr

Comment #21

From: egbarr
Sent: Tuesday, October 29, 2019 1:43 PM
To: Bill Roth
Subject: Morrison Canyon

Bill Roth
Senior Planner
City of Fremont

Mr. Roth,

This is to let you know that I want Morrison Canyon to remain closed to vehicle traffic. There are numerous safety and littering issues that have not been satisfactorily addressed. Consequently, I feel the road should remain closed to vehicle traffic for the general public.

Thank you for your consideration.

Regards,

Eric Barr
463 Lowell Pl.
Fremont, CA

Comment #22

From: aanh2
Sent: Tuesday, October 29, 2019 2:42 PM
To: Bill Roth
Subject: Morrison Canyon Rd

I have driven Morrison Canyon Rd several times and always found it an extreme challenge for all kinds of safety. Very few places to pass oncoming vehicles and never knowing when a pedestrian or bicyclist were coming around the corner. I was very happy when the City Council decided to close it last November. It should remain closed for pure safety reasons alone. Pedestrians yes and bicyclists maybe ok but they can still be a safety hazard coming downhill. Responsible people will always be safe on this road especially as a footpath to Vargas Plateau Regional Park.
Keep it Closed!

Comment #23

From: Vanessa McDonnell
Sent: Wednesday, October 30, 2019 7:43 AM
To: Bill Roth
Subject: Morrison canyon closure

Dear Mr. Roth,

I enthusiastically endorse the proposed project to permanently close the specified 0.8 mile area of Morrison Canyon Road to private automobiles. The pilot program for this closure has been a great success and has made this section of road safe for bicyclists and pedestrians. As a ride leader for the local bicycle club (Fremont Freewheelers Bicycle Club) I'm really enjoying riding Morrison with my regular group. Before the closure I avoided the road due to some close calls with cars who were unwilling to share the road with us cyclists. I look forward to riding Morrison car free for many years to come.

Sincerely,
Vanessa McDonnell

Comment #24

From: Gould, Nick
Sent: Wednesday, October 30, 2019 8:16 AM
To: Bill Roth
Subject: Permanent closure of Morrison Canyon Road

Dear Mr. Roth:

I am writing this email in support of the concept of closing Morrison Canyon road permanently to automobiles.

I've been a Fremont resident since 1999, and I am an avid bicyclist and runner. I absolutely love living in Fremont, despite the recent troubles with pass through traffic during commute times.

I hope you do go ahead and close MCR permanently. Obviously I love riding it without worrying about cars, but I would also like to point out, that opening it again will lead to pass-through traffic on an EXTREMELY narrow road. This for sure will lead to traffic accidents injuries and deaths. That road is simply too narrow to support any semblance of commute traffic. I also worry that if it was re-opened it would get significant vehicular traffic now that the new Vargas Ridge park is open.

I am not anti-car. I own two cars and commute by car, however some roads are just not wide enough for automobile usage, and I consider Morrison Canyon Road one of those.

As a side note, I would like to thank the City of Fremont for the excellent job it has done with bike lanes in the rest of the city. I have several loops around Fremont that I feel completely safe on, thanks to the generous bike lanes. As I said before, I love living in Fremont.

Kind Regards,

Nick Gould
Sr. Manager, Programming

DIRECT: +1 925.415.8946 •
5000 Executive Parkway. • Suite 540 San Ramon, California 94583 • USA • prahs.com

PRAHEALTHSCIENCES

Comment #25

From: Himanshu.Chokshi
Sent: Wednesday, October 30, 2019 8:59 AM
To: Bill Roth
Subject: Morrison Canyon Road

Hello Bill,

I and my wife regularly hike on Morrison Canyon Road along with many others.

We request that this road be permanently closed to automobiles for everyone's safety.

Thanks.
Himanshu Chokshi
Tejal Chokshi

Comment #26

SIERRA CLUB
FOUNDED 1892

Southern Alameda County Group
(Castro Valley, San Lorenzo, Hayward, Newark and Fremont)

October 24, 2019

City of Fremont, Planning Division
Attn: Bill Roth, Senior Planner
39550 Liberty Street, P.O. Box 5006
Fremont, CA 94537

Subject: Notice of Preparation of an Environmental Impact Report for the Morrison Canyon Road Traffic Safety Project (PWC8981)

Morrison Road was temporarily closed nearly one year ago primarily in response to safety concerns due to increased vehicle traffic on this narrow road. The road is very narrow in places making it very difficult for two vehicles to pass. Since the closing it has become a popular hiking and cycling trail for those visiting the canyon and Vargas Plateau Regional Park.

The Sierra Club supports the objectives set out in the Notice of Preparation and the preparation of an EIR for the project described leading to permanent closure of portions of Morrison Canyon Road to private vehicles, while remaining open to pedestrians, equestrians and bicycles.

Park visitation is at all time highs and the population of the City is growing. Vargas Plateau Regional Preserve is a nearby resource. The scope of the planned EIR should include considerations of park access to visitors originating on the west side of the canyon. Specifically, we urge the City in its transportation and traffic analyses to consider park access, including the use of public transit and bicycle and hiking trails.

Again, the Sierra Club is generally supportive of the road closure to private vehicles and urge that appropriate alternatives can be found to facilitate access to Vargas Plateau Regional Preserve for residents on the west side of the canyon.

We look forward to providing comments to the Draft EIR.

Cordially,

Glenn Kirby
Sierra Club
Southern Alameda County Group

2530 San Pablo Ave., Suite I, Berkeley, CA 94702 Tel. (510) 848-0800 Email: info@sfbaysc.org

Comment #27

From: Hartmut Wiesenthal
Sent: Wednesday, October 30, 2019 4:58 PM
To: Bill Roth
Subject: Morrison Canyon Road: please keep it closed for motorized vehicles

To:
William Roth
Planning Division
Title: Senior Planner
Phone: (510) 494-4450
Email : broth@fremont.gov <broth@fremont.gov>;
From:
Hartmut Wiesenthal
3600 Braxton Common
Fremont, CA 94538
Subject: Morrison Canyon Road: please keep it closed for motorized vehicles

Date: October 30,2019

Dear Senior Planner William Roth,
I enjoy hiking and running Morrison Canyon Road almost every day, especially during the rainy season, when park trails are muddy and impassable.
I experienced scary situations before Morrison Canyon Road was closed for motorized vehicles. There were a few drivers speeding down Morrison Canyon Road and trying to make the point, that this is their road, and pushing me from the road. I needed to jump from the road to avoid to get hit or run over. This happens roughly once a month. I assume these were drivers used the road frequently, in the other case, they would drive more cautiously.
From my personal experience, some drivers are not willing to share Morrison Canyon Road with hikers or bikers.
Just before Morrison Canyon Road was closed, I noticed a fatal accident with a pick up truck coming down crashing into another car. And I also remember well the stalled trailer truck.
Open Morrison Canyon Road for car traffic might work for cautious drivers, but not for drivers in a hurry bypassing traffic jams or residents on Vergas Plateau, who fought with law suits against public usage of Morrison Canyon Road as access to Vergas Plateau. Some of the residents on Vergas Plateau did not drive cautiously down Morrison Canyon Road, instead used it as a speed way.
I urge you to keep Morrison Canyon Road closed for motorized traffic and keep it open for hikers and bikers only.

Kind regards,
Hartmut Wiesenthal

Comment #28
From: Dirk deJong
Sent: Wednesday, October 30, 2019 7:13 PM
To: Bill Roth
Subject: Morrison Canyon feedback

Hi Bill,
Flyer left at my step said you are soliciting Morrison Canyon Rd. closure comments. Here's my input.

For decades it was nice to have this somewhat secret roadway accessible when you wanted to use it. Waze screwed that up though. So, now I don't think there's much choice but to close it off to all but emergency vehicles. Definitely needs to be accessible to them because with all the unmaintained or dead trees that start even well before the single lane the fire hazard is very high.

If the road blocking continues to be the pylons, it might be a good idea to place some hi-res cameras to capture transgressors.

Best regards,

Dirk deJong
Tothero Place

Comment #29

From: Doug Burgess
Sent: Thursday, October 31, 2019 8:42 AM
To: Bill Roth
Subject: Morrison Canyon Road

Dear Mr. Roth

I am writing to support the continuation of closing Morrison Canyon Road to through traffic.

Prior to the closure, while walking on the road I felt unsafe. In spots the road is quite narrow and some drivers used the road as a speedway. I even experienced a semi truck on the road.

The popular app Waze often times routed commute traffic from Vargus Road through Morrison Canyon Road.

Please keep the road safe by maintaining the current closure.

Cheers,
Doug Burgess
737 Wasatch Dr, Fremont, CA 94536

Comment #30

From: Tina Marquez
Sent: Thursday, October 31, 2019 10:29 AM
To: Bill Roth
Cc: Art Marquez
Subject: Keep Morrison Canyon Road safe

Hi Bill,
My family and I have lived on Morrison Canyon Road for nearly 40 years. We love Fremont, the city workers and the environment. My concern is degradation of our open space and the safety of residents in Fremont.

Over the last 5 years it seems every open field has been taken for high density housing, thus increasing the number of cars on Mission Blvd and 680. As a result Morrison Canyon has turned into a through way for commuters to "beat" the traffic. I'm a commuter and can empathize with the growing, crowded roadway . . . but we need to prevent through traffic on Morrison Canyon to assure safety of residents, prevention of fires and the beauty of our diminishing open-space hillsides. Given I have have a small child living in our home, I would also like to see speed bumps for those drivers in a hurry to beat the light on Mission and Morrison Canyon Road.

Thanks for your consideration to close Morrison Canyon Road to through traffic, allow pedestrians and cyclists to enjoy our open space and help to slow down the speedsters.

Many thanks,

Tina Marquez

Comment #31
From: Melville
Sent: Thursday, October 31, 2019 11:25 AM
To: Bill Roth
Subject: Our Feedback on Morrison Canyon Road Traffic Safety Project

To:

Bill Roth, Senior Planner
broth@fremont.gov
39550 Liberty St, PO Box 5006
Fremont CA 94537

Please note this email is on behalf of 64 people who use Morrison Canyon Road for recreation -- some regularly, some sporadically. Names and addresses of the signatories are at the bottom of this email.

Dear Mr. Roth:

We thank you for the opportunity to provide you with our feedback on the Environmental Impact Report to dedicate a scenic 3/4 mile stretch of Morrison Canyon Road as a recreational trail. We would like to express our full support for this proposal and to permanently close Morrison Canyon Road to vehicular traffic, except for emergency access.

Prior to the closure, this road was used as an out of town commuter shortcut with hundreds of cars using this narrow and windy road -- only 8 feet wide in sections -- creating a dangerous situation for all involved.

The road was set aside for pedestrians and cyclists on a pilot basis with no vehicular traffic beginning November 2018. This has been an amazing experience as many in our community have found this path a safe and convenient route to access Vargas Plateau Regional Park. Even the residents up on the hill have benefited immensely by not having to battle the hundreds of commuter cars that practically trapped them in their own homes!

This nineteenth-century road through picturesque Morrison Canyon was designed for horse-drawn wagons. A 2008 lawsuit filed by two hillside residents who claimed the road was narrow, dangerous and substandard delayed the park opening by over 8 years! The narrow road has brought on dangerous head-on conflicts with cars, pedestrians and bicyclists and constant illegal dumping in the creek. Since the road was closed, the amount of illegal dumping has also subsided significantly and we hope that closing the road permanently will hopefully eliminate the illegal dumping completely.

Here is what some of the city officials stated about Morrison Canyon Road at the City Council meeting in June 2018:

"The road does not meet current roadway standards." — Fire Chief Jacobson
With "local traffic use going up and down it, and the amount of recreational use that there is, a significant conflict exists." — Hans Larsen, Director of Public Works
If access were limited to local motorists, "I think the problem you're going to run into is [that] you still have conflict between people walking up and down, and people driving in vehicles." —Harvey Levine, City Attorney
"There's a specific provision in the streets and highways code that allows us to close roads for reasons of public health and safety…that's a liability for the city to operate a roadway with two-way access with mixes of bikes and pedestrians, and if it was just limited to local access, I mean, that's still a recipe for a problem. Which is, you know, a concern to us." — Hans Larsen, Director of Public Works

We believe this picturesque road is an incredible recreational resource for all the residents of the city of Fremont as well as the neighboring cities. With its permanent closure, the city instantly acquires a beautiful "Class I Trail", without having to spend any additional funds and at the same time keeping the residents of the city safe and healthy. The only proper use for this road is as a recreational trail. We therefore hope that the city permanently closes this road to vehicular traffic and designates it as a recreational trail.

Please confirm receipt of this email on behalf of the 64 signatories and we thank you for giving us this opportunity to provide our feedback on Morrison Canyon Road.

Sincerely,

Monica Melville, 38645 Chrisholm Pl, Fremont CA 94536
Navin Melville, 38645 Chrisholm Pl, Fremont CA 94536
Dominic Melville, 38645 Chrisholm Place, Fremont CA 94536
Jo Melville, 38645 Chrisholm Place, Fremont, CA 94536
Moina Shaiq, 537 Morrison Canyon Road, Fremont CA 94536
Mohammad Shaiq, 537 Morrison Canyon Road, Fremont CA 94536
Nina Stull, 39512 Platero Place, Fremont, CA 94539
Bill Stull, 39512 Platero Place, Fremont CA 94539
Mei Li Hsu, 40810 Ondina Court, Fremont CA 94539
Eric Barr, 463 Lowell Place, Fremont CA 94536
Pamela Weiss Barr, 463 Lowell Place, Fremont CA 94536
Mira Chong, 5702 Pandorea Terrace, Newark CA 94560
Larry Edelson, 507 Maar Place, Fremont CA 94536
Jane Conn, 162 Melendez Avenue, Fremont CA 94539
Nighat Lotia, 39025 Zacate Avenue, Fremont CA 94539
Waqar Haidari, 39025 Zacate Avenue, Fremont CA 94539
Daphne Lin, 524 Lowell Place, Fremont CA 94536
Serena Tan, Benevente Avenue, Fremont CA 94539
Sarah McCurdy, 650 Pickering Avenue, Fremont CA 94536
Sonali Vagholikar, 55 Calle Amigo Dr, Fremont CA 94539
Rahul Sharangpani 55 Calle Amigo Dr, Fremont CA 94539
Judy Chong, 189 Obispo Court, Fremont CA 94539
Kim Takacs, 38655 Chrisholm Place, Fremont CA 94536
Dave Takacs, 38655 Chrisholm Place, Fremont CA 94536
Marilyn Williams, 39321 Canyon Heights Drive, Fremont CA 94539
Jon Williams, 39321 Canyon Heights Drive, Fremont CA 94539
Jay Swaminathan, 38659 Chrisholm Place, Fremont CA
Suganya Parthasarathy, 38659 Chrisholm Place, Fremont CA
Filiz Crocker, 41753 Olympus Avenue, Fremont CA 94539
Robert Crocker, 41753 Olympus Avenue, Fremont CA 94539
Shirley Gilbert, 71 Delegado Court, Fremont, CA 94539
Arnold Gilbert, 71 Delegado Court, Fremont, CA 94539
Lucy Rich, 740 Pickering Avenue, Fremont, CA 94536
Dave Rich, 740 Pickering Avenue, Fremont, CA 94536
Andrea Schacter, 40885 Bandera Street, Fremont CA 94539
David Fishbaugh, 40885 Bandera Street, Fremont CA 94539
Sadhana Prasad, 511 Lowell Place, Fremont CA 94536
Don Phelps, 488 Woodward Drive, Fremont CA 94536
Bridget McShea, 639 Pickering Avenue, Fremont CA 94536
Thomas McShea, 639 Pickering Avenue, Fremont CA 94536
Rukhsana Attarwala, 118 Ray Court, Fremont CA 94536
Sheerin Attarwala, 126 Ray Court, Fremont CA 94536
Idris Attarwala, 126 Ray Court, Fremont CA 94536
Sherri Plaza, 43472 Laurel Glen Common, Fremont CA 94539
Carlos Plaza, 43472 Laurel Glen Common, Fremont, CA 94539
Jerry Alden, 38650 Chrisholm Place, Fremont, CA 94536
Kim Alden, 38650 Chrisholm Place, Fremont, CA 94536
Vahida A Attarwala, 133 Ray Court, Fremont, CA 94536

Abbas Attarwala, 133 Ray Court, Fremont CA 94536
Waseem Brelvi, 150 Espada Place, Fremont, CA 94539
Shehnaz Brelvi, 150 Espada Place, Fremont CA 94539
Bill Stull, 689 Los Huecos, San Jose, CA 95123
Lise Stull, 689 Los Huecos, San Jose, CA 95123
Linda Mapes, 35225 Cornwall Place, Newark,CA 94560
Ron Fong, Platero Place, Fremont, CA 94539
Suresh Bajaz, Suresh@bajaz.org
Srividya Prakash, 1068 Nez Perce Court, Fremont CA 94539
Anirudh Samsi, 1068 Nez Perce Court, Fremont CA 94539
Man Yee DeSandies, 35167 Charmwood Court, Newark, CA 94560
Gene Zanardi, 348 Thatcher, Foster City, CA 94404
Maggie Zanardi, 348 Thatcher, Foster City, CA 94404
Shalini Singh, 38667 Chrisholm Place, Fremont CA 94536
Amit Kumar, 38667 Chrisholm Place, Fremont CA 94536
Linda Makaipo, 4655 Northdale Drive, Fremont CA 94536

Comment #32

KIRTI DOSHI
586 WOODWARD PL.
FREMONT, CA 94536

October 28, 2019

Re: Road Closure, (~~Nites~~ Morrison Canyon Rd.), For 2019 & beyond

To: Bill Roth

Dear Sir:

I Strongly urge you to close Morrison Canyon Road beyond Canyon heights up in the hill.

It has been unsafe & being misused by motorists.

Sincerely,

Kirti Doshi

ph. no. 510-790-0916

Comment #33

From: Serena Fu
Sent: Thursday, October 31, 2019 2:16 PM
To: Bill Roth
Subject: Morrison Canyon Road Closure

Hi Mr. Roth,

I support to permanently ban vehicles going up to Morrison Canyon Road, only allows pedestrians and cyclists.

Morrison Canyon Road had been damaged by vehicles going up and down on this narrow road, it could lead to landslide. If you have been there, you would know how serious it is.

Thank you for your attention.

Sincerely,

Serena Fu

Comment #34
From: SHEETAL CHOKSHI
Sent: Friday, November 01, 2019 12:52 PM
To: Bill Roth
Subject: Ref: Morrison Canyon Road Traffic Safety Project (PWC8981)
Mr. Roth, Senior Planner,
My husband I walk up the Morrison Road in the morning and we have encountered many vehicles in past that would not yield to us. We even had a woman in her Fiat race past us for several weeks even when we motioned for her to slow down.
Please close the road permanently as the city has proposed in the October 4, 2019 notice of preparation. It is not safe for pedestrians to walk on if automobiles are allowed.
Thank you.
Sheetal M. Chokshi

Comment #35
From: Demitri Morgan
Sent: Friday, November 01, 2019 10:36 PM
To: Bill Roth
Subject: In support of the closure of Morrison Canyon Road

Greetings, Mr Roth,

I write to you in regards to the decision on whether to close Morrison Canyon road.

I am a resident of the nearby Canyon Heights neighborhood, and so am less directly impacted by any decision in this area than most. However, I myself have walked, biked and driven (when it was open) Morrison Canyon road, and I have thoughts on this matter that I feel worth spending time to articulate, even if they have already been heard and considered in other forms. I attended the public hearing at the Vallejo Mill Elementary School auditorium on May 1st, to gain a more well-rounded understanding of this issue and my neighbors' feelings about the issue.

Having driven up and down Morrison Canyon road when it was open, I can personally attest to its precariousness and severe inadequacy for the kinds of traffic that Fremont roads typically experience, from both local residential traffic and non-local commuter thru traffic. It is not only dangerous; it puts a lot of strain on a vehicle's engine and suspension. Should a less-than-adequately maintained vehicle break down on the road, it would invariably result in a blockage requiring a very skilled tow truck driver and at least an hour to remove.
Having bicycled up and down Morrison Canyon road several times, I can personally attest to how it is dangerous (going downhill) even without cars. It is pockmarked with irregularities full of blind corners, and pedestrians could be anywhere. Furthermore, as at least one resident in attendance at the May 1st hearing pointed out, there can also be wildlife such as turkey and deer on the road.

Granted, there are some changes that would be needed if keeping the road closed. Clearer signage that the speed limit applies to bicycles is an absolute must, and should be a priority for near-term maintenance if the road were to be permanently closed to motor vehicle traffic but left open to bicyclists. I also would like to point out that the plastic barricades are not a very good obstacle or deterrent, and I have seen many times them broken or bent over from vehicles that drove over them. They will need periodic replacement, but also the no-motorist-traffic policy may need better enforcement. Perhaps the design of the closure itself could be rethought.

On the other hand, making Morrison Canyon road safe for motor vehicle traffic would require not merely an overhaul of the road surface. It would require a very destructive and expensive reshaping of the hillside itself in order to to accommodate a wider road that is adequately engineered to withstand erosion. Such a project incurs a large cost in tax dollars to every Fremont citizen, and not just those who live in the Vargas Plateau area, who would use the road most frequently for access to their residences. It would, for the majority of Fremont, only confer the benefit of easier access to one of two legitimate East Bay Regional Park-sanctioned entrances to Vargas Plateau, which itself is just one of Fremont's multiple recreation areas. Widening the road is the only really viable option to appease those who want the road open to motor vehicle traffic, and it's an expensive one that requires everyone else pay for it.

All of this being said, I would like to voice my encouragement of and agreement with the motion to permanently close Morrison Canyon Road to thru motor vehicle traffic. The only necessary near-term maintenance, if the road were kept closed, would be inexpensive low-hanging fruit (i.e. improved signage, barriers and/or enforcement). These would more clearly reflect the city's commitment to this decision, and help keep the road safe for all, at a much lower cost and risk than reopening the road.
Thank you for your consideration.

Sincerely,
Demitri Morgan
38042 Stenhammer Drive

Comment #36
From: Michael Chew
Sent: Saturday, November 02, 2019 11:01 AM
To: Bill Roth
Subject: Keep Morrison Canyon Rd Safe

Hi Bill,

I am the resident of the 155 Morrison Canyon Rd for the past 19 years.
The increasing motor vehicles usage of the Morrison Canyon Road
in our residence area is a major concern for us.
It should not be used for commute road and heavy traffic.
I fully support the "Morrison Canyon Rd safety for children and families".

Sincerely,
Michael Chew

Comment #37

From: Jeanne
Sent: Saturday, November 02, 2019 2:57 PM
To: Bill Roth
Subject: Morrison Canyon Road

I am writing to ask you to keep Morrison Canyon closed to cars. As a bike rider I am concerned for my safety as well as the safety of the many pedestrians who use this road. The times I've had vehicles pass me before the road was closed was both frightening and dangerous.

Comment #38

From: jlkeenandesigns
Sent: Saturday, November 02, 2019 3:00 PM
To: Bill Roth
Subject: Morrison canyon road

Please keep Morrison Canyon Rd closed to cars. As a bike rider I am concerned for my safety as well as the safety of others.
That road cannot accommodate cars and bikes or pedestrians it's all about safety. Keep Fremont residents safe!

Sent from my iPhone

Comment #39
From: jean zhang
Sent: Saturday, November 02, 2019 6:59 PM
To: Bill Roth
Subject: Closure of Morrison Canyon Road

To who may concern,
I'm writing to support the permanent closure of Morrison Canyon Road. To keep the road safe for children and family.
Thank you,
Junying Zhang
194 orchard Dr
Fremont CA 94536

Comment #40
From: elaine
Sent: Sunday, November 03, 2019 10:33 AM
To: Bill Roth
Subject: Morrison Canyon Road Comments

Hi Bill,

I have been attending the meetings about the traffic concerns in the residential area encompassing Morrison Canyon to the east, Niles Canyon to the West and north of Mission Blvd.

During commute hours there was a continuous stream of cars going up Morrison Canyon to 680. The pilot program to limit the access to motorist in November 2018 was a very positive step in making the road much safer for motorists and pedestrians. I strongly support this pilot program to be made permanent. I would very much like you continued support in this effort.

Much thanks,

Elaine Owyang
Homeowner on Altura Street

Comment #41

10/28/19

To: Bill Roth
Re: Morrison Canyon Rd.

I am writing to request the planning commission and city council maintain Morrison Canyon Rd. in its current configuration or permanently close the road above the 0.8 mile point in current use.

Morrison Canyon Road is a one lane (9 foot wide) road. It is prone to landslides and has been the site of vehicles going off the road into the canyon.

Opening Morrison Canyon Road to traffic posts serious dangers to pedestrians, cyclists, and vehicles. Opening the road to two way traffic increase the amount of traffic in the area and increases the traffic and hazards to the adjoining neighborhood streets.

In its current configuration, Morrison Canyon Road still allows for emergency response vehicles, emergency access for residents in the hill area, and non-vehicular use.

I am therefore again requesting the planning commission and the city council eliminate the use of Morrison Canyon road for traffic beyond the current 0.8 mile mark.

thank you for your consideration of my request.

Sincerely
Carolyn M. Drybrae
(mrsd1@comcast.net)

Ms. Carolyn Drybrae
38942 Canyon Heights Dr
Fremont, CA 94536

Comment #42
From: Richard Godfrey
Sent: Sunday, November 03, 2019 12:29 PM
To: Bill Roth
Subject: Morrison Canyon Rd

Bill, last day to send this note supporting the dedication of 1.2 km stretch of MCR to be a recreational trail. I live a few blocks off MCR and along with many neighbors have been using this road for recreation and exercise for around 30 years. It seems like a great natural resource for Fremont families and the city. Hopefully such designation will allow for access to the two property owners who only have access to town through the road. I am wondering if consideration has been given to having a locked gate at the lower base of the road.

Best regards,

Richard Godfrey

Comment #43
From: Nicholas Bardales
Sent: Sunday, November 03, 2019 11:05 PM
To: Bill Roth
Subject: Morrison canyon road comments

11/3/2019

To Broth Roth

My name is Nicholas Bardales and I recently moved 365 Morrison Canyon Road I'm one the last houses before it gets to the one way road on Morrison Canyon. Since moving here in 2018 I've noticed how many cars drive back and forth dangerously on this road and when they put the roadblocks up temporarily it decreased so much traffic from using this road is a freeway access to 680. So many cars used to race to get up morrison canyon rd and now its so much more of a peaceful pathway to walk for the residents and bikers and pedestrians walking up Morrison Canyon. Since the city set up temporary road blocks it then became an actual safe Trail for physical activities. The road is too narrow to be used for a regular car road and really should only be used in emergency more permanent road blocks need to be set up to maintain the safety of this road are the residents of Fremont, with the addition of speed bumps on the corner turn because cars still race up and down that road making it unsafe for the pedestrians train to walk to get to the beginning of the one way road. I hope the city addresses this matter seriously and sets up permanent road blocks with speed bumps before it reaches the turn.rk

Thank you

Nicholas Bardales

Comment #44
From: wyragui
Sent: Monday, November 04, 2019 11:15 PM
To: Bill Roth
Cc: Larry Edelson; Kelly
Subject: CEQA comments - Morrison Canyon CEQA Public Comments

Public safety was a pivotal issue for a 2008 CEQA lawsuit filed by two Vargas Plateau residents against East Bay Regional Park District. They contended that Morrison Canyon Road was narrow, dangerous and substandard. Their\ lawsuit kept Vargas Plateau Regional Park shut down for eight years and then when it opened, shut it down again using the courts. Their primary argument was that public safety required that the district mitigate to reduce the dangers associated with access to a public park. The mitigation included removing trees, improving sight lines and expanding the road in selected areas. They even forced the district to change signs and remove roads from the park maps. Clearly, the safety of the public roads was a significant component to their lawsuit and resulted in the park district paying attorney fees and the costs for upgrading the public roads used to access the park.

Since that lawsuit, one of the plaintiffs has constructed a 12,000 sq. ft. "barn" which has been used for several large events where alcohol was served. We believe that the safety of Morrison Canyon Road continues to present a risk to the city of Fremont. The 2008 lawsuit clearly demonstrated that the city was financially liable for any injury that might occur through use of the road since Morrison Canyon Road continues to be narrow, dangerous and substandard.

We encourage the city to maintain the road closure, since the city is responsible for injury or death that might occur due to an inebriated driver crashing or driving into a pedestrian. Morrison Canyon Road at nine feet wide is too narrow for most drivers and certainly those impacted by the consumption of alcohol served at facilities on Vargas Plateau.

We agree with the 2008 plaintiffs and the City Council which reviewed the narrow, dangerous and substandard road in June 2018:

> "The road does not meet current roadway standards." — Fire Chief Jacobson
>
> With "local traffic use going up and down it, and the amount of recreational use that there is, a still a significant conflict that exists…that's a liability for the city to operate a roadway with two-way access with mixes of bikes and pedestrians, and if it was just limited to local access, I mean, that's still a recipe for a problem. Which is, you know, a concern to us."
>
> — Hans Larsen, Director of Public Works
>
> If access were limited to local motorists, "I think the problem you're going to run into is [that] you still have conflict between people walking up and down, and people driving in vehicles."
>
> "There's a specific provision in the streets and highways code that allows us to close roads for reasons of public health and safety.
>
> — Harvey Levine, City Attorney

The road as set aside for pedestrians and cyclists on a pilot basis, with no cars beginning November 2018, has proven to be safe with very limited automotive traffic. We support road safety for children and families and after adoption of the environmental impact report (EIR), we urge the city to dedicate the scenic ¾-mile (1.2-km) stretch as a recreational trail.

Sincerely,

Wm. Yragui
Co-Founder
Mission Peak Conservancy

Comment #45

From: Paul
Sent: Tuesday, November 05, 2019 9:47 AM
To: Bill Roth
Subject: NOP Morrison Canyon Rd, PWC8981

Hello Bill Roth,
I'm responding to the NOP I received in the mail regarding the closure of Morrison Canyon Rd, PWC 8981.

I support the permanent closure of Morrison Canyon Rd as proposed in the NOP. Please do it.

I am a resident of lower Morrison Canyon Rd (MCR) near mission and a regular user of the closed portion of upper MCR. I typically ride my bicycle up MCR to the Vargas Plateau park several times per week since the park has been opened, so several hundred times during last year or two.

Prior to closure, I found the upper portion of MCR to be very dangerous to use, so dangerous that it was vital to avoid during rush hour and popular times for fear of extreme injury or death. Additionally, the traffic and congestion in front of my house and driveway was horrible. I was almost in several accidents in front of my driveway!

Since the closure last year, the neighbor has slowly returned to it's pre-commuter App peaceful nature, and MCR is now once again safely usable at all hours of the day. While not perfect, the current closure system and barriers have been effective at reducing most (95%?) of the traffic and safety problems, which I consider a huge success. Of course they can continue to be fine-tuned over time, but in essence, I think the current temporary system is sufficiently effective to be selected as a permanent fix.

Please let me know if you have any further questions or I can help the process in any way.

Thank you for your help,
Regards

Paul Perkins
230 Morrison Canyon Rd
Fremont, Ca 94536

Comment #45

From: Jack W. Balch
Sent: Tuesday, November 26, 2019 3:07 PM
To: wil@fremont.gov; Bill Roth <broth@fremont.gov>
Subject: Safety Project PWC8981

Dear Mr Lee;

Thank you for taking the time to talk to me while Mr Roth was out and letting me comment on the Notice of Preparation dated October 4th, 2019. I apologize for getting this back so late, but for some reason I believed I had until December 3rd. Mr Roth is also on this e mail.

I would like to comment on some of the topics that are noted in the above letter, most specifically, Land Use, Transportation, Wildfire, Hazardous Materials, and Public services. By way of background, I have lived on Vargas Road for over 40 years, and until the recent road closure, used Morrison Canyon as my main access to and from the City almost every day. In preparing the report, please consider the following:

While the road may be closed, it is still used by some of the residents as may be needed. Two ranches abut and have fence lines along the section of the road that is closed. The Vieux Ranch has a gate in the closed section that is used on occasion to access their cattle. Danny Escobar uses the closed road to inspect and repair fencing as needed. He believes that some of the damage is caused by the hikers and bikers that still use the road and needs to inspect it regularly. I would assume that the Garcia Ranch uses the road for the same purposes.

The road was used by some of the residents when there was a wreck on 680 a few months back that closed all east bound traffic for many hours. It was the only way to access their homes.

We have had Vargas Road closed for many reasons when the only access to our homes was Morrison Canyon. This had included wrecks on the road, trees falling, power lines falling, wash outs from heavy rains, etc. Many times these were not even reported to the City. Most of the time when a tree limb falls on the road, we would take care of it ourselves first and then call the City as it takes them too long to respond. The road maintenance has been so bad that the recent repairs that you see on Vargas Road were done by private citizens, not the City.

With the park open at the upper end of Morrison Canyon, there is much more traffic on Vargas Road, with drivers unfamiliar with the area or driving on narrow roads. Near misses in cars is much more prevalent. Locals know to pull well over and let others pass. The chances of a road closure due to an accident are much more likely.

Currently the lower portion of Morison Canyon is closed at a very narrow section of the road. There is no turn around or street lights. In order to turn around, you either need to back up across a narrow bridge or go through the gate onto private property. While there are signs indicating the road is closed ahead, it is still used on a regular basis by drivers that are confused or those with less than honorable intentions. Someone that makes a mistake and goes up this road is left with the very difficult task of trying to turn around on a very narrow road. Can you imagine trying to do this at night? I do not know how many just go past the barricades as there is no safe way to turn around.

You will see a narrow driveway off to the right where the road is suppose to end. There are two houses and properties owned by others up these driveways. One is a widow and good friend of ours. The road closure had caused the property owners in this area many issues. The driveway is sometimes mistaken as a continuation of the road. If they lock the gate, they have come home with people parked in their driveway and they need to either get out of their car and open the gate to let them through to turn around, or back up over the bridge to the small turnout, neither of which are necessarily safe to do. They have been leaving the gate unlocked, but on a recent morning three men broke into her house and were stealing things. She heard something and went down the stairs yelling. Thankfully they were scared away and she was not harmed. They have also had issues with people using the end of the road to “park” as well as dump trash. She seldom goes out at night because she does not know what she will find when she comes home.

The closure of the road has resulted in unreasonable travel times if we are coming from Fremont, as we need to get on 680 to get home. My commute from our offices in Hayward has increased from about 20 to 25 minutes to over an hour most times, if I try and go home during the commute hours. During a Friday, before a holiday, or if there are any delays on 680, I have had it take me over two additional hours to get home. While our offices are just off Wipple Road next to Union City, on occasion I have found it faster to head north to Castro Valley, go over 580 through Pleasanton, and come home that way. I now typically work until about 6:00 p.m. before I head home, unless I can leave work before 2:00 p.m.

My wife tries to always be home from Fremont by 2:00 because it takes so long to get on 680, but with friends and family in Fremont, that is not always possible. She will now try and shop in Pleasanton if she needs anything in the afternoon.

Ride share, such as Uber, will not typically take us home or pick us up in the afternoon because of traffic. I have had an Uber driver ask me to get out because he could not get on the freeway. We have tried to take Uber or Lyft to the airport, only to have the ride cancel on us. Friends will not come by our house in the afternoon because of the difficulty getting on 680. This has been a major problem for us.

I understand that a neighbor's daughter quit school as she had afternoon classes and could not get home in a reasonable time. We have a 1948 Willy that we do not drive on the freeway. I know of at least one other neighbor that has cars that he can take on City roads but not the freeway. We are currently land locked.

The best friend of the Widow that lives off of Morrison Canyon just below the closure lives about a half mile up Morrison Canyon. They use to visit each other in the afternoons. With the road closure, this is not practical.

You cannot use any of the traffic apps to determine the time it will take you to get home or get on 680 going north. They must use the flow of traffic in both lanes. The actual time to get home can be up to four times longer than stated on Waze. The only way to get accurate information is to drive the roads and obey the laws. I estimate that my wife and I spend an extra five to seven hours a week in traffic that could be avoided if we could use Morrison Canyon, and it would be much more if we were not adjusting our schedule when possible to avoid the traffic.

While they say that we can drive over the barricades, this is not without its own problems. There is a group of bikers that have taken it upon them self to patrol the road. They are not nice to any cars on the road. When the men broke into the lady's house, the Highway Patrol took Vargas Road to get to her house on Lower Morrison. They did not drive over the barricades and down the road. They turned around. The ambulance driver we talk to did not know he could go past the barricades. A neighbor off of upper Morrison had a major hand injury and lost a portion of the hand. The wife took the missing piece and drove to 680, then to the hospital. She did not know she could go through the barricades.

We have had people dump garbage, including paint and other hazardous materials, along Morrison Canyon. When traffic was allowed on this road, it may have provided a greater deterrent.

We have had wild fires in the area where Morrison Canyon was the only escape route for some residents. Not everyone knows that you can drive pass the barricades. On occasion you will see additional barricades on the road that have been placed there by individuals, not the City. You will scratch your front bumper if you drive pass the barricades. You would not want to do this in most cars.

While we have tried to adapt to the road closure, it is much more difficult and expensive than we thought. We are more isolated from our friends and family in Fremont, we must take Limos if we do not want to drive as ride share is no longer reliable, we are wasting many hours in traffic each week that would be avoided if we still had access to Morrison Canyon. Please take these things into consideration as the EIR is being completed.

Jack W. Balch

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Appendix B

Technical Memorandum: Morrison Canyon Road Closure Study for Air Quality and Greenhouse Gas Emissions

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality

429 E. Cotati Ave
Cotati, CA 94931

Tel: 707-794-0400 *Fax: 707-794-0405*
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M E M O

Date: December 12, 2019

To: **Leo Mena**
ICF
201 Mission Street, 15th Floor
San Francisco, CA 94105
Leo.Mena@icf.com

From: James A. Reyff
Illingworth & Rodkin, Inc.
429 E. Cotati Ave
Cotati, CA 94931

RE: Morrison Canyon Road Closure Study- Fremont, CA

SUBJECT: Air Pollutant and GHG Emissions Job#19-119

This memo transmits results of traffic air pollutant and greenhouse gas (GHG) emissions modeling associated with the closure of Morrison Canyon Road to traffic. Traffic emissions were modeled using the Caltrans CT-EMFAC2017 Model, Version 1.0.2.27401. Traffic inputs were based on daily traffic trips on the existing roadway and vehicles miles travelled for the roadway network[1].

Existing Emissions – Morrison Canyon Traffic

W-trans reports that there are 396 daily trips on the 3.88-mile section of Morrison Canyon Road from Mission Boulevard to (or from) Interstate 680. This roadway is a rural, one-lane facility, with hilly portions that are transited at relatively slow speeds. Our understanding is that this travel is associated with a diversion route of Interstate 680 and Mission Boulevard that can become congested during peak-travel periods. Closure of Morrison Canyon Road would remove traffic from Morrison Canyon and Vargas roads. The traffic would be redistributed through the roadway network. Table 1 reports emissions associated with travel on Morrison Canyon Road, using existing travel volumes (i.e., representing conditions before the roadway was closed).

[1] W-Trans. 2019. Subject: Memorandum of Assumptions for the Morrison Canyon Road Closure Study, prepared by Andre Huff and Mark Spencer. November 18.

Table 1. Daily Emissions along Morrison Canyon Road in pounds per day

Segment	ROG	NOx	PM10	PM2.5	CO2e
Morrison Canyon Road	0.5	0.4	2.5	0.4	1,377*

*Equivalent to about 200 metric tons per year

Note: ROG= reactive organic gases, NOx = nitrogen oxides, PM10 = particulate matter with aerodynamic diameter of less than 10 micrometer, PM2.5 = and CO2e = carbon dioxide equivalent, where the greenhouse effect of each different greenhouse gas is expressed in terms of the amount of CO2 that would create the same amount of atmospheric warming.

Project Conditions

W-Trans computed the VMT for both existing conditions when Morrison Canyon Road was open to traffic and the conditions with existing traffic and the roadway closed to motor vehicle traffic. Under the existing conditions, VMT was computed at 3,219 miles per day. The proposed project (closure of Morrison Canyon Road to traffic) would reduce the VMT to 2,931 miles. W-Trans did not study changes in traffic speed that might change emissions. However, traffic using Morrison Canyon Roadway is expected to travel at slow speeds, so redistribution of the traffic is not likely to result in substantially different speeds. Even if traffic speeds decreased by 5 mph, emissions would not be that much greater. Perhaps emission rates under reduced speed could increase by up to 20 percent; however, this would not trigger the potential for any significant air quality impact. Keep in mind that under the proposed project, emissions are more likely to decrease due to the decrease in VMT.

Project Construction

Project construction would include placement of barricades and signage that would have a duration of approximately one day of work and would involve hand tools and 1 to 2 pickup trucks and delivery of the barricades. As a result, the construction air quality impacts would be negligible and would not exceeds any significance thresholds used to judge air quality impacts (e.g. those contained in the BAAQMD CEQA Air Quality Guidelines).

Appendix C

Morrison Canyon Road Closure Traffic Noise Assessment

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
429 E. Cotati Avenue
Cotati, CA 94931

Memo

Date: November 15, 2019

To: Leo Mena
ICF

From: Michael S. Thill
Illingworth & Rodkin, Inc.

SUBJECT: **Morrison Canyon Road Closure, Fremont, CA – Traffic Noise Assessment (IR Job # 19-119)**

This memo summarizes the results of the traffic noise calculations made to assess potential noise impacts due to the Morrison Canyon Road Closure Project in Fremont. To quantify project generated traffic noise increases, our analysis compared traffic conditions expected as a result of the project to existing conditions. Additional comparisons were then made between existing conditions, cumulative conditions, and cumulative plus project conditions.

Based on our review of the traffic data that you provided, our findings are as follows:

1) The Existing Plus Project condition would not result in a substantial increase in traffic noise levels (i.e., 3 dBA L_{dn} or greater) above existing conditions at sensitive receptors along segments of Mission Boulevard, Niles Canyon Road, Walnut Avenue, Stevenson Boulevard, or Interstate 680 (I-680). Traffic noise increases expected along all roadway segments within the study limits are calculated to be 0 dBA L_{dn} (e.g., the maximum peak-hour noise level increase is calculated to be 0.3 dBA at the I-680/Mission Boulevard interchange).

2) The proposed project would not result in a measurable increase in traffic noise levels (i.e., 1 dBA L_{dn} or more) as compared to the traffic noise levels expected as a result of long-term growth forecast under cumulative conditions. Noise increases attributable to the project would not be "cumulatively considerable".

Regulatory Criteria

General Plan Policy 10-8.3 states that, "the City will require the evaluation of mitigation measures for projects under the following circumstances:

1) The project would cause the L_{dn} to increase by 5 dB(A) or more but would remain below 60 dB(A), or;

2) The project would cause the L_{dn} to increase by 3 dB(A) or more and exceed 60 dB(A), or;

3) The project has the potential to generate significant adverse community response due to the unusual character of the noise.

For the purposes of this analysis, ambient traffic noise levels at receptors along these major roadways are assumed to exceed 60 dBA L_{dn}; therefore, the 3 dBA L_{dn} significance threshold would apply.

The project would result in a significant cumulative traffic noise impact if noise levels at existing sensitive receivers would be substantially increased (i.e., 3 dBA L_{dn} above existing traffic noise levels where noise levels would exceed 60 dBA L_{dn}) and if the Project would make a "cumulatively considerable" contribution to the overall traffic noise level increase. A "cumulatively considerable" contribution would be defined as an increase of 1 dBA L_{dn} or more attributable solely to the proposed project.

Existing Plus Project Conditions

Traffic data provided by W-Trans was reviewed to calculate traffic noise level increases expected as a result of the project along roadways within the study limits. These data included turning movement counts at six intersections for existing conditions and projections for existing plus project traffic conditions. Link volumes under the existing plus project scenario were compared to existing link volumes to calculate the noise increase attributable to the project. This analysis assumed that traffic noise increases calculated based on the comparison of PM peak hour traffic data would equal the noise increase expected on a daily average basis.

The project would increase traffic volumes on study area roadway segments by up to 87 vehicles per hour, which is a relatively small addition to existing traffic volumes along these major roadways. By way of comparison, the project would have to increase existing traffic volumes by approximately 1,200 vehicles during the peak hour to increase existing noise levels by 3 dBA L_{dn} or more.

Table 1 summarizes the calculated noise level increases expected along roadways within the project vicinity resulting from the proposed project. Noise levels along all roadways within the study area limits would experience noise increases of 0 dBA L_{dn}, which are not considered substantial. This is a less-than-significant impact.

TABLE 1 Calculated Roadway Traffic Noise Level Increases

Roadway	Existing Plus Project Noise Increase above Existing Conditions (dBA, L_{dn})
Mission Boulevard	0.0 to 0.3 dBA
Niles Canyon Road	0.0 to 0.1 dBA
Mowry Avenue	0.0 dBA
Walnut Avenue	0.0 dBA
Stevenson Boulevard	0.0 dBA

Cumulative Plus Project Conditions

Cumulative and cumulative plus project traffic volume data were compared to existing traffic volume data to determine if either cumulative condition would result in noise levels that would be substantially increased over existing conditions. In all cases, cumulative traffic conditions would not result in traffic noise levels that would be substantially increased above existing conditions. The comparison of the two future traffic scenarios also revealed that traffic noise levels under these two conditions would be the same with or without the project. Therefore, the project would not yield traffic noise levels that would be measurably increased above the traffic noise levels forecast under cumulative conditions.

No roadway segments were identified where noise levels would be substantially increased and where the project would contribute at least 1 dBA L_{dn} to the substantial cumulative noise increase. The largest relative traffic noise increase attributable to the project is 0.2 dBA along Mission Boulevard. This is a less-than-significant impact.

TABLE 2 Calculated Roadway Traffic Noise Level Increases

Roadway	Cumulative Plus Project Noise Increase above Cumulative Conditions (dBA, L_{dn})
Mission Boulevard	0.0 to 0.2 dBA
Niles Canyon Road	0.0 to 0.1 dBA
Mowry Avenue	0.0 dBA
Walnut Avenue	0.0 dBA
Stevenson Boulevard	0.0 dBA

(19-119)

Appendix D
Traffic Safety Study

Morrison Canyon Road Traffic Safety Study EIR

Prepared for the City of Fremont

Submitted by
W-Trans

March 3, 2020

TRAFFIC ENGINEERING
TRANSPORTATION PLANNING
Balancing Functionality and Livability since 1995
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Table of Contents

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Introduction

This report presents an analysis of the potential traffic impacts that would be associated with a road closure project proposed along Morrison Canyon Road between the midpoint of Morrison Canyon Road and Vargas Road in the City of Fremont. The traffic study was completed in accordance with the criteria established by the City of Fremont and is consistent with standard traffic engineering techniques.

Prelude

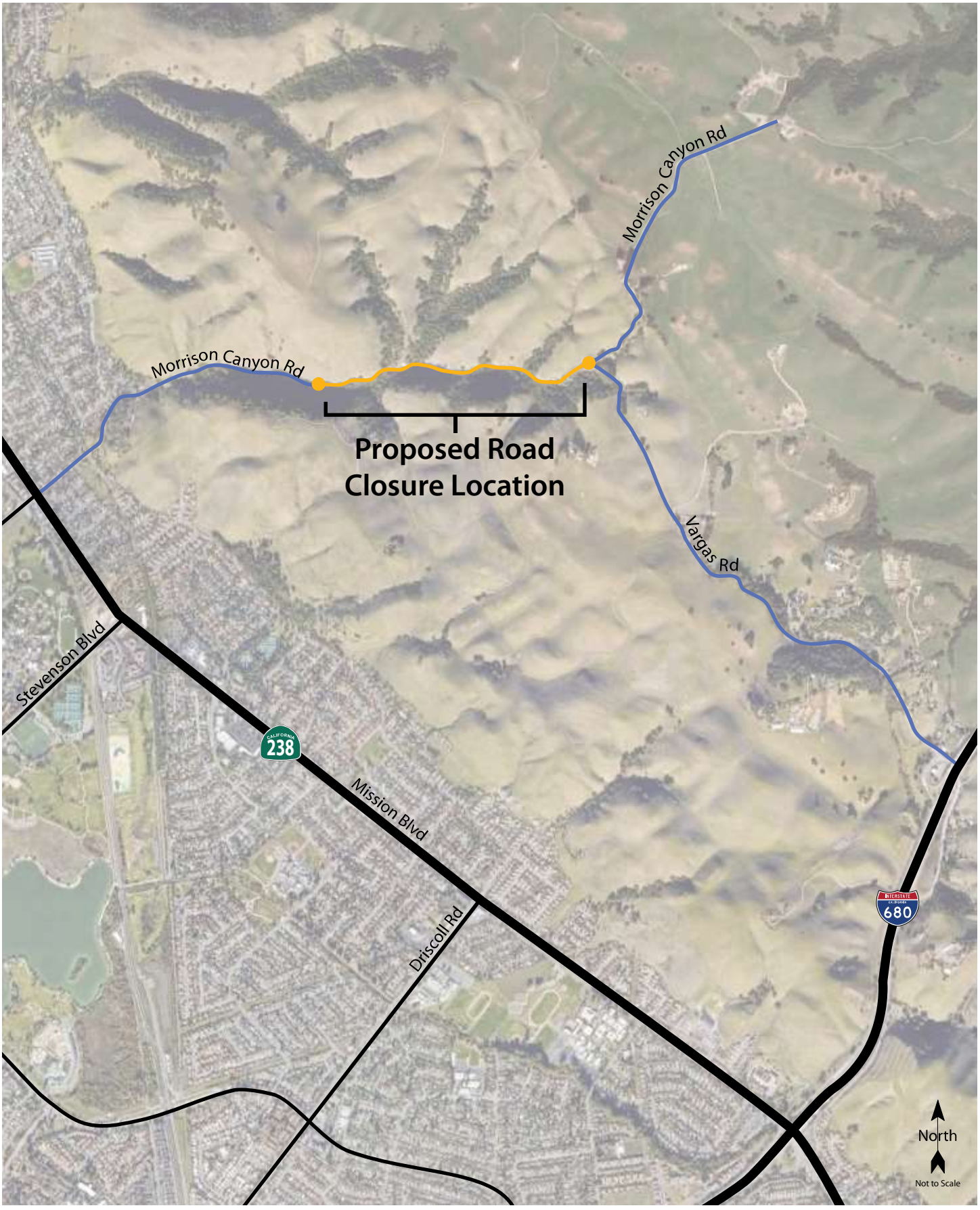
The purpose of a traffic impact study is to provide City staff and policy makers with data they can use to make an informed decision regarding the potential traffic impacts of a proposed project, and any associated improvements that would be required to mitigate these impacts to a level of insignificance as defined by the City's General Plan or other policies. Vehicular traffic impacts are typically evaluated by determining the number of generated trips that the proposed use would be expected to generate, assigning these trips to the surrounding street system based on existing travel patterns or anticipated travel patterns specific to the proposed project, then analyzing the impact the new traffic would be expected to have on critical intersections or roadway segments. Impacts relative to access for pedestrians, bicyclists, and to transit are also addressed.

Project Profile

Morrison Canyon Road east of Mission Boulevard is a narrow one-lane road that has historically provided access to the rural hillside properties in the Morrison Canyon and Vargas Road areas. Access of the roadway has become increasingly difficult due to several reasons, including an increase in cut-through vehicle traffic between regional roadways such as I-680, CA-84, and CA-238. Additionally, the increase in vehicle traffic has subsequently increased conflicts where there is two-way vehicle travel. The road is narrow at certain locations creating choke points as narrow as nine feet wide. As such, some vehicles are required to reverse in order to let oncoming vehicles pass. Further, the increase in vehicle traffic has coincided with the increased use of the roadway to access recreational hiking and bicycling trails within the area.

The proposed project consists of temporarily closing a 0.75-mile segment of Morrison Canyon Road to vehicle traffic from the "middle" or midpoint of Morrison Canyon Road to Vargas Road. The roadway would remain accessible for emergency fire and police response purposes and would also allow access for residents in emergency situations.

The primary goals of the road closure are to eliminate cut-through traffic, allow the road to be primarily used as an emergency response route, and eliminate safety concerns surrounding two-way traffic on the narrow road. The location of the project site and road closure are shown in Figure 1.



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Morrison Canyon Road Traffic Safety Project

Figure 1 – Project Study Area

Transportation Setting

Operational Analysis

Study Area and Periods

The study area includes the following intersections:

1. Mission Boulevard/Niles Canyon Road
2. Mission Boulevard/Mowry Avenue
3. Mission Boulevard/Walnut Avenue
4. Mission Boulevard/Stevenson Avenue
5. Mission Boulevard north/I-680 SB Ramps
6. Mission Boulevard north/I-680 NB Ramps

Operating conditions during the weekday p.m. peak period were evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network. The p.m. peak hour typically occurs between 4:00 and 6:00 p.m. and reflects the highest level of congestion during the homeward bound commute.

Study Intersections

Mission Boulevard/Niles Canyon Road is a four-legged intersection including protected left-turn phasing for all approaches. Crosswalks are present across the north, east, and west legs accompanied by pedestrian signal heads and pedestrian push buttons.

Mission Boulevard/Mowry Avenue is a tee-intersection accompanied by a signalized driveway which functions as the east leg. Protected left-turn phasing is present for all approaches, in addition to crosswalks across the west and south legs. Pedestrian signal heads and push buttons are also present.

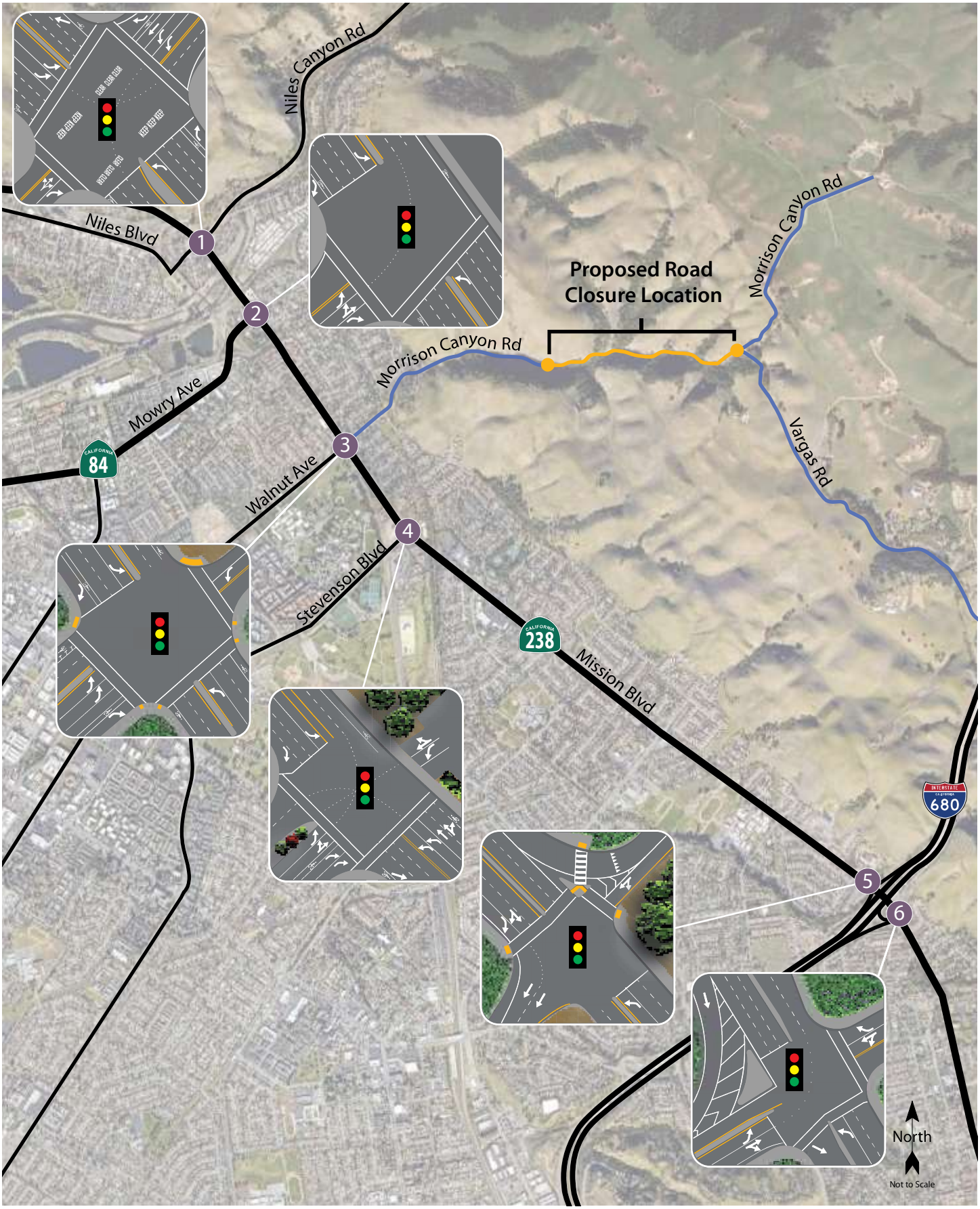
Mission Boulevard/Walnut Avenue-Morrison Canyon Road is a four-legged signalized intersection including protected left-turn phasing on all approaches except the eastern leg. Crosswalks are present across all legs with the exception of the northern approach.

Mission Boulevard/Stevenson Avenue is a four-legged signalized intersection consisting of a signalized driveway at the eastern approach. Crosswalks are present across the south and west legs in addition to pedestrian signal heads.

Mission Boulevard North/I-680 SB Ramps is a four-legged intersection with protected left-turn phasing on the approaches. The west leg is the on-ramp while the east leg is the off-ramp with the channelized right-turn. There are crosswalks with pedestrian signal heads on the southbound and westbound approaches.

Mission Boulevard North/I-680 NB Ramps is a four-legged intersection with protected left-turn phasing on all approaches. The west leg is the on- and off-ramps for I-680. There is a crosswalk with pedestrian signal heads across the south and east legs.

The locations of the study intersections and the existing lane configurations and controls are shown in Figure 2.



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Morrison Canyon Road Traffic Safety Project

Figure 2 – Existing Lane Configurations

Alternative Modes

Pedestrian Facilities

Pedestrian facilities typically include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, there are no pedestrian specific facilities (sidewalks, crosswalks, pedestrian signals, and curb ramps) in the vicinity of the proposed roadway closure site. It is noted that sidewalk gaps can be found along some of the roadways (Morrison Canyon Road) connecting to the project site, but specifically along the segment of the roadway which temporarily closed. Existing gaps and obstacles along the connecting roadways impact convenient and continuous access for pedestrians and present safety concerns in those locations where appropriate pedestrian infrastructure would address potential conflict points.

- **Morrison Canyon Road** – Sidewalk coverage is provided on Morrison Canyon Road between Mission Boulevard and approximately 350 feet east of the intersection at Yerba Buena Street. Sidewalks are provided along developed property frontages between Mission Boulevard and Yerba Buena Street accompanied by curb ramps at the majority of side street approaches while lighting is provided by overhead streetlights. Sidewalks are not provided between Vargas Road and 350 feet east of Yerba Buena Street.

Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2017, classifies bikeways into four categories:

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

In the project area, Class II bike lanes exist on Mission Boulevard between the city limits with Union City and I-680. Bicyclists ride in the roadway and/or on sidewalks along Morrison Canyon Road and Walnut Avenue. Table 1 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the City of Fremont Bicycle Master Plan, 2018.

Table 1 – Bicycle Facility Summary

Status Facility	Class	Length (miles)	Begin Point	End Point
Existing				
Mission Blvd North	II	5.60	Union City Limits	I-680
Walnut Ave	II	2.02	Mission Blvd	Argonaut Wy
Planned				
Morrison Canyon Rd	I	0.76	Midpoint of Road	Vargas Rd
Mission Blvd	IV	5.60	Union City Limits	I-680

Source: *City of Fremont Bicycle Master Plan, City of Fremont, 2018*

Transit Facilities

Alameda-Contra Costa County (AC) Transit provides fixed route bus service in Fremont and neighboring jurisdictions within the East Bay. Routes 99, 216, 217, 232, and 801 provide loop service to destinations throughout the City and stop on Mission Boulevard at various locations. The aforementioned routes operate Monday through Friday with approximately 30- to 60-minute headways between 6:00 a.m. and 8:30 p.m. Saturday service operates with approximately 60-minute headways between 5:00 a.m. and 12:00 a.m.

Two bicycles can be carried on most AC Transit buses. Bike rack space is on a first come, first served basis. Additional bicycles are allowed on AC Transit buses at the discretion of the driver.

Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Paratransit is designed to serve the needs of individuals with disabilities within Fremont and the greater San Francisco Bay area.

Capacity Analysis

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The study intersections were evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated or not, truck traffic, and pedestrian activity. Average delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology. For purposes of this study, delays were calculated using signal timing obtained from the City of Fremont and Caltrans.

The ranges of delay associated with the various levels of service are indicated in Table 2.

Table 2 – Signalized Intersection Level of Service Criteria	
LOS A	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
LOS B	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
LOS C	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
LOS D	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
LOS E	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
LOS F	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

Reference: *Highway Capacity Manual*, Transportation Research Board, 2000

Traffic Operation Standards

Alameda County Transportation Commission (ACTC)

Mission Boulevard is included in the ACTC regional network which has a performance standard for CMP facilities. However, based on the number of trips assumed to be redistributed, the net new peak hour trips would not approach 100 net new peak hour trips, and as such no CMP analysis would be required.

Caltrans

The I-680 ramp intersections are under the Caltrans jurisdiction. Caltrans has set forth guidelines for traffic operations based on measures of effectiveness (MOEs) for varying State Highway facilities. In general, Caltrans recommends a target LOS at the transition between LOS C and LOS D. If the existing location operates worse than the target LOS, then the existing LOS should be maintained.

City of Fremont

The City of Fremont, in its *General Plan,* has adopted the following Policy 3-4.2: Variable Level of Service Standards:

Adopt variable standards for traffic speed and travel delay that recognize the character of adjacent land uses, the functions of different streets, the different modes of transportation on a street or corridor, and other community development goals. The following standards shall apply:

For locations outside of the City Center, Town Centers, and Warm Springs BART Station area (as depicted on the Future Land Use Map), peak hour levels of service for signalized intersections should generally be maintained at Level of Service (LOS) "D" for minor arterials and collector streets, and LOS "E" for regional (CMA network) arterials. The design and construction of new signalized intersections and roadways in areas outside the City Center, Town Centers, and Warm Springs BART Station area should achieve a target operational capacity of midpoint LOS D or better upon completion.

For locations within the City Center, Town Centers, and Irvington and Warm Springs BART Station areas, and within PDA boundaries, peak hour LOS "E" or "F" may be acceptable. In these locations, the efficiency and convenience of vehicular operations must be balanced with the goal of increasing transit use, bicycling, and walking.

Where an intersection is projected to operate unacceptably under cumulative baseline conditions (without the influence of project-added traffic), the project's impact is considered to be significant only if the intersection's average delay increases by four seconds or more. This is consistent with standards applied in the General Plan analysis.

Intersections along Mission Boulevard (SR-238) and Niles Canyon Road (SR-84) are maintained by Caltrans and are State highway facilities. As stated in the Caltrans' Guide for the preparation of Traffic Impact Studies: "Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and "D" on State highway facilities, however, Caltrans acknowledges that it may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE [Measure of Effectiveness] should be maintained." [1] Because the City of Fremont is the lead agency for this project, the LOS standards and impact criteria used in this report were based on City standards, as they better reflect local traffic conditions and local planning priorities in Fremont. This approach is consistent with previous traffic impact analyses conducted in the City of Fremont and is also consistent with CEQA.

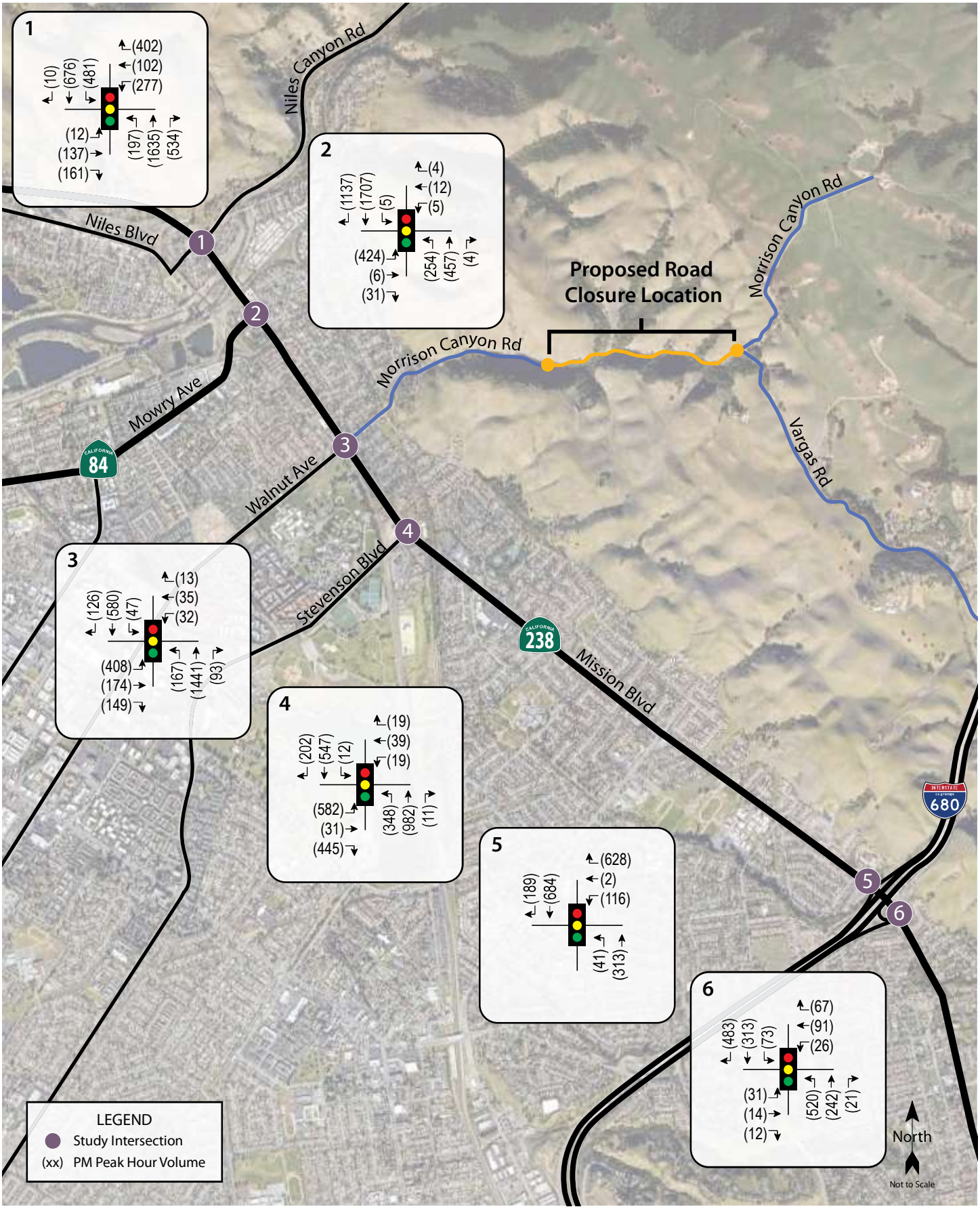
Existing Conditions

The Existing Conditions scenario provides an evaluation of operation based on conditions prior to the temporary road closure traffic volumes during the p.m. peak hour. This condition does not include project-generated redistributed traffic volumes along roadways and intersections located within the study area.

Intersection Levels of Service

Under existing conditions, all study intersections operate at LOS E or better. The existing traffic volumes are shown in Figure 3. A summary of the intersection level of service calculations is contained in Table 3, and copies of the Level of Service calculations are provided in Appendix A.

[1] Caltrans uses different Measures of Effectiveness (MOEs) to evaluate operations of different types of facilities. For example, both signalized and unsignalized intersections are analyzed based on average delay, in seconds per vehicle; this average delay is measured as part of Level of Service (LOS) analysis. For freeways and ramps, the Caltrans MOE is based on vehicle density per lane per mile, while for city streets, the MOE is vehicle speed.



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Morrison Canyon Road Traffic Safety Project

Figure 3 – Existing Traffic Volumes

Table 3 – Existing Peak Hour Intersection Levels of Service		
Study Intersection	**PM Peak Hour**	
	Delay	**LOS**
1. Mission Blvd/Niles Canyon Rd	42.6	D
2. Mission Blvd/Mowry Ave	58.8	E
3. Mission Blvd/Walnut Ave	35.2	D
4. Mission Blvd/Stevenson Ave	42.1	D
5. Mission Blvd North/I-680 SB Ramps	24.4	C
6. Mission Blvd North/I-680 NB Ramps	27.9	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Where LOS and delay under Existing conditions is characterized as LOS C and D, conditions in the field may be worse due to unserved demand. Specifically, unserved demand refers to the upstream and downstream congestion resulting in delays that are not captured by Synchro analysis. For example, vehicles approaching the intersection are underserved when they are unable to pass through the intersection due to queues and congestions. As such, the analysis software is does not always reflect and/or capture the queued operating conditions within the field.

Cumulative Conditions

Cumulative turning movement counts for the horizon year of 2040 were derived from previously approved transportation impact reports, including the Hobbs Property Housing Development Transportation Impact Analysis. Additionally, where future turning movement volumes were not readily available, growth factors ranging between one-half and two percent per annum were applied to the historical roadway segment volumes along of Mission Boulevard, Mowry Avenue, Walnut Avenue, and Niles Boulevard.

The General Plan EIR Mitigation Monitoring Program (City of Fremont, 2011b) identifies a mitigation measure at the Mission Boulevard (SR-238)/Mowry Avenue and Mission Boulevard (SR-238)/Niles Boulevard intersections (General Plan EIR Impact TRA-15). Based on the mitigation measures, the following changes will occur:

- Mowry Avenue eastbound at Mission Boulevard (SR-238) will be modified from one left, one through-left and one right turn lane to include two left-turn lanes and one through/right-turn lane;
- Mission Boulevard (SR-238) northbound at Mowry Avenue will be modified from one left- turn lane, two through lanes, and one shared right turn/through lane to one left-turn lane, one through lanes, and one shared through/right-turn lane;
- Mission Boulevard (SR-238) southbound at Mowry Avenue will change from having one left-turn lane, three through lanes and one right-turn lane to having one left-turn lane, four through lanes, and one shared through/right-turn lane;
- At the Mission Boulevard (SR-238) / Niles Boulevard - Niles Canyon Road intersection, the traffic signal will be modified to include protected left-turn phasing, along with a change to the Niles Boulevard approach from a shared left-through-right lane and one right-turn lane to one right-turn lane and one shared left-through lane, which is expected to be remodeled within the available right-of-way and avoid relocation of utilities. (General Plan EIR TRA-14).

For the purposes of identifying the potential impacts associated with the proposed project, these General Plan EIR mitigation measures are assumed to be fully implemented by 2040 and are included in the Cumulative No-Project and Cumulative plus Project scenarios.

Under these conditions, the intersection located at Mission Boulevard/Mowry Avenue and is expected to operate deficiently. These results are summarized in Table 4 and Cumulative volumes are shown in Figure 4.

Table 4 – Cumulative Peak Hour Intersection Levels of Service

Study Intersection	PM Peak Hour	
	Delay	LOS
1. Mission Blvd/Niles Canyon Rd	54.7	D
2. Mission Blvd/Mowry Ave	**99.1**	**F**
3. Mission Blvd/Walnut Ave-Morrison Canyon Rd	56.8	E
4. Mission Blvd/Stevenson Ave	79.3	E
5. Mission Blvd North/I-680 SB Ramps	45.9	D
6. Mission Blvd North/I-680 NB Ramps	67.4	E

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; **Bold** text = deficient operation

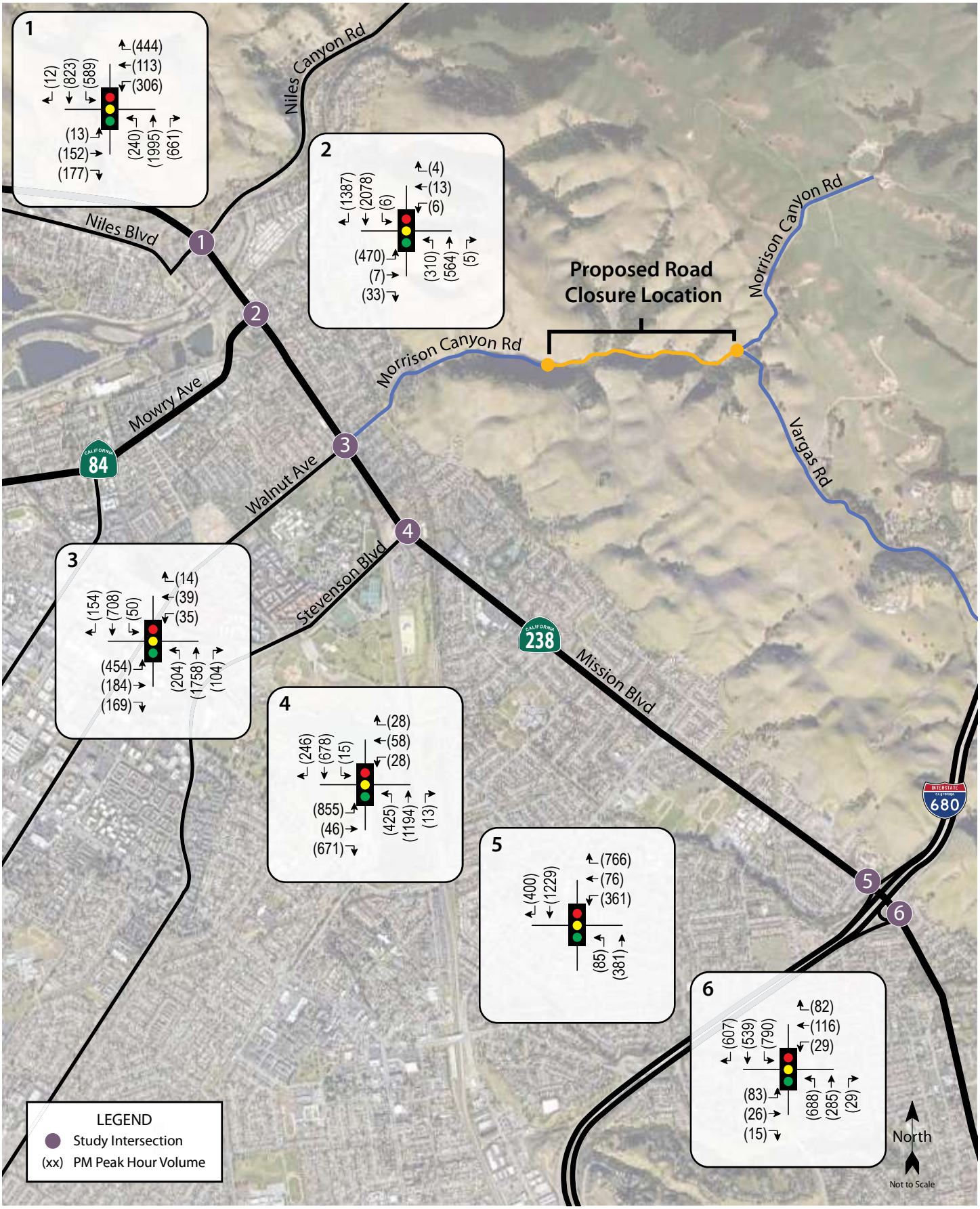
Project Description

The proposed project consists of a roadway closure along Morrison Canyon Road for a distance of approximately 0.75 miles west of the intersection of Morrison Canyon Road/Vargas Road. The road closure would continue to allow pedestrians and cyclists to access the roadway. Additionally, the roadway would remain accessible for local emergency fire and police response purposes and allow access for residents in emergency situations. The project would install permanent barriers at the bottom and top of "middle" Morrison Canyon Road.

Trip Redistribution

The anticipated trip generation (or redistribution of trips) for the proposed project was estimated using segment counts provided by City staff recorded between October 23 and 25, 2018, as well as turning movement counts collected on April 29, 2019. The trip redistribution potential of the project as planned was developed using the aforementioned traffic counts.

Based on the comparison of vehicle volumes before and after the temporary roadway closure, the proposed project is expected to generate an average of 396 trips per day, including 150 trips during the p.m. peak hour. The expected trip redistribution as a result of the road closure is based on the largest difference in average trips observed on Morrison Canyon Road before (October 2018) and after (November 2018) the road closure. The trip generation table is shown in Table 5.



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Morrison Canyon Road Traffic Safety Project

Figure 4 – Cumulative Traffic Volumes

Table 5 – Trip Generation Summary					
Land Use	**Units**	**Daily**		**PM Peak Hour**	
		Rate	**Trips**	**Rate**	**Eastbound Trips**
Proposed					
Temporary Road Closure	N/A	N/A*	396	N/A*	150
Total			**396**		**150**

Note: * = Daily and P.M. peak hour trips developed based on observed roadway segment counts

While trips generated from proposed projects are typically generated between the hours of 4:00 and 6:00 p.m., the largest difference in trips due to the roadway closure was observed at 3:15 p.m. The difference of 150 trips observed between 3:15 p.m. and 4:15 p.m. is approximately 20 trips higher than volumes observed during the typical peak period between 4:00 and 6:00 p.m. For this reason, the difference of 150 trips was used for analysis to conservatively account for the redistribution of trips attributable to the roadway closure. The difference in trips is shown below in Plate 1.

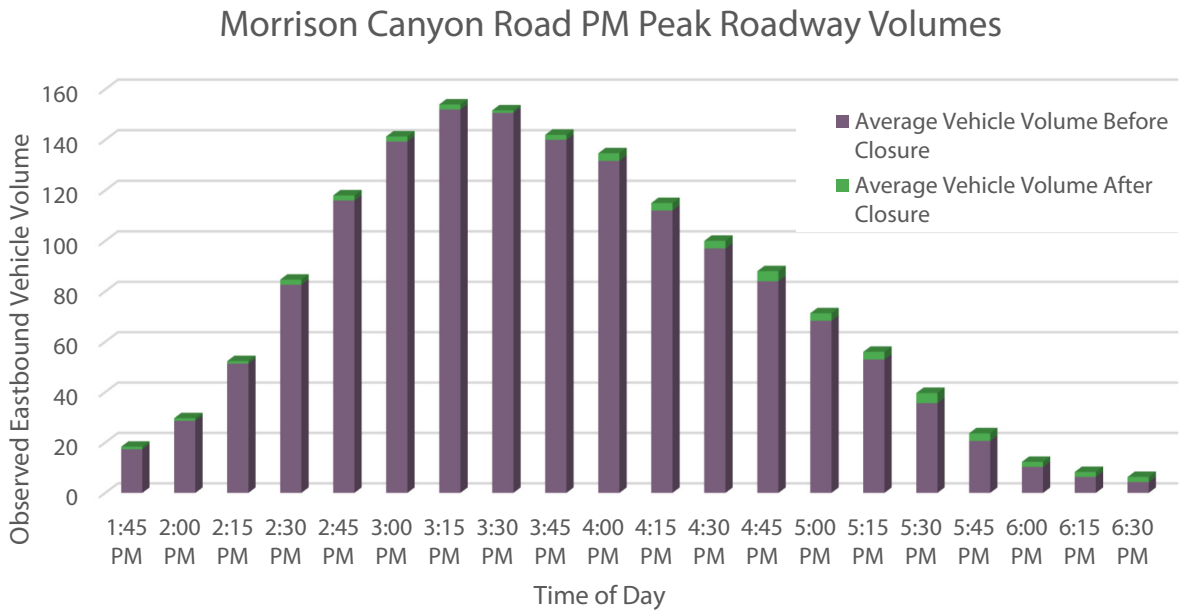


Plate 1 Morrison Canyon Road PM Peak Roadway Volumes

It is noted that while a road closure project would remove trips along the roadway segment in question, the majority of vehicles accessing Morrison Canyon Road are considered to be cut-through traffic attempting to by-pass northbound p.m. commute congestion along I-680. As a result, the trips which would be restricted from traveling along the closed segment of Morrison Canyon Road are assumed to be added back to the "typical" routes including Mission Boulevard, Niles Canyon Road, and I-680. As such, the trips are not new trips added to the existing network, but rather reassigned to the typical homeward bound commute routes.

Trip Assignment

The pattern used to reallocate project trips to the street network was determined by engineering judgement, and employment patterns for residents of the San Francisco Bay Area as well as the Tri-Valley Region based on data from the 2010 Census for work-to-home trips. It should be noted that upon review of the volumes along the Morrison Canyon Road both before and after the temporary road closure, the number of vehicles traveling westbound was minimal. For this reason, no westbound trips were assigned along the study roadways. Based on the applied assumptions shown in Table 5, the following distribution assumptions are proposed. The applied trip assignment assumptions and resulting trips are shown in Table 6 and volumes shown in Figure 5

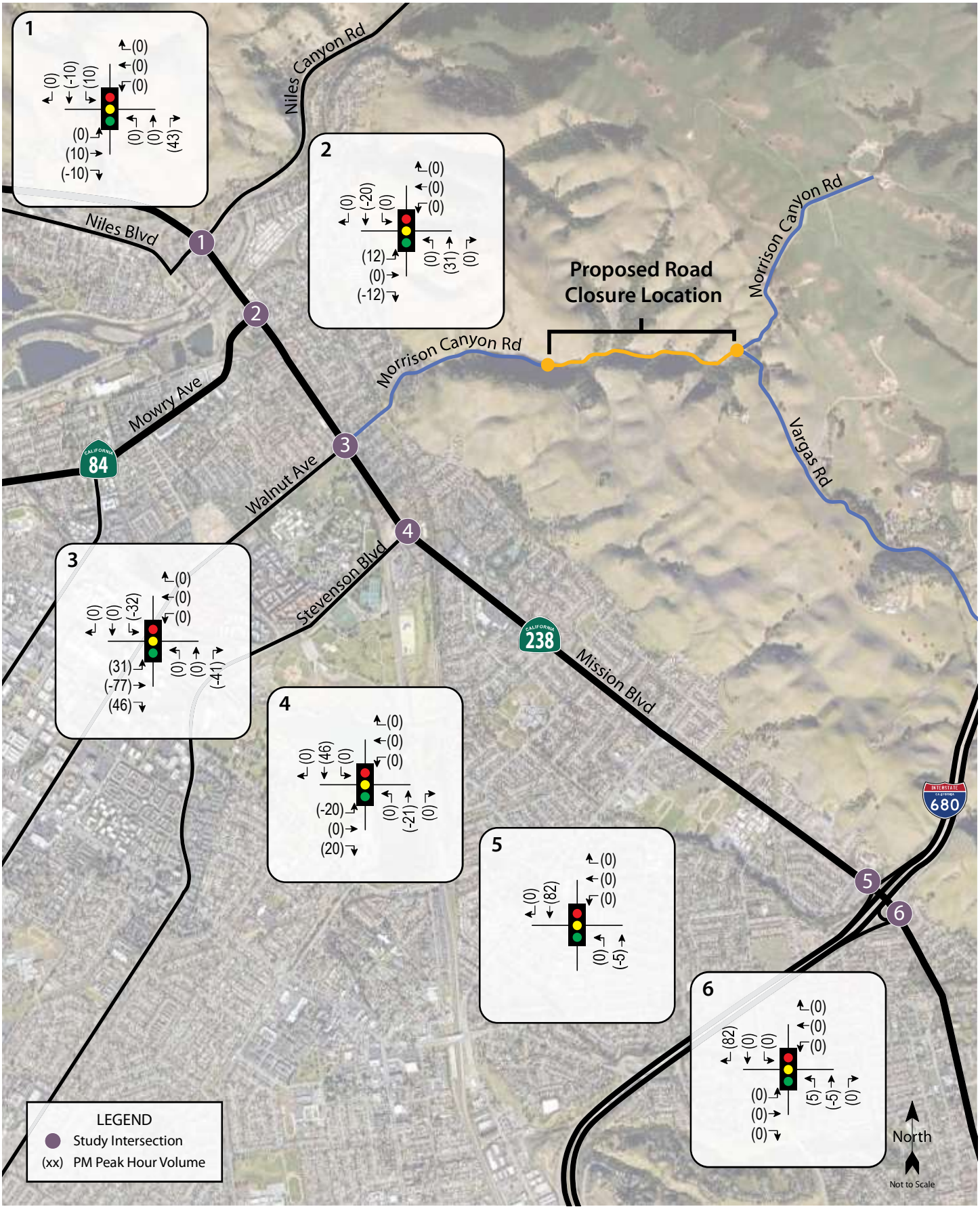
Table 6 – Trip Assignment Assumptions

Route	Percent	Daily Trips	PM Trips
From Mission Blvd north of Niles Canyon Rd (to SR-84)	7%	26	10
From Niles Canyon Rd west of Mission Blvd (to SR-84)	7%	26	10
From Mowry Ave west of Mission Blvd (to SR-84)	8%	32	12
From Walnut Ave west of Mission Blvd (to SR-84)	21%	82	31
From Walnut Ave west of Mission Blvd (to I-680)	31%	122	46
From Stevenson Ave west of Mission Blvd (to I-680)	13%	53	20
From South of Stevenson via Mission Blvd southbound	11%	42	16
From Mission Blvd south of I-680 On-Ramp (northbound)	3%	13	5
TOTAL	**100%**	**396**	**150**

Vehicle Miles Traveled (VMT)

Senate Bill (SB) 743 established a change in the metric to be applied to determining traffic impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service analysis, the change in Vehicle Miles Traveled (VMT) as a result of a project will be the basis for determining California Environmental Quality Act (CEQA) impacts with respect to transportation and traffic.

Vehicle miles traveled under Existing conditions was derived based on the assumed trip assignment patterns and the number of vehicles traveling eastbound on Morrison Canyon Road and subsequently on to I-680. Based on the assumptions the VMT under Existing conditions is 3,219 miles per day as shown below in Table 7.



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Morrison Canyon Road Traffic Safety Project

Figure 5 – Project Traffic Volumes

Table 7 – Existing Vehicle Miles Traveled					
Segment	**From**	**To**	**Daily Trips**	**Distance**	**VMT**
Mission Blvd	Niles Blvd	Walnut Ave	52	0.94	49
Mission Blvd	Mowry Ave	Walnut Ave	32	0.61	20
Morrison Canyon Rd	Mission Blvd	I-680	396	3.88	1,536
I-680	Vargas Rd	SR-84 (Sunol)	396	3.75	1,486
Mission Blvd	Stevenson Blvd	Walnut Ave	53	0.41	22
Mission Blvd	Driscoll Rd	Walnut Ave	42	1.62	69
Mission Blvd	I-680 Off-Ramps	Walnut Ave	13	2.84	37
Total					**3,219**

Note: VMT = Vehicle Miles Traveled

VMT under Existing plus Project conditions are based on the redistributed trip pattern as a result of the roadway closure, as well as the respective volumes along each route. Based on the trip pattern assumptions, the VMT under Existing plus Project conditions is expected to be 2,931 miles per day as shown below in Table 8.

Table 8 – Existing plus Project Vehicle Miles Traveled					
Segment	**From**	**To**	**Daily Trips**	**Distance**	**VMT**
Niles Canyon Rd	Mission Blvd	I-680 (Sunol)	166	7.56	1,256
Mission Blvd	Mowry Ave	Niles Blvd	32	0.33	11
Mission Blvd	Walnut Ave	Niles Blvd	82	0.94	77
Mission Blvd	Walnut Ave	I-680	121	2.84	344
Mission Blvd	Stevenson Blvd	I-680	53	2.43	129
Mission Blvd	Driscoll Rd	I-680 Ramps	42	1.22	52
I-680 Span	Mission Blvd	SR-84	230	4.61	1,062
Total					**2,931**

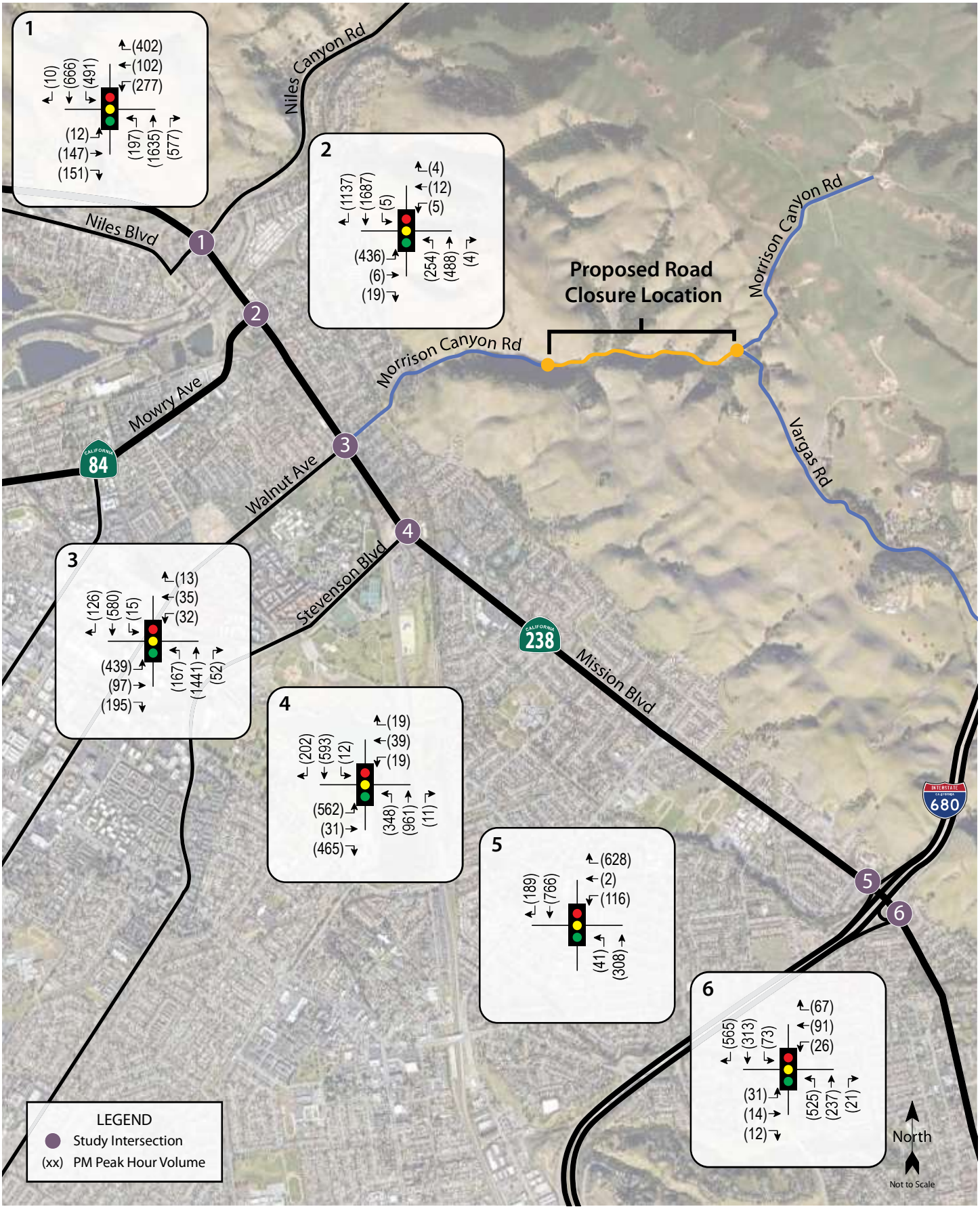
Note: VMT = Vehicle Miles Traveled

In comparison to Existing conditions, the road closure is expected to result in 396 redistributed daily trips and a decrease in VMT of 288 miles per day.

Intersection Operation

Existing plus Project Conditions

Upon the redistribution of project-related traffic, the study intersections are expected to operate at LOS E or better. These results are summarized in Table 9. Project traffic volumes under Existing plus Project conditions are shown in Figure 6.



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Morrison Canyon Road Traffic Safety Project

Figure 6 – Existing plus Project Traffic Volumes

Table 9 – Existing and Existing plus Project Peak Hour Intersection Levels of Service				
Study Intersection	**Existing Conditions PM Peak**		**Existing plus Project PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
1. Mission Blvd/Niles Canyon Rd	42.6	D	42.6	D
2. Mission Blvd/Mowry Ave	58.8	E	59.6	E
3. Mission Blvd/Walnut Ave	35.2	D	32.6	C
4. Mission Blvd/Stevenson Ave	42.1	D	41.9	D
5. Mission Blvd North/I-680 SB Ramps	24.4	C	24.2	C
6. Mission Blvd North/I-680 NB Ramps	27.9	C	30.2	C

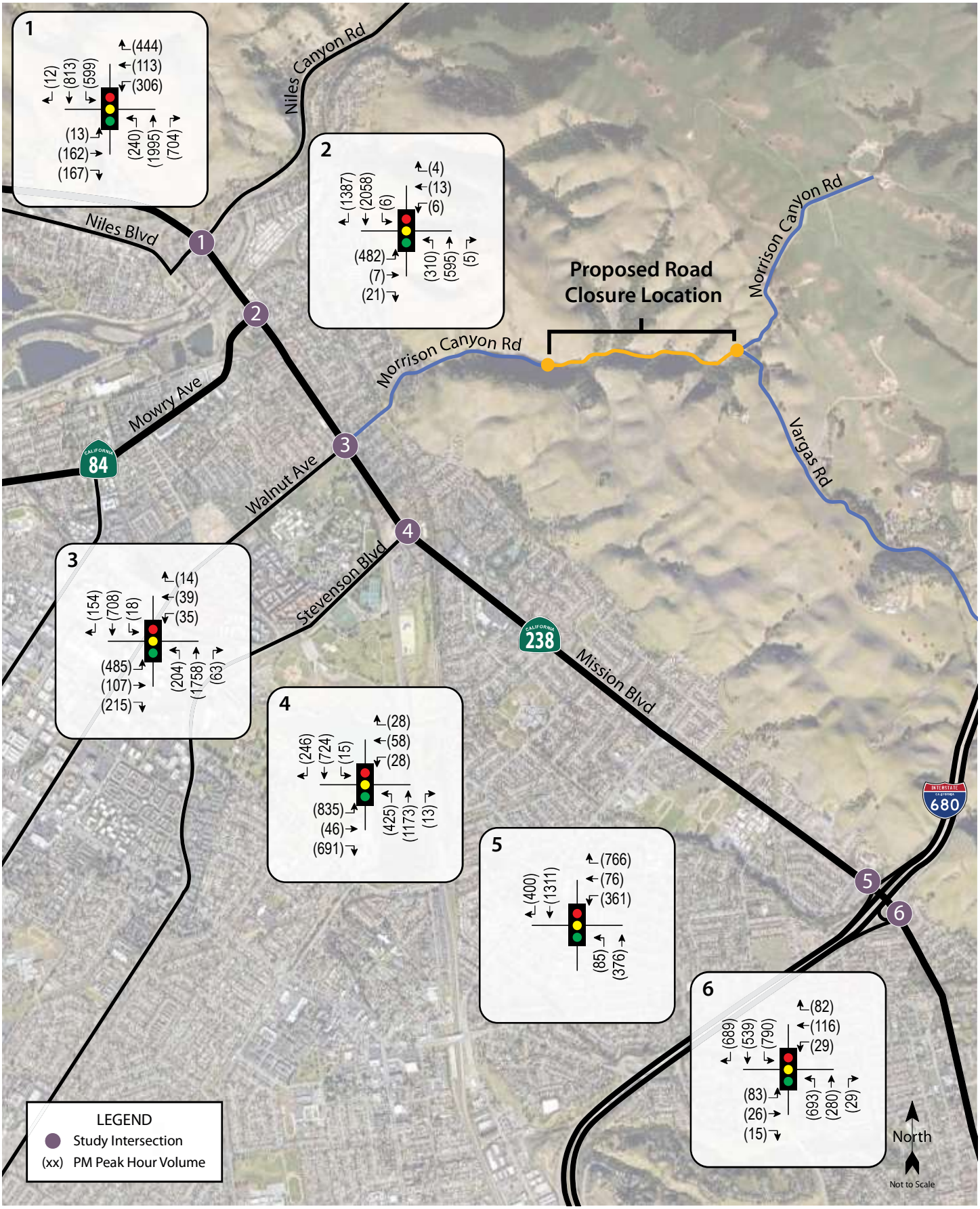
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

It is noted that with the redistribution of project-related traffic volumes, the average delay at the intersections including Mission Boulevard/Walnut Avenue, Mission Boulevard/Stevenson Avenue, and Mission Blvd/I-680 SB Ramps would decrease during the p.m. peak hour. While this is counter-intuitive, this condition occurs when a project adds trips to movements that are currently underutilized or have delays that are below the intersection average, resulting in a better balance between approaches and lower overall average delay. If a project adds traffic predominantly to the right-turn or through movement, which has an average delay that is lower than the average for the intersection as a whole, then it can result in a slight reduction in the overall average delay. The conclusion could incorrectly be drawn that the project actually improves operation based on this data alone; however, it is more appropriate to conclude that the project trips are expected to make use of excess capacity, so drivers individually will experience little, if any, change in conditions as a result of the project.

Cumulative plus Project Conditions

With project-related redistributed traffic added to 2040 Cumulative volumes, the study intersections are expected to operate acceptably with the exception of Mission Boulevard/Mowry Avenue. Even with implementation of the General Plan EIR mitigation measures discussed above, the intersection at Mission Boulevard/Mowry Avenue would continue to operate at LOS F during the p.m. peak hour under Cumulative plus Project conditions.

It should be noted that with the redistribution of project-related traffic volumes, the average delay at the intersections of Mission Boulevard/Walnut Avenue, Mission Boulevard/Stevenson Avenue would slightly decrease during the p.m. peak hour. These results are summarized in Table 10 and Cumulative plus Project volumes are shown in Figure 7.



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Morrison Canyon Road Traffic Safety Project

Figure 7 – Cumulative plus Project Traffic Volumes

Table 10 – Cumulative and Cumulative plus Project Peak Hour Intersection Levels of Service				
Study Intersection	**Cumulative Conditions PM Peak**		**Cumulative plus Project PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**
1. Mission Blvd/Niles Canyon Rd	76.5	E	77.8	E
2. Mission Blvd/Mowry Ave	**99.1**	**F**	**82.1**	**F**
3. Mission Blvd/Walnut Ave	56.8	E	40.8	D
4. Mission Blvd/Stevenson Ave	79.3	E	78.5	E
5. Mission Blvd/I-680 SB Ramps	45.9	D	47.7	D
6. Mission Blvd North/I-680 NB Ramps	67.4	E	77.7	E

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; **Bold** text = deficient operation

Finding – The study intersections are expected to continue operating acceptably upon the redistribution of project-generated traffic with the exception of Mission Boulevard/Mowry Avenue.

Alternative Modes

Pedestrian and Bicycle Facilities

Given the rural characteristics of the Morrison Canyon Road, it is reasonable to assume that some project community members will want to walk and/or bicycle in the project area.

Morrison Canyon Road – Sidewalks do not exist along the length of the proposed roadway closure. However, the closure of the roadway to through vehicles would enhance safety for pedestrians and cyclists as the potential for conflict with vehicles would be reduced.

Finding – Pedestrian and bicycle facilities would be enhanced under project conditions as the interaction with passenger vehicles would be substantially reduced.

Transit

There are no existing transit routes which provide service along the study roadway. However, the project would result in additional vehicles traveling along specific sections of Mission Boulevard. The project would not result in the removal and/or relocation of transit facilities, nor would it result in a decrease in access. The additional vehicles added to Mission Boulevard are not expected to significantly impact transit accessibility or travel speeds.

Finding – Transit facilities serving the project site are expected to remain the same with or without the proposed roadway closure project.

Conclusions

Conclusions

- The proposed project is expected to redistribute an average of 396 trips per day, including 150 p.m. peak hour trips.
- VMT as a result of the redistribution of project trips is expected to decrease by approximately 288 miles per day.
- The study intersections operate acceptably overall during the p.m. peak hour under existing conditions.
- Under Cumulative conditions the study intersections are expected to operate acceptably during the p.m. peak hour at LOS E or better with the exception of Mission Boulevard/Mowry Avenue.
- Upon applying redistributed project trips to Existing volumes, the study intersections are expected to continue operating acceptably.
- Upon applying redistributed project trips to Cumulative volumes, the study intersections are expected to continue operating acceptably with the exception of Mission Boulevard/Mowry.
- While LOS F is expected to be maintained at the intersection of Mission Boulevard/Mowry Avenue under Cumulative plus Project conditions, the delay is expected to improve. This is largely due to the change in intersection geometry 'associated with the General Plan EIR recommended mitigation measures. As such, no significant impact is expected as a result of the project.

Study Participants and References

Study Participants

Principal in Charge	Mark E. Spencer, TE
Assistant Planner	Andre Huff
Graphics	Katia Wolf
Editing/Formatting	Hannah Yung-Boxdell
Quality Control	Dalene J. Whitlock, PE, PTOE

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Appendix A

Intersection Level of Service Calculations

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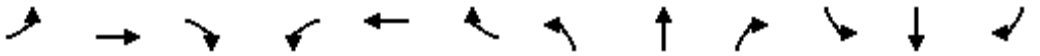
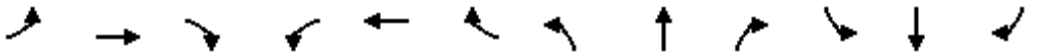


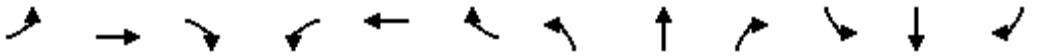
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	137	161	277	102	402	197	1632	534	481	676	10
Future Volume (vph)	12	137	161	277	102	402	197	1632	534	481	676	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7	4.7	5.8	5.8	5.3	4.2	5.8	5.8	5.3	5.8	
Lane Util. Factor		0.95	0.95	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes		1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1733	1471	3433	1863	1570	1770	5085	1583	3433	5071	
Flt Permitted		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1733	1471	3433	1863	1570	1770	5085	1583	3433	5071	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	144	169	292	107	423	207	1718	562	506	712	11
RTOR Reduction (vph)	0	3	134	0	0	158	0	0	167	0	1	0
Lane Group Flow (vph)	0	171	18	292	107	265	207	1718	395	506	722	0
Confl. Peds. (#/hr)	1		4	4		1	4			1		4
Turn Type	Split	NA	Perm	Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3	1	5	2		1	6	
Permitted Phases			4			3			2			
Actuated Green, G (s)		16.0	16.0	14.5	14.5	37.6	18.1	57.3	57.3	23.1	63.4	
Effective Green, g (s)		16.0	16.0	14.5	14.5	37.6	18.1	57.3	57.3	23.1	63.4	
Actuated g/C Ratio		0.12	0.12	0.11	0.11	0.28	0.14	0.43	0.43	0.17	0.48	
Clearance Time (s)		4.7	4.7	5.8	5.8	5.3	4.2	5.8	5.8	5.3	5.8	
Vehicle Extension (s)		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)		209	177	375	203	445	241	2199	684	598	2426	
v/s Ratio Prot		c0.10		c0.09	0.06	0.10	0.12	c0.34		c0.15	0.14	
v/s Ratio Perm			0.01			0.07			0.25			
v/c Ratio		0.82	0.10	0.78	0.53	0.60	0.86	0.78	0.58	0.85	0.30	
Uniform Delay, d1		56.8	51.9	57.4	55.8	40.9	56.0	32.2	28.4	53.0	21.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		20.6	0.1	9.0	1.1	1.4	24.1	2.8	3.5	10.3	0.3	
Delay (s)		77.4	52.0	66.4	56.9	42.3	80.0	35.1	32.0	63.2	21.3	
Level of Service		E	D	E	E	D	F	D	C	E	C	
Approach Delay (s)		65.5			52.8			38.1			38.6	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	132.5	Sum of lost time (s)	21.6
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



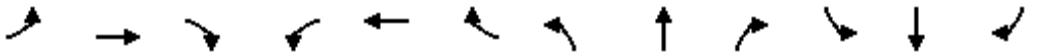
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	424	6	31	5	12	4	245	457	4	5	1707	1137
Future Volume (vph)	424	6	31	5	12	4	245	457	4	5	1707	1137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1		4.3		4.8	5.8		4.8	5.8	5.8
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.98		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1688	1561		1797		1770	5079		1770	5085	1548
Flt Permitted	0.95	0.95	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1688	1561		1797		1770	5079		1770	5085	1548
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	442	6	32	5	12	4	255	476	4	5	1778	1184
RTOR Reduction (vph)	0	0	26	0	4	0	0	0	0	0	0	417
Lane Group Flow (vph)	225	223	6	0	18	0	255	480	0	5	1778	767
Confl. Peds. (#/hr)			2									1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	24.5	24.5	24.5		4.6		24.0	80.1		0.8	56.9	56.9
Effective Green, g (s)	24.5	24.5	24.5		4.6		24.0	80.1		0.8	56.9	56.9
Actuated g/C Ratio	0.19	0.19	0.19		0.04		0.18	0.62		0.01	0.44	0.44
Clearance Time (s)	5.1	5.1	5.1		4.3		4.8	5.8		4.8	5.8	5.8
Vehicle Extension (s)	5.0	5.0	5.0		3.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	316	318	294		63		326	3129		10	2225	677
v/s Ratio Prot	c0.13	0.13			c0.01		c0.14	0.09		0.00	0.35	
v/s Ratio Perm			0.00									c0.50
v/c Ratio	0.71	0.70	0.02		0.29		0.78	0.15		0.50	0.80	1.13
Uniform Delay, d1	49.4	49.3	43.0		61.1		50.5	10.6		64.4	31.6	36.5
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.1	8.5	0.1		2.5		11.6	0.1		34.4	3.1	77.5
Delay (s)	58.5	57.8	43.0		63.6		62.1	10.7		98.8	34.7	114.1
Level of Service	E	E	D		E		E	B		F	C	F
Approach Delay (s)		57.2			63.6			28.5			66.5	
Approach LOS		E			E			C			E	

Intersection Summary			
HCM 2000 Control Delay	58.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



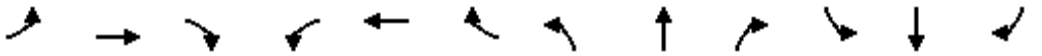
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	408	174	149	32	35	13	167	1441	93	47	580	126
Future Volume (vph)	408	174	149	32	35	13	167	1441	93	47	580	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6	3.6	3.6	4.1	4.1		3.6	5.3		3.6	5.3	5.3
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1552	1770	1788		1770	3507		1770	3539	1545
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1552	1770	1788		1770	3507		1770	3539	1545
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	443	189	162	35	38	14	182	1566	101	51	630	137
RTOR Reduction (vph)	0	0	134	0	10	0	0	3	0	0	0	73
Lane Group Flow (vph)	443	189	28	35	42	0	182	1664	0	51	630	64
Confl. Peds. (#/hr)			6				2					2
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7									6
Actuated Green, G (s)	22.2	22.2	22.2	9.6	9.6		21.2	73.3		8.3	60.4	60.4
Effective Green, g (s)	22.2	22.2	22.2	9.6	9.6		21.2	73.3		8.3	60.4	60.4
Actuated g/C Ratio	0.17	0.17	0.17	0.07	0.07		0.16	0.56		0.06	0.46	0.46
Clearance Time (s)	3.6	3.6	3.6	4.1	4.1		3.6	5.3		3.6	5.3	5.3
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	586	318	265	130	132		288	1977		113	1644	717
v/s Ratio Prot	c0.13	0.10		0.02	c0.02		0.10	c0.47		c0.03	0.18	
v/s Ratio Perm			0.02									0.04
v/c Ratio	0.76	0.59	0.10	0.27	0.32		0.63	0.84		0.45	0.38	0.09
Uniform Delay, d1	51.3	49.7	45.5	56.9	57.1		50.8	23.5		58.7	22.7	19.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.3	2.5	0.1	0.8	1.0		4.5	4.5		2.8	0.7	0.2
Delay (s)	56.6	52.2	45.6	57.7	58.1		55.2	28.1		61.5	23.3	19.7
Level of Service	E	D	D	E	E		E	C		E	C	B
Approach Delay (s)		53.3			57.9			30.8			25.1	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



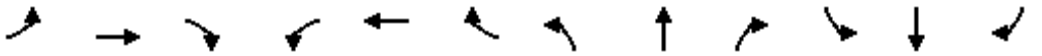
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	582	31	445	19	39	19	348	982	11	12	547	202
Future Volume (vph)	582	31	445	19	39	19	348	982	11	12	547	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	4.1	4.1	4.1	4.1		4.1	5.8		4.1	5.8	5.8
Lane Util. Factor	0.95	0.95	0.88	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1694	2750	1770	1762		3433	3532		1770	3539	1563
Flt Permitted	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1694	2750	1770	1762		3433	3532		1770	3539	1563
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	633	34	484	21	42	21	378	1067	12	13	595	220
RTOR Reduction (vph)	0	0	354	0	14	0	0	0	0	0	0	127
Lane Group Flow (vph)	335	332	130	21	49	0	378	1079	0	13	595	93
Confl. Peds. (#/hr)	1		1	1		1	7		2	2		1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	8	8		7	7		1	6		5	2	
Permitted Phases			8									2
Actuated Green, G (s)	39.3	39.3	39.3	9.5	9.5		27.6	86.3		2.8	61.5	61.5
Effective Green, g (s)	39.3	39.3	39.3	9.5	9.5		27.6	86.3		2.8	61.5	61.5
Actuated g/C Ratio	0.25	0.25	0.25	0.06	0.06		0.18	0.55		0.02	0.39	0.39
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1		4.1	5.8		4.1	5.8	5.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		1.3	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	423	426	692	107	107		607	1953		31	1395	616
v/s Ratio Prot	c0.20	0.20		0.01	c0.03		c0.11	c0.31		0.01	c0.17	
v/s Ratio Perm			0.05									0.06
v/c Ratio	0.79	0.78	0.19	0.20	0.46		0.62	0.55		0.42	0.43	0.15
Uniform Delay, d1	54.5	54.3	45.8	69.6	70.8		59.4	22.4		75.8	34.4	30.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.8	8.8	0.1	0.9	3.1		1.4	1.1		8.9	1.0	0.5
Delay (s)	64.3	63.1	46.0	70.5	73.8		60.8	23.6		84.7	35.4	30.9
Level of Service	E	E	D	E	E		E	C		F	D	C
Approach Delay (s)		56.2			73.0			33.2			35.0	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	156.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



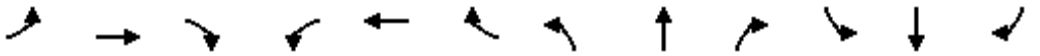
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	116	2	628	41	313	0	0	766	189
Future Volume (vph)	0	0	0	116	2	628	41	313	0	0	766	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.7	4.7	3.7	5.5			5.5	5.5
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frpb, ped/bikes					1.00	0.98	1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00	1.00	1.00	1.00			1.00	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1775	1557	1770	3539			3539	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1775	1557	1770	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	126	2	683	45	340	0	0	833	205
RTOR Reduction (vph)	0	0	0	0	0	265	0	0	0	0	0	105
Lane Group Flow (vph)	0	0	0	0	128	418	45	340	0	0	833	100
Confl. Peds. (#/hr)	4					4			5	5		
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					29.8	29.8	4.0	53.3			45.6	45.6
Effective Green, g (s)					29.8	29.8	4.0	53.3			45.6	45.6
Actuated g/C Ratio					0.32	0.32	0.04	0.57			0.49	0.49
Clearance Time (s)					4.7	4.7	3.7	5.5			5.5	5.5
Vehicle Extension (s)					4.0	4.0	3.5	3.5			3.5	3.5
Lane Grp Cap (vph)					566	497	75	2021			1729	773
v/s Ratio Prot							c0.03	0.10			c0.24	
v/s Ratio Perm					0.07	c0.27						0.06
v/c Ratio					0.23	0.84	0.60	0.17			0.48	0.13
Uniform Delay, d1					23.3	29.5	43.9	9.5			15.9	13.0
Progression Factor					1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2					0.3	12.6	13.0	0.2			1.0	0.3
Delay (s)					23.6	42.1	56.8	9.7			16.9	13.4
Level of Service					C	D	E	A			B	B
Approach Delay (s)		0.0			39.2			15.2			16.2	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	93.3	Sum of lost time (s)	13.9
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



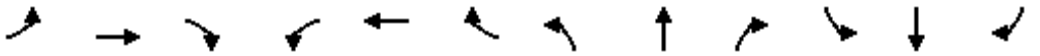
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	14	12	26	91	67	520	242	21	73	313	483
Future Volume (vph)	31	14	12	26	91	67	520	242	21	73	313	483
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	3.7			3.7	3.7	3.5	4.7		3.7	4.7	4.7
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1610			1842	1583	1770	3487		1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1610			1842	1583	1770	3487		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	15	13	28	99	73	565	263	23	79	340	525
RTOR Reduction (vph)	0	12	0	0	0	63	0	4	0	0	0	426
Lane Group Flow (vph)	31	19	0	0	127	10	565	282	0	79	340	99
Confl. Peds. (#/hr)			45	45					6	6		
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						6
Actuated Green, G (s)	4.5	4.5			11.9	11.9	36.9	45.2		7.6	16.1	16.1
Effective Green, g (s)	4.5	4.5			11.9	11.9	36.9	45.2		7.6	16.1	16.1
Actuated g/C Ratio	0.05	0.05			0.14	0.14	0.43	0.53		0.09	0.19	0.19
Clearance Time (s)	3.7	3.7			3.7	3.7	3.5	4.7		3.7	4.7	4.7
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	88	85			257	221	768	1854		158	670	299
v/s Ratio Prot	c0.02	0.01			c0.07		c0.32	0.08		0.04	c0.10	
v/s Ratio Perm						0.01						0.06
v/c Ratio	0.35	0.22			0.49	0.05	0.74	0.15		0.50	0.51	0.33
Uniform Delay, d1	38.8	38.6			33.8	31.6	20.0	10.1		36.9	30.9	29.8
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	1.3			1.5	0.1	3.7	0.2		2.5	2.7	3.0
Delay (s)	41.3	39.9			35.3	31.7	23.7	10.3		39.4	33.6	32.8
Level of Service	D	D			D	C	C	B		D	C	C
Approach Delay (s)		40.6			34.0			19.2			33.6	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	152	177	306	113	444	240	1995	661	589	823	12
Future Volume (vph)	13	152	177	306	113	444	240	1995	661	589	823	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.7		5.8	5.8	5.3	4.2	5.8	5.8	5.3	5.8	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1694		3433	1863	1562	1770	5085	1583	3433	5072	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1694		3433	1863	1562	1770	5085	1583	3433	5072	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	14	160	186	322	119	467	253	2100	696	620	866	13
RTOR Reduction (vph)	0	27	0	0	0	118	0	0	186	0	1	0
Lane Group Flow (vph)	14	319	0	322	119	349	253	2100	510	620	878	0
Confl. Peds. (#/hr)	1		4	4		1	4			1		4
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	5.1	19.3		17.6	31.8	51.5	20.1	49.4	49.4	19.7	50.1	
Effective Green, g (s)	5.1	19.3		17.6	31.8	51.5	20.1	49.4	49.4	19.7	50.1	
Actuated g/C Ratio	0.04	0.15		0.14	0.25	0.40	0.16	0.39	0.39	0.15	0.39	
Clearance Time (s)	4.7	4.7		5.8	5.8	5.3	4.2	5.8	5.8	5.3	5.8	
Vehicle Extension (s)	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	70	256		473	464	630	278	1968	612	530	1991	
v/s Ratio Prot	0.01	c0.19		c0.09	0.06	0.09	0.14	c0.41		c0.18	0.17	
v/s Ratio Perm						0.14			0.32			
v/c Ratio	0.20	1.25		0.68	0.26	0.55	0.91	1.07	0.83	1.17	0.44	
Uniform Delay, d1	59.3	54.1		52.3	38.4	29.2	52.9	39.1	35.4	53.9	28.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	138.8		3.2	0.1	0.6	31.1	40.9	12.6	95.2	0.7	
Delay (s)	59.8	193.0		55.5	38.5	29.8	83.9	80.0	47.9	149.1	29.2	
Level of Service	E	F		E	D	C	F	F	D	F	C	
Approach Delay (s)		187.8			40.1			73.0			78.8	
Approach LOS		F			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	76.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	127.6	Sum of lost time (s)	21.6
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

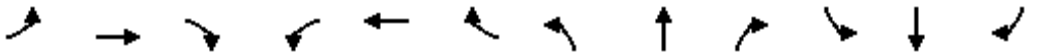


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	470	7	33	6	13	4	310	564	5	6	2078	1387
Future Volume (vph)	470	7	33	6	13	4	310	564	5	6	2078	1387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1			4.3		4.8	5.8		4.8	5.8	
Lane Util. Factor	0.97	1.00			1.00		1.00	0.91		1.00	0.81	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.88			0.98		1.00	1.00		1.00	0.94	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	1612			1798		1770	5079		1770	7028	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	1612			1798		1770	5079		1770	7028	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	490	7	34	6	14	4	323	588	5	6	2165	1445
RTOR Reduction (vph)	0	27	0	0	4	0	0	0	0	0	87	0
Lane Group Flow (vph)	490	14	0	0	20	0	323	593	0	6	3523	0
Confl. Peds. (#/hr)			2									1
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	26.0	26.0			4.6		24.0	78.6		0.8	55.4	
Effective Green, g (s)	26.0	26.0			4.6		24.0	78.6		0.8	55.4	
Actuated g/C Ratio	0.20	0.20			0.04		0.18	0.60		0.01	0.43	
Clearance Time (s)	5.1	5.1			4.3		4.8	5.8		4.8	5.8	
Vehicle Extension (s)	5.0	5.0			3.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	686	322			63		326	3070		10	2995	
v/s Ratio Prot	c0.14	0.01			c0.01		c0.18	0.12		0.00	c0.50	
v/s Ratio Perm												
v/c Ratio	0.71	0.04			0.32		0.99	0.19		0.60	1.77dr	
Uniform Delay, d1	48.5	42.0			61.2		52.9	11.5		64.4	37.3	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.4	0.1			2.9		47.2	0.1		70.6	83.2	
Delay (s)	52.9	42.1			64.1		100.1	11.6		135.0	120.5	
Level of Service	D	D			E		F	B		F	F	
Approach Delay (s)		52.1			64.1			42.8			120.5	
Approach LOS		D			E			D			F	

Intersection Summary			
HCM 2000 Control Delay	99.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

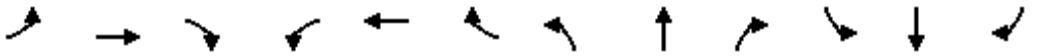
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



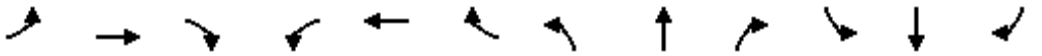
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	545	184	169	35	39	14	204	1758	104	50	708	154
Future Volume (vph)	545	184	169	35	39	14	204	1758	104	50	708	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6	3.6	3.6	4.1	4.1		3.6	5.3		3.6	5.3	5.3
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1552	1770	1789		1770	3510		1770	3539	1545
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1552	1770	1789		1770	3510		1770	3539	1545
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	592	200	184	38	42	15	222	1911	113	54	770	167
RTOR Reduction (vph)	0	0	147	0	10	0	0	3	0	0	0	95
Lane Group Flow (vph)	592	200	37	38	47	0	222	2021	0	54	770	72
Confl. Peds. (#/hr)			6				2					2
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7									6
Actuated Green, G (s)	26.3	26.3	26.3	9.6	9.6		21.1	70.2		7.3	56.4	56.4
Effective Green, g (s)	26.3	26.3	26.3	9.6	9.6		21.1	70.2		7.3	56.4	56.4
Actuated g/C Ratio	0.20	0.20	0.20	0.07	0.07		0.16	0.54		0.06	0.43	0.43
Clearance Time (s)	3.6	3.6	3.6	4.1	4.1		3.6	5.3		3.6	5.3	5.3
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	694	376	313	130	132		287	1895		99	1535	670
v/s Ratio Prot	c0.17	0.11		0.02	c0.03		0.13	c0.58		0.03	c0.22	
v/s Ratio Perm			0.02									0.05
v/c Ratio	0.85	0.53	0.12	0.29	0.35		0.77	1.07		0.55	0.50	0.11
Uniform Delay, d1	50.0	46.3	42.4	57.0	57.3		52.2	29.9		59.7	26.6	21.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.8	1.1	0.1	0.9	1.2		12.2	41.0		6.0	1.2	0.3
Delay (s)	59.8	47.5	42.5	57.9	58.4		64.4	70.9		65.8	27.8	22.2
Level of Service	E	D	D	E	E		E	E		E	C	C
Approach Delay (s)		54.0			58.2			70.2			28.9	
Approach LOS		D			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	56.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



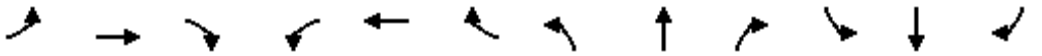
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	855	46	671	28	58	28	425	1194	13	15	678	246
Future Volume (vph)	855	46	671	28	58	28	425	1194	13	15	678	246
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	4.1	4.1	4.1	4.1		4.1	5.8		4.1	5.8	5.8
Lane Util. Factor	0.95	0.95	0.88	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1694	2750	1770	1765		3433	3533		1770	3539	1563
Flt Permitted	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1694	2750	1770	1765		3433	3533		1770	3539	1563
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	929	50	729	30	63	30	462	1298	14	16	737	267
RTOR Reduction (vph)	0	0	316	0	13	0	0	1	0	0	0	130
Lane Group Flow (vph)	492	487	413	30	80	0	462	1311	0	16	737	137
Confl. Peds. (#/hr)	1		1	1		1	7		2	2		1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	8	8		7	7		1	6		5	2	
Permitted Phases			8									2
Actuated Green, G (s)	54.5	54.5	54.5	13.3	13.3		12.9	67.3		2.8	57.2	57.2
Effective Green, g (s)	54.5	54.5	54.5	13.3	13.3		12.9	67.3		2.8	57.2	57.2
Actuated g/C Ratio	0.35	0.35	0.35	0.09	0.09		0.08	0.43		0.02	0.37	0.37
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1		4.1	5.8		4.1	5.8	5.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		1.3	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	587	591	960	150	150		283	1524		31	1297	573
v/s Ratio Prot	c0.29	0.29		0.02	c0.05		c0.13	c0.37		0.01	c0.21	
v/s Ratio Perm			0.15									0.09
v/c Ratio	0.84	0.82	0.43	0.20	0.53		1.63	0.86		0.52	0.57	0.24
Uniform Delay, d1	46.7	46.4	38.9	66.4	68.4		71.5	40.1		75.9	39.5	34.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.1	9.1	0.3	0.7	3.6		300.2	6.6		13.7	1.8	1.0
Delay (s)	56.8	55.5	39.2	67.1	72.0		371.7	46.7		89.7	41.3	35.3
Level of Service	E	E	D	E	E		F	D		F	D	D
Approach Delay (s)		48.9			70.8			131.4			40.5	
Approach LOS		D			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	79.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	156.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



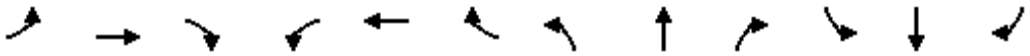
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	361	76	766	85	381	0	0	1229	400
Future Volume (vph)	0	0	0	361	76	766	85	381	0	0	1229	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.7	4.7	3.7	5.5			5.5	5.5
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frpb, ped/bikes					1.00	0.98	1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00	1.00	1.00	1.00			1.00	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.96	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1789	1553	1770	3539			3539	1583
Flt Permitted					0.96	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1789	1553	1770	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	392	83	833	92	414	0	0	1336	435
RTOR Reduction (vph)	0	0	0	0	0	223	0	0	0	0	0	155
Lane Group Flow (vph)	0	0	0	0	475	610	92	414	0	0	1336	280
Confl. Peds. (#/hr)	4					4			5	5		
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					58.0	58.0	9.3	74.6			61.6	61.6
Effective Green, g (s)					58.0	58.0	9.3	74.6			61.6	61.6
Actuated g/C Ratio					0.41	0.41	0.07	0.52			0.43	0.43
Clearance Time (s)					4.7	4.7	3.7	5.5			5.5	5.5
Vehicle Extension (s)					4.0	4.0	3.5	3.5			3.5	3.5
Lane Grp Cap (vph)					726	630	115	1848			1526	682
v/s Ratio Prot							c0.05	0.12			c0.38	
v/s Ratio Perm					0.27	c0.39						0.18
v/c Ratio					0.65	0.97	0.80	0.22			0.88	0.41
Uniform Delay, d1					34.3	41.5	65.8	18.4			37.1	28.1
Progression Factor					1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2					2.4	28.0	32.3	0.3			7.3	1.8
Delay (s)					36.6	69.5	98.1	18.7			44.4	29.9
Level of Service					D	E	F	B			D	C
Approach Delay (s)		0.0			57.6			33.2			40.9	
Approach LOS		A			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	45.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	142.8	Sum of lost time (s)	13.9
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



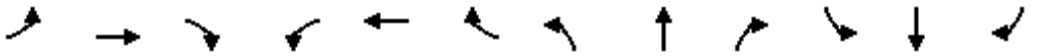
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	26	15	29	116	82	688	285	29	790	539	607
Future Volume (vph)	83	26	15	29	116	82	688	285	29	790	539	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	3.7			3.7	3.7	3.5	4.7		3.7	4.7	4.7
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1648			1844	1583	1770	3477		1770	3539	1583
Flt Permitted	0.95	0.98			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1648			1844	1583	1770	3477		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	90	28	16	32	126	89	748	310	32	859	586	660
RTOR Reduction (vph)	0	8	0	0	0	77	0	5	0	0	0	346
Lane Group Flow (vph)	67	59	0	0	158	12	748	337	0	859	586	314
Confl. Peds. (#/hr)			45	45					6	6		
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						6
Actuated Green, G (s)	9.8	9.8			14.7	14.7	43.6	20.7		48.5	25.8	25.8
Effective Green, g (s)	9.8	9.8			14.7	14.7	43.6	20.7		48.5	25.8	25.8
Actuated g/C Ratio	0.09	0.09			0.13	0.13	0.40	0.19		0.44	0.24	0.24
Clearance Time (s)	3.7	3.7			3.7	3.7	3.5	4.7		3.7	4.7	4.7
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	150	147			247	212	704	657		783	833	372
v/s Ratio Prot	c0.04	0.04			c0.09		0.42	0.10		c0.49	0.17	
v/s Ratio Perm						0.01						c0.20
v/c Ratio	0.45	0.40			0.64	0.06	1.06	0.51		1.10	0.70	0.85
Uniform Delay, d1	47.3	47.1			44.9	41.3	33.0	39.9		30.5	38.3	39.9
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.1	1.8			5.4	0.1	51.7	2.9		62.0	4.9	20.5
Delay (s)	49.4	48.9			50.3	41.5	84.7	42.7		92.5	43.3	60.4
Level of Service	D	D			D	D	F	D		F	D	E
Approach Delay (s)		49.1			47.1			71.5			68.7	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	67.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	109.5	Sum of lost time (s)	15.8
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



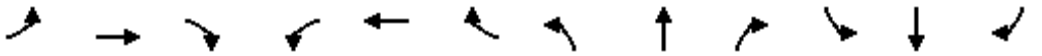
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	137	151	277	102	402	197	1635	577	481	676	10
Future Volume (vph)	12	137	151	277	102	402	197	1635	577	481	676	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7	4.7	5.8	5.8	5.3	4.2	5.8	5.8	5.3	5.8	
Lane Util. Factor		0.95	0.95	0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes		1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1735	1471	3433	1863	1570	1770	5085	1583	3433	5071	
Flt Permitted		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1735	1471	3433	1863	1570	1770	5085	1583	3433	5071	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	144	159	292	107	423	207	1721	607	506	712	11
RTOR Reduction (vph)	0	3	126	0	0	158	0	0	180	0	1	0
Lane Group Flow (vph)	0	170	17	292	107	265	207	1721	427	506	722	0
Confl. Peds. (#/hr)	1		4	4		1	4			1		4
Turn Type	Split	NA	Perm	Split	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		3	3	1	5	2		1	6	
Permitted Phases			4			3			2			
Actuated Green, G (s)		15.9	15.9	14.5	14.5	37.6	18.1	57.3	57.3	23.1	63.4	
Effective Green, g (s)		15.9	15.9	14.5	14.5	37.6	18.1	57.3	57.3	23.1	63.4	
Actuated g/C Ratio		0.12	0.12	0.11	0.11	0.28	0.14	0.43	0.43	0.17	0.48	
Clearance Time (s)		4.7	4.7	5.8	5.8	5.3	4.2	5.8	5.8	5.3	5.8	
Vehicle Extension (s)		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)		208	176	375	204	445	241	2200	685	598	2428	
v/s Ratio Prot		c0.10		c0.09	0.06	0.10	0.12	c0.34		c0.15	0.14	
v/s Ratio Perm			0.01			0.07			0.27			
v/c Ratio		0.82	0.10	0.78	0.52	0.60	0.86	0.78	0.62	0.85	0.30	
Uniform Delay, d1		56.8	51.9	57.4	55.7	40.9	55.9	32.2	29.2	52.9	21.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		20.6	0.1	9.0	1.1	1.4	24.1	2.9	4.2	10.3	0.3	
Delay (s)		77.4	52.0	66.4	56.8	42.3	80.0	35.1	33.4	63.2	21.3	
Level of Service		E	D	E	E	D	E	D	C	E	C	
Approach Delay (s)		65.9			52.7			38.3			38.5	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	132.4	Sum of lost time (s)	21.6
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



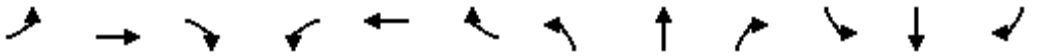
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	436	6	19	5	12	4	245	457	4	5	1687	1137
Future Volume (vph)	436	6	19	5	12	4	245	457	4	5	1687	1137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1		4.3		4.8	5.8		4.8	5.8	5.8
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.98		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1687	1561		1797		1770	5079		1770	5085	1548
Flt Permitted	0.95	0.95	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1687	1561		1797		1770	5079		1770	5085	1548
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	454	6	20	5	12	4	255	476	4	5	1757	1184
RTOR Reduction (vph)	0	0	16	0	4	0	0	0	0	0	0	419
Lane Group Flow (vph)	232	228	4	0	18	0	255	480	0	5	1757	765
Confl. Peds. (#/hr)			2									1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	24.9	24.9	24.9		4.6		24.0	79.7		0.8	56.5	56.5
Effective Green, g (s)	24.9	24.9	24.9		4.6		24.0	79.7		0.8	56.5	56.5
Actuated g/C Ratio	0.19	0.19	0.19		0.04		0.18	0.61		0.01	0.43	0.43
Clearance Time (s)	5.1	5.1	5.1		4.3		4.8	5.8		4.8	5.8	5.8
Vehicle Extension (s)	5.0	5.0	5.0		3.0		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	321	323	298		63		326	3113		10	2210	672
v/s Ratio Prot	c0.14	0.14			c0.01		c0.14	0.09		0.00	0.35	
v/s Ratio Perm			0.00									c0.49
v/c Ratio	0.72	0.71	0.01		0.29		0.78	0.15		0.50	0.80	1.14
Uniform Delay, d1	49.3	49.1	42.6		61.1		50.5	10.7		64.4	31.7	36.8
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.5	8.5	0.0		2.5		11.6	0.1		34.4	3.1	79.6
Delay (s)	58.8	57.7	42.6		63.6		62.1	10.9		98.8	34.8	116.3
Level of Service	E	E	D		E		E	B		F	C	F
Approach Delay (s)		57.6			63.6			28.6			67.7	
Approach LOS		E			E			C			E	

Intersection Summary			
HCM 2000 Control Delay	59.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	439	79	195	32	35	13	167	1441	52	15	580	126
Future Volume (vph)	439	79	195	32	35	13	167	1441	52	15	580	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6	3.6	3.6	4.1	4.1		3.6	5.3		3.6	5.3	5.3
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1552	1770	1788		1770	3521		1770	3539	1545
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1552	1770	1788		1770	3521		1770	3539	1545
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	477	86	212	35	38	14	182	1566	57	16	630	137
RTOR Reduction (vph)	0	0	174	0	10	0	0	2	0	0	0	76
Lane Group Flow (vph)	477	86	38	35	42	0	182	1621	0	16	630	61
Confl. Peds. (#/hr)			6				2					2
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7									6
Actuated Green, G (s)	23.2	23.2	23.2	9.6	9.6		22.5	76.8		3.8	58.1	58.1
Effective Green, g (s)	23.2	23.2	23.2	9.6	9.6		22.5	76.8		3.8	58.1	58.1
Actuated g/C Ratio	0.18	0.18	0.18	0.07	0.07		0.17	0.59		0.03	0.45	0.45
Clearance Time (s)	3.6	3.6	3.6	4.1	4.1		3.6	5.3		3.6	5.3	5.3
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	612	332	276	130	132		306	2080		51	1581	690
v/s Ratio Prot	c0.14	0.05		0.02	c0.02		0.10	c0.46		0.01	c0.18	
v/s Ratio Perm			0.02									0.04
v/c Ratio	0.78	0.26	0.14	0.27	0.32		0.59	0.78		0.31	0.40	0.09
Uniform Delay, d1	51.0	46.0	45.0	56.9	57.1		49.5	20.2		61.8	24.2	20.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.0	0.3	0.2	0.8	1.0		3.1	3.0		3.5	0.8	0.3
Delay (s)	57.0	46.3	45.1	57.7	58.1		52.6	23.1		65.3	24.9	21.0
Level of Service	E	D	D	E	E		D	C		E	C	C
Approach Delay (s)		52.5			57.9			26.1			25.1	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

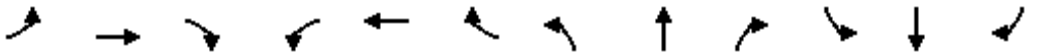


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	562	31	465	19	39	19	348	961	11	12	593	202
Future Volume (vph)	562	31	465	19	39	19	348	961	11	12	593	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	4.1	4.1	4.1	4.1		4.1	5.8		4.1	5.8	5.8
Lane Util. Factor	0.95	0.95	0.88	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1694	2750	1770	1762		3433	3532		1770	3539	1563
Flt Permitted	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1694	2750	1770	1762		3433	3532		1770	3539	1563
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	611	34	505	21	42	21	378	1045	12	13	645	220
RTOR Reduction (vph)	0	0	382	0	14	0	0	0	0	0	0	116
Lane Group Flow (vph)	324	321	123	21	49	0	378	1057	0	13	645	104
Confl. Peds. (#/hr)	1		1	1		1	7		2	2		1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	8	8		7	7		1	6		5	2	
Permitted Phases			8									2
Actuated Green, G (s)	37.9	37.9	37.9	9.5	9.5		27.7	87.7		2.8	62.8	62.8
Effective Green, g (s)	37.9	37.9	37.9	9.5	9.5		27.7	87.7		2.8	62.8	62.8
Actuated g/C Ratio	0.24	0.24	0.24	0.06	0.06		0.18	0.56		0.02	0.40	0.40
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1		4.1	5.8		4.1	5.8	5.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		1.3	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	408	411	668	107	107		609	1985		31	1424	629
v/s Ratio Prot	c0.19	0.19		0.01	c0.03		c0.11	c0.30		0.01	c0.18	
v/s Ratio Perm			0.04									0.07
v/c Ratio	0.79	0.78	0.18	0.20	0.46		0.62	0.53		0.42	0.45	0.17
Uniform Delay, d1	55.4	55.2	46.8	69.6	70.8		59.3	21.3		75.8	34.0	29.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.2	9.3	0.1	0.9	3.1		1.4	1.0		8.9	1.0	0.6
Delay (s)	65.6	64.5	46.9	70.5	73.8		60.7	22.4		84.7	35.1	30.4
Level of Service	E	E	D	E	E		E	C		F	D	C
Approach Delay (s)		57.1			73.0			32.5			34.6	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	41.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	156.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	116	2	628	41	308	0	0	766	189
Future Volume (vph)	0	0	0	116	2	628	41	308	0	0	766	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.7	4.7	3.7	5.5			5.5	5.5
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frpb, ped/bikes					1.00	0.98	1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00	1.00	1.00	1.00			1.00	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1775	1557	1770	3539			3539	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1775	1557	1770	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	126	2	683	45	335	0	0	833	205
RTOR Reduction (vph)	0	0	0	0	0	271	0	0	0	0	0	104
Lane Group Flow (vph)	0	0	0	0	128	412	45	335	0	0	833	101
Confl. Peds. (#/hr)	4					4			5	5		
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					29.3	29.3	4.0	53.3			45.6	45.6
Effective Green, g (s)					29.3	29.3	4.0	53.3			45.6	45.6
Actuated g/C Ratio					0.32	0.32	0.04	0.57			0.49	0.49
Clearance Time (s)					4.7	4.7	3.7	5.5			5.5	5.5
Vehicle Extension (s)					4.0	4.0	3.5	3.5			3.5	3.5
Lane Grp Cap (vph)					560	491	76	2032			1738	777
v/s Ratio Prot							c0.03	0.09			c0.24	
v/s Ratio Perm					0.07	c0.26						0.06
v/c Ratio					0.23	0.84	0.59	0.16			0.48	0.13
Uniform Delay, d1					23.4	29.6	43.6	9.3			15.7	12.8
Progression Factor					1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2					0.3	12.4	12.4	0.2			0.9	0.3
Delay (s)					23.7	42.0	56.0	9.5			16.7	13.2
Level of Service					C	D	E	A			B	B
Approach Delay (s)		0.0			39.1			15.0			16.0	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	92.8	Sum of lost time (s)	13.9
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

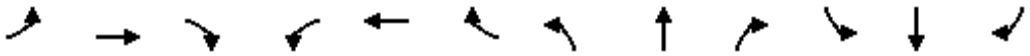


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	14	12	26	91	67	525	237	21	73	313	565
Future Volume (vph)	31	14	12	26	91	67	525	237	21	73	313	565
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	3.7			3.7	3.7	3.5	4.7		3.7	4.7	4.7
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1609			1842	1583	1770	3486		1770	3539	1583
Flt Permitted	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1609			1842	1583	1770	3486		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	15	13	28	99	73	571	258	23	79	340	614
RTOR Reduction (vph)	0	12	0	0	0	63	0	4	0	0	0	442
Lane Group Flow (vph)	31	19	0	0	127	10	571	277	0	79	340	172
Confl. Peds. (#/hr)			45	45					6	6		
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						6
Actuated Green, G (s)	4.5	4.5			11.9	11.9	37.5	45.7		7.6	16.0	16.0
Effective Green, g (s)	4.5	4.5			11.9	11.9	37.5	45.7		7.6	16.0	16.0
Actuated g/C Ratio	0.05	0.05			0.14	0.14	0.44	0.53		0.09	0.19	0.19
Clearance Time (s)	3.7	3.7			3.7	3.7	3.5	4.7		3.7	4.7	4.7
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	88	84			256	220	776	1863		157	662	296
v/s Ratio Prot	c0.02	0.01			c0.07		c0.32	0.08		0.04	0.10	
v/s Ratio Perm						0.01						c0.11
v/c Ratio	0.35	0.22			0.50	0.05	0.74	0.15		0.50	0.51	0.58
Uniform Delay, d1	39.1	38.8			34.0	31.9	19.9	10.1		37.1	31.3	31.7
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	1.3			1.5	0.1	3.6	0.2		2.5	2.8	8.1
Delay (s)	41.5	40.2			35.5	32.0	23.5	10.2		39.7	34.1	39.8
Level of Service	D	D			D	C	C	B		D	C	D
Approach Delay (s)		40.8			34.2			19.2			37.9	
Approach LOS		D			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	85.5	Sum of lost time (s)	15.8
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	162	167	306	113	444	240	1995	704	599	823	12
Future Volume (vph)	13	162	167	306	113	444	240	1995	704	599	823	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.7		5.8	5.8	5.3	4.2	5.8	5.8	5.3	5.8	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1704		3433	1863	1562	1770	5085	1583	3433	5072	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1704		3433	1863	1562	1770	5085	1583	3433	5072	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	14	171	176	322	119	467	253	2100	741	631	866	13
RTOR Reduction (vph)	0	23	0	0	0	106	0	0	188	0	1	0
Lane Group Flow (vph)	14	324	0	322	119	361	253	2100	553	631	878	0
Confl. Peds. (#/hr)	1		4	4		1	4			1		4
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	5.1	22.3		18.5	35.7	58.4	21.6	53.4	53.4	22.7	55.6	
Effective Green, g (s)	5.1	22.3		18.5	35.7	58.4	21.6	53.4	53.4	22.7	55.6	
Actuated g/C Ratio	0.04	0.16		0.13	0.26	0.42	0.16	0.39	0.39	0.16	0.40	
Clearance Time (s)	4.7	4.7		5.8	5.8	5.3	4.2	5.8	5.8	5.3	5.8	
Vehicle Extension (s)	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Lane Grp Cap (vph)	65	274		458	480	658	276	1960	610	562	2036	
v/s Ratio Prot	0.01	c0.19		c0.09	0.06	0.09	0.14	c0.41		c0.18	0.17	
v/s Ratio Perm						0.14			0.35			
v/c Ratio	0.22	1.18		0.70	0.25	0.55	0.92	1.07	0.91	1.12	0.43	
Uniform Delay, d1	64.8	58.1		57.4	40.8	30.1	57.6	42.6	40.2	57.9	30.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	113.5		4.0	0.1	0.5	32.3	42.5	19.5	76.4	0.7	
Delay (s)	65.4	171.6		61.3	40.9	30.6	89.9	85.1	59.7	134.3	30.7	
Level of Service	E	F		E	D	C	F	F	E	F	C	
Approach Delay (s)		167.5			42.9			79.4			74.0	
Approach LOS		F			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	77.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	138.5	Sum of lost time (s)	21.6
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

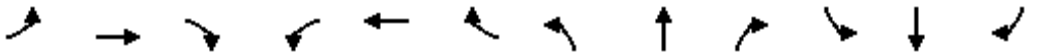


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	482	7	21	6	13	4	310	595	5	6	2058	1387
Future Volume (vph)	482	7	21	6	13	4	310	595	5	6	2058	1387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1			4.3		4.8	5.8		4.8	5.8	
Lane Util. Factor	0.97	1.00			1.00		1.00	0.91		1.00	0.81	
Frpb, ped/bikes	1.00	0.99			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89			0.98		1.00	1.00		1.00	0.94	
Flt Protected	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	1633			1798		1770	5079		1770	7024	
Flt Permitted	0.95	1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	1633			1798		1770	5079		1770	7024	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	502	7	22	6	14	4	323	620	5	6	2144	1445
RTOR Reduction (vph)	0	18	0	0	4	0	0	0	0	0	74	0
Lane Group Flow (vph)	502	11	0	0	20	0	323	625	0	6	3515	0
Confl. Peds. (#/hr)			2									1
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	29.6	29.6			7.2		25.0	91.4		1.8	68.2	
Effective Green, g (s)	29.6	29.6			7.2		25.0	91.4		1.8	68.2	
Actuated g/C Ratio	0.20	0.20			0.05		0.17	0.61		0.01	0.45	
Clearance Time (s)	5.1	5.1			4.3		4.8	5.8		4.8	5.8	
Vehicle Extension (s)	5.0	5.0			3.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	677	322			86		295	3094		21	3193	
v/s Ratio Prot	c0.15	0.01			c0.01		c0.18	0.12		0.00	c0.50	
v/s Ratio Perm												
v/c Ratio	0.74	0.04			0.23		1.09	0.20		0.29	1.72dr	
Uniform Delay, d1	56.6	48.7			68.7		62.5	13.1		73.5	40.9	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.3	0.1			1.4		80.2	0.1		7.4	50.9	
Delay (s)	61.9	48.8			70.2		142.7	13.2		80.8	91.8	
Level of Service	E	D			E		F	B		F	F	
Approach Delay (s)		61.1			70.2			57.3			91.8	
Approach LOS		E			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	82.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		

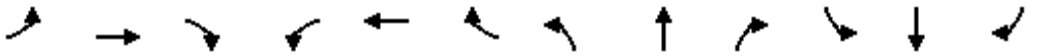
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



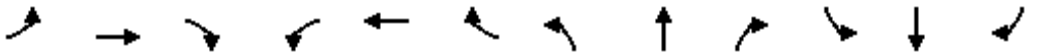
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	485	107	215	35	39	14	204	1758	63	18	708	154
Future Volume (vph)	485	107	215	35	39	14	204	1758	63	18	708	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.6	3.6	3.6	4.1	4.1		3.6	5.3		3.6	5.3	5.3
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1863	1552	1770	1789		1770	3521		1770	3539	1545
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1863	1552	1770	1789		1770	3521		1770	3539	1545
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	527	116	234	38	42	15	222	1911	68	20	770	167
RTOR Reduction (vph)	0	0	190	0	10	0	0	2	0	0	0	94
Lane Group Flow (vph)	527	116	44	38	47	0	222	1977	0	20	770	73
Confl. Peds. (#/hr)			6				2					2
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7									6
Actuated Green, G (s)	24.6	24.6	24.6	9.6	9.6		22.6	75.7		3.5	56.6	56.6
Effective Green, g (s)	24.6	24.6	24.6	9.6	9.6		22.6	75.7		3.5	56.6	56.6
Actuated g/C Ratio	0.19	0.19	0.19	0.07	0.07		0.17	0.58		0.03	0.44	0.44
Clearance Time (s)	3.6	3.6	3.6	4.1	4.1		3.6	5.3		3.6	5.3	5.3
Vehicle Extension (s)	2.5	2.5	2.5	2.5	2.5		3.0	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	649	352	293	130	132		307	2050		47	1540	672
v/s Ratio Prot	c0.15	0.06		0.02	c0.03		0.13	c0.56		0.01	c0.22	
v/s Ratio Perm			0.03									0.05
v/c Ratio	0.81	0.33	0.15	0.29	0.35		0.72	0.96		0.43	0.50	0.11
Uniform Delay, d1	50.5	45.6	44.0	57.0	57.3		50.7	25.9		62.3	26.5	21.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.5	0.4	0.2	0.9	1.2		8.2	13.1		6.1	1.2	0.3
Delay (s)	57.9	46.0	44.2	57.9	58.4		58.9	39.0		68.4	27.7	22.1
Level of Service	E	D	D	E	E		E	D		E	C	C
Approach Delay (s)		52.7			58.2			41.0			27.5	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	40.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



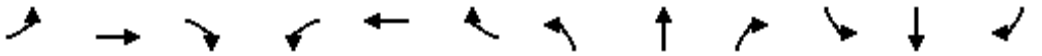
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	835	46	691	28	58	28	425	1173	13	15	724	246
Future Volume (vph)	835	46	691	28	58	28	425	1173	13	15	724	246
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.1	4.1	4.1	4.1	4.1		4.1	5.8		4.1	5.8	5.8
Lane Util. Factor	0.95	0.95	0.88	1.00	1.00		0.97	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1694	2750	1770	1765		3433	3532		1770	3539	1563
Flt Permitted	0.95	0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1694	2750	1770	1765		3433	3532		1770	3539	1563
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	908	50	751	30	63	30	462	1275	14	16	787	267
RTOR Reduction (vph)	0	0	332	0	13	0	0	1	0	0	0	122
Lane Group Flow (vph)	481	477	419	30	80	0	462	1288	0	16	787	145
Confl. Peds. (#/hr)	1		1	1		1	7		2	2		1
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	8	8		7	7		1	6		5	2	
Permitted Phases			8									2
Actuated Green, G (s)	54.5	54.5	54.5	13.3	13.3		12.9	67.3		2.8	57.2	57.2
Effective Green, g (s)	54.5	54.5	54.5	13.3	13.3		12.9	67.3		2.8	57.2	57.2
Actuated g/C Ratio	0.35	0.35	0.35	0.09	0.09		0.08	0.43		0.02	0.37	0.37
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1		4.1	5.8		4.1	5.8	5.8
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		1.3	5.0		3.0	5.0	5.0
Lane Grp Cap (vph)	587	591	960	150	150		283	1523		31	1297	573
v/s Ratio Prot	c0.29	0.28		0.02	c0.05		c0.13	c0.36		0.01	c0.22	
v/s Ratio Perm			0.15									0.09
v/c Ratio	0.82	0.81	0.44	0.20	0.53		1.63	0.85		0.52	0.61	0.25
Uniform Delay, d1	46.3	46.0	39.0	66.4	68.4		71.5	39.7		75.9	40.2	34.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.7	7.9	0.3	0.7	3.6		300.2	6.0		13.7	2.1	1.1
Delay (s)	55.0	53.9	39.3	67.1	72.0		371.7	45.7		89.7	42.4	35.5
Level of Service	E	D	D	E	E		F	D		F	D	D
Approach Delay (s)		47.8			70.8			131.7			41.4	
Approach LOS		D			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	78.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	156.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	361	76	766	85	376	0	0	1331	400
Future Volume (vph)	0	0	0	361	76	766	85	376	0	0	1331	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.7	4.7	3.7	5.5			5.5	5.5
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frpb, ped/bikes					1.00	0.98	1.00	1.00			1.00	1.00
Flpb, ped/bikes					1.00	1.00	1.00	1.00			1.00	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.96	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1789	1553	1770	3539			3539	1583
Flt Permitted					0.96	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1789	1553	1770	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	392	83	833	92	409	0	0	1447	435
RTOR Reduction (vph)	0	0	0	0	0	242	0	0	0	0	0	143
Lane Group Flow (vph)	0	0	0	0	475	591	92	409	0	0	1447	292
Confl. Peds. (#/hr)	4					4			5	5		
Turn Type				Perm	NA	Perm	Prot	NA			NA	Perm
Protected Phases					4		1	6			2	
Permitted Phases				4		4						2
Actuated Green, G (s)					56.1	56.1	9.3	77.5			64.5	64.5
Effective Green, g (s)					56.1	56.1	9.3	77.5			64.5	64.5
Actuated g/C Ratio					0.39	0.39	0.06	0.54			0.45	0.45
Clearance Time (s)					4.7	4.7	3.7	5.5			5.5	5.5
Vehicle Extension (s)					4.0	4.0	3.5	3.5			3.5	3.5
Lane Grp Cap (vph)					697	605	114	1907			1587	710
v/s Ratio Prot							c0.05	0.12			c0.41	
v/s Ratio Perm					0.27	c0.38						0.18
v/c Ratio					0.68	0.98	0.81	0.21			0.91	0.41
Uniform Delay, d1					36.4	43.2	66.4	17.3			37.0	26.8
Progression Factor					1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2					3.0	30.5	33.4	0.3			9.5	1.8
Delay (s)					39.4	73.7	99.7	17.5			46.5	28.6
Level of Service					D	E	F	B			D	C
Approach Delay (s)		0.0			61.3			32.6			42.3	
Approach LOS		A			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	143.8	Sum of lost time (s)	13.9
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	26	15	29	116	82	693	280	29	790	539	689
Future Volume (vph)	83	26	15	29	116	82	693	280	29	790	539	689
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	3.7			3.7	3.7	3.5	4.7		3.7	4.7	4.7
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1648			1844	1583	1770	3476		1770	3539	1583
Flt Permitted	0.95	0.98			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1681	1648			1844	1583	1770	3476		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	90	28	16	32	126	89	753	304	32	859	586	749
RTOR Reduction (vph)	0	8	0	0	0	77	0	5	0	0	0	356
Lane Group Flow (vph)	67	59	0	0	158	12	753	331	0	859	586	393
Confl. Peds. (#/hr)			45	45					6	6		
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						6
Actuated Green, G (s)	9.8	9.8			14.7	14.7	42.6	21.7		47.5	26.8	26.8
Effective Green, g (s)	9.8	9.8			14.7	14.7	42.6	21.7		47.5	26.8	26.8
Actuated g/C Ratio	0.09	0.09			0.13	0.13	0.39	0.20		0.43	0.24	0.24
Clearance Time (s)	3.7	3.7			3.7	3.7	3.5	4.7		3.7	4.7	4.7
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	4.0		3.0	4.0	4.0
Lane Grp Cap (vph)	150	147			247	212	688	688		767	866	387
v/s Ratio Prot	c0.04	0.04			c0.09		0.43	0.10		c0.49	0.17	
v/s Ratio Perm						0.01						c0.25
v/c Ratio	0.45	0.40			0.64	0.06	1.09	0.48		1.12	0.68	1.02
Uniform Delay, d1	47.3	47.1			44.9	41.3	33.4	38.9		31.0	37.4	41.4
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.1	1.8			5.4	0.1	63.0	2.4		70.7	4.2	49.9
Delay (s)	49.4	48.9			50.3	41.5	96.4	41.3		101.7	41.7	91.3
Level of Service	D	D			D	D	F	D		F	D	F
Approach Delay (s)		49.1			47.1			79.4			82.1	
Approach LOS		D			D			E			F	

Intersection Summary			
HCM 2000 Control Delay	77.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	109.5	Sum of lost time (s)	15.8
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Appendix E

AB 52 Tribal Consultation Correspondences

CITY OF
Fremont

June 12, 2019

The Ohlone Indian Tribe
Attn: Andrew Galvan, Chairperson
P.O. Box 3388
Fremont, CA 94539

RE: <u>Assembly Bill 52 Consultation</u> for the Morrison Canyon Road Traffic Safety Project (City File Number: PWC8581), Location: as shown in Attachment 1, the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23).

Dear Mr. Galvan,

This letter is intended to notify you of the proposed Morrison Canyon Road Traffic Safety Project at the location shown in Attachment 1 – the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23). A brief summary of the proposed project is provided below:

Morrison Canyon Road Traffic Safety Project
The City of Fremont is proposing to permanently close to private automobile use the above noted 1.2 miles of Morrison Canyon Road, from the Proposed Western/Bottom Closure to the Proposed Eastern/Top Closure. The City has not determined the precise closure mechanism at this time but anticipates installation of a gate structure at the bottom of Morrison Canyon Road. Emergency vehicles would be able to pass through the gate. In addition, Morrison Canyon Road would remain open to pedestrian and bicycle use. Therefore, the gate structure would also be installed in a manner that would also allow continued access by pedestrians and bicyclists. At Vargas Road, the top of the proposed closed section, automobile traffic would be restricted from entering by a combination of creating a mountable curb and signage. Emergency vehicles would be able to pass over the mountable curb. All improvements are anticipated to occur within the existing public right-of-way.

Background
Morrison Canyon Road is a bi-directional road. The roadway has been historically a dirt/gravel trail that has received a chip seal maintenance treatment over the years, as necessary. It is winding and nine feet in width at its most narrow point within the subject 1.2 mile area. The roadway cuts through steep slopes that have often resulted in closures due to erosion and landslides. Bi-directional automobile traffic has recently increased along this route, as weekday commuters have sought to avoid traffic along Interstate 680 and/or Mission Boulevard. Given the narrow winding nature of the roadway, the increase in automobile trips has contributed to a considerable increase in vehicle conflicts, as many sections lack width for two cars to pass by each other. The increased automobile traffic also presents additional safety concerns for pedestrians and bicyclists, who frequent the road to access Vargas Plateau Regional Park, which is accessible from a location east of Vargas Road.

Assembly Bill 52 (AB 52), which became law January 1, 2015, requires that, as part of the CEQA review process, public agencies provide early notice of a project to California Native American Tribes, and if formally requested in writing by a Tribe, consult with Tribes in regards to the project. With this letter, the City is hereby providing notice per AB 52 and as part of the CEQA process for the project.

The purpose of AB 52 and the consultation, if requested, is to identify and consider potential impacts to a new category of resources called Tribal Cultural Resources (TCRs)[1], and take into account tribal cultural values in addition to scientific and archaeological values when determining possible impacts and mitigation. An impact to a TCR may result in a significant impact under CEQA and require avoidance or minimization of the impacts.

No evidence has been identified to indicate that a TCR is present in or adjacent to the project area. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

To request consultation under AB 52 for the project, please contact me within 30 days of receipt of this letter. Failure to respond within this timeframe means that the City is not required to enter into consultation with you on this matter.

If you have any questions or comments regarding this project, please contact me directly at (510) 494-4450 or broth@fremont.gov.

Sincerely,

Bill Roth
Senior Planner

Attachments: Aerial Map of Project Site and Surroundings

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[1] Public Resources Code (PRC) Section 21074(a) defines Tribal Cultural Resources as either of the following:

• Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either: (1) included or determined to be eligible for inclusion in the California Register of Historical Resources; or (2) included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1; or

• A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.

CITY OF
Fremont

June 12, 2019

North Valley Yokuts Tribe
Attn: Katherine Erolinda Perez, Chairperson
P.O. Box 717
Linden, CA 95236

RE: <u>Assembly Bill 52 Consultation</u> for the Morrison Canyon Road Traffic Safety Project (City File Number: PWC8581), Location: as shown in Attachment 1, the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23).

Dear Ms. Perez,

This letter is intended to notify you of the proposed Morrison Canyon Road Traffic Safety Project at the location shown in Attachment 1 – the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23). A brief summary of the proposed project is provided below:

Morrison Canyon Road Traffic Safety Project
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Background
Morrison Canyon Road is a bi-directional road. The roadway has been historically a dirt/gravel trail that has received a chip seal maintenance treatment over the years, as necessary. It is winding and nine feet in width at its most narrow point within the subject 1.2 mile area. The roadway cuts through steep slopes that have often resulted in closures due to erosion and landslides. Bi-directional automobile traffic has recently increased along this route, as weekday commuters have sought to avoid traffic along Interstate 680 and/or Mission Boulevard. Given the narrow winding nature of the roadway, the increase in automobile trips has contributed to a considerable increase in vehicle conflicts, as many sections lack width for two cars to pass by each other. The increased automobile traffic also presents additional safety concerns for pedestrians and bicyclists, who frequent the road to access Vargas Plateau Regional Park, which is accessible from a location east of Vargas Road.

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No evidence has been identified to indicate that a TCR is present in or adjacent to the project area. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

To request consultation under AB 52 for the project, please contact me within 30 days of receipt of this letter. Failure to respond within this timeframe means that the City is not required to enter into consultation with you on this matter.

If you have any questions or comments regarding this project, please contact me directly at (510) 494-4450 or broth@fremont.gov.

Sincerely,

Bill Roth
Senior Planner

Attachments: Aerial Map of Project Site and Surroundings

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• Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either: (1) included or determined to be eligible for inclusion in the California Register of Historical Resources; or (2) included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1; or

• A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.

CITY OF
Fremont

June 12, 2019

Muwekma Ohlone Indian Tribe
Attn: Charlene Nijmeh, Chairperson
20885 Redwood Road, Suite 232
Castro Valley, CA 94546

RE: <u>Assembly Bill 52 Consultation</u> for the Morrison Canyon Road Traffic Safety Project (City File Number: PWC8581), Location: as shown in Attachment 1, the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23).

Dear Ms. Nijmeh,

This letter is intended to notify you of the proposed Morrison Canyon Road Traffic Safety Project at the location shown in Attachment 1 – the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23). A brief summary of the proposed project is provided below:

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Sincerely,

Bill Roth
Senior Planner

Attachments: Aerial Map of Project Site and Surroundings

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• A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.

CITY OF
Fremont

June 12, 2019

Costanoan Rumsen Carmel Tribe
Attn: Tony Cerda, Chairperson
244 E. 1st Street
Pomona, CA 91766

RE: <u>Assembly Bill 52 Consultation</u> for the Morrison Canyon Road Traffic Safety Project (City File Number: PWC8581), Location: as shown in Attachment 1, the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23).

Dear Mr. Cerda,

This letter is intended to notify you of the proposed Morrison Canyon Road Traffic Safety Project at the location shown in Attachment 1 – the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23). A brief summary of the proposed project is provided below:

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To request consultation under AB 52 for the project, please contact me within 30 days of receipt of this letter. Failure to respond within this timeframe means that the City is not required to enter into consultation with you on this matter.

If you have any questions or comments regarding this project, please contact me directly at (510) 494-4450 or broth@fremont.gov.

Sincerely,

Bill Roth
Senior Planner

Attachments: Aerial Map of Project Site and Surroundings

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• A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.

CITY OF
Fremont

June 12, 2019

Amah Mutsun Tribal Band of
Mission San Juan Bautista
Attn: Irene Zwierlein, Chairperson
789 Canada Road
Woodside, CA 94062

RE: Assembly Bill 52 Consultation for the Morrison Canyon Road Traffic Safety Project (City File Number: PWC8581), Location: as shown in Attachment 1, the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23).

Dear Ms. Zwierlein,

This letter is intended to notify you of the proposed Morrison Canyon Road Traffic Safety Project at the location shown in Attachment 1 – the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23). A brief summary of the proposed project is provided below:

Morrison Canyon Road Traffic Safety Project
The City of Fremont is proposing to permanently close to private automobile use the above noted 1.2 miles of Morrison Canyon Road, from the Proposed Western/Bottom Closure to the Proposed Eastern/Top Closure. The City has not determined the precise closure mechanism at this time but anticipates installation of a gate structure at the bottom of Morrison Canyon Road. Emergency vehicles would be able to pass through the gate. In addition, Morrison Canyon Road would remain open to pedestrian and bicycle use. Therefore, the gate structure would also be installed in a manner that would also allow continued access by pedestrians and bicyclists. At Vargas Road, the top of the proposed closed section, automobile traffic would be restricted from entering by a combination of creating a mountable curb and signage. Emergency vehicles would be able to pass over the mountable curb. All improvements are anticipated to occur within the existing public right-of-way.

Background
Morrison Canyon Road is a bi-directional road. The roadway has been historically a dirt/gravel trail that has received a chip seal maintenance treatment over the years, as necessary. It is winding and nine feet in width at its most narrow point within the subject 1.2 mile area. The roadway cuts through steep slopes that have often resulted in closures due to erosion and landslides. Bi-directional automobile traffic has recently increased along this route, as weekday commuters have sought to avoid traffic along Interstate 680 and/or Mission Boulevard. Given the narrow winding nature of the roadway, the increase in automobile trips has contributed to a considerable increase in vehicle conflicts, as many sections lack width for two cars to pass by each other. The increased automobile traffic also presents additional safety concerns for pedestrians and bicyclists, who frequent the road to access Vargas Plateau Regional Park, which is accessible from a location east of Vargas Road.

Assembly Bill 52 (AB 52), which became law January 1, 2015, requires that, as part of the CEQA review process, public agencies provide early notice of a project to California Native American Tribes, and if formally requested in writing by a Tribe, consult with Tribes in regards to the project. With this letter, the City is hereby providing notice per AB 52 and as part of the CEQA process for the project.

The purpose of AB 52 and the consultation, if requested, is to identify and consider potential impacts to a new category of resources called Tribal Cultural Resources (TCRs)[1], and take into account tribal cultural values in addition to scientific and archaeological values when determining possible impacts and mitigation. An impact to a TCR may result in a significant impact under CEQA and require avoidance or minimization of the impacts.

No evidence has been identified to indicate that a TCR is present in or adjacent to the project area. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

To request consultation under AB 52 for the project, please contact me within 30 days of receipt of this letter. Failure to respond within this timeframe means that the City is not required to enter into consultation with you on this matter.

If you have any questions or comments regarding this project, please contact me directly at (510) 494-4450 or broth@fremont.gov.

Sincerely,

Bill Roth
Senior Planner

Attachments: Aerial Map of Project Site and Surroundings

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[1] Public Resources Code (PRC) Section 21074(a) defines Tribal Cultural Resources as either of the following:

• Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either: (1) included or determined to be eligible for inclusion in the California Register of Historical Resources; or (2) included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1; or

• A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1.

CITY OF
Fremont

June 12, 2019

Amah Mutsun Tribal Band
Attn: Valentin Lopez, Chairperson
P.O. Box 5272
Galt, CA 95632

RE: <u>Assembly Bill 52 Consultation</u> for the Morrison Canyon Road Traffic Safety Project (City File Number: PWC8581), Location: as shown in Attachment 1, the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23).

Dear Mr. Lopez,

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CITY OF
Fremont

June 12, 2019

Indian Canyon Mutsun Band of Costanoan
Attn: Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024

RE: **Assembly Bill 52 Consultation for the Morrison Canyon Road Traffic Safety Project (City File Number: PWC8581), Location: as shown in Attachment 1, the approximately 1.2-mile portion of Morrison Canyon Road in the City of Fremont between Mission Boulevard and Vargas Road. (Niles Quadrangle. Township 4S, Range 1W, Sections 22 and 23).**

Dear Ms. Sayers,

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Sincerely,

Bill Roth
Senior Planner

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Attachment 1

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